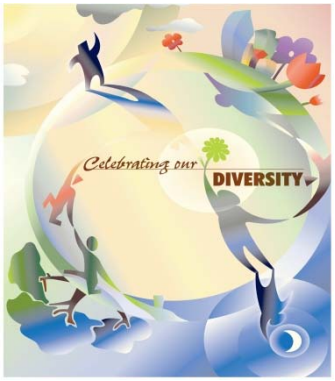
# Young Scholars Teacher Handbook

## For Use By:

GT Resource Teachers
YS Principals
YS Classroom Teachers

**Fairfax County Public Schools  Instructional Services Department**

# Young Scholars Handbook Table of Contents



# Section I
# Young Scholars: A Schoolwide Commitment

Young Scholars on field trip to Woodrow Wilson Bridge project

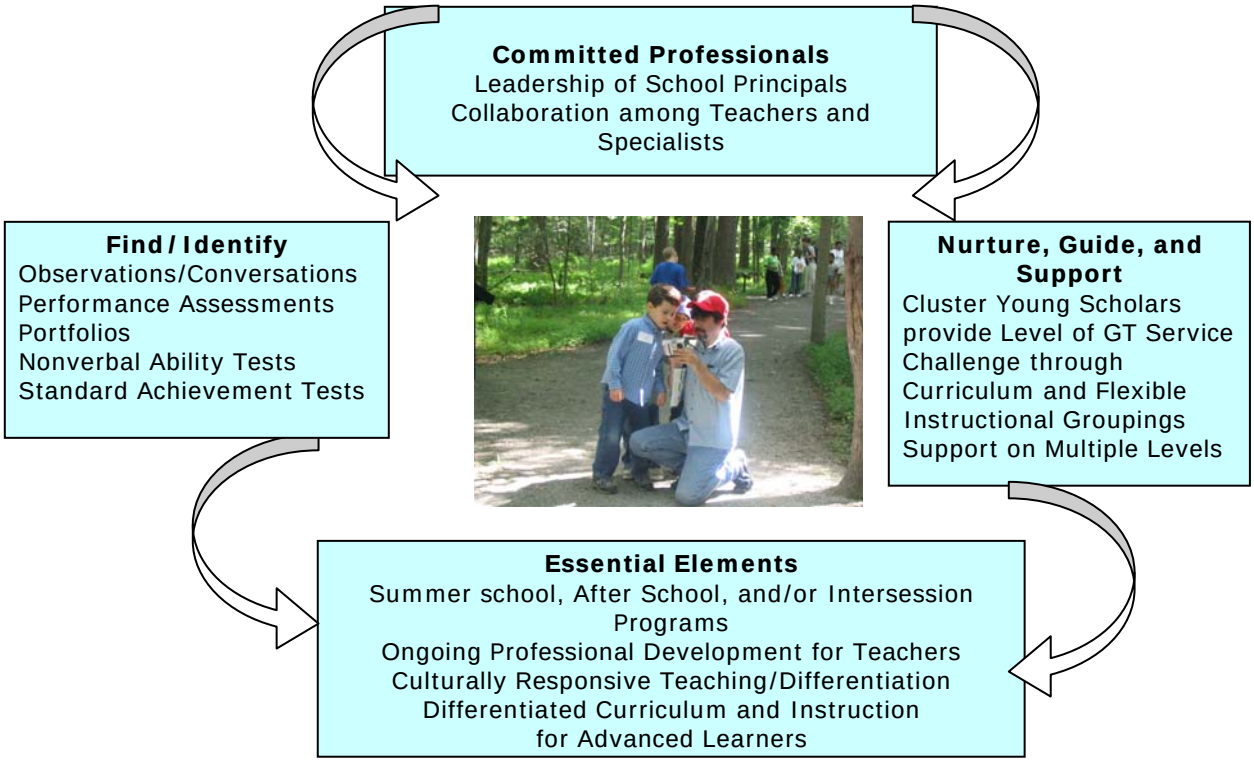
*I not only use all of the brains that I have, but all that I can borrow.*

Woodrow Wilson
28th President of the United States

**Schools must have:**

- **An informed Gifted and Talented Resource Teacher**
- **Staff training each year (not just on Young Scholars, but also Gifted Behaviors, Twice Exceptional)**
- **Communication between Gifted and Talented Resource Teacher and administrators**
- **Young Scholars Model explained at Parent Information meetings each fall**

# Introduction




# Young Scholars Model

**Young Scholars** (YS) is one facet of Fairfax County Public Schools' approach to closing the achievement gap between majority and underrepresented minority students. Young Scholars are students who are not likely to be considered for gifted programs using traditional methods of identification, and who, without opportunity, are less likely to pursue advanced levels of learning on their own. Historically, these students have lacked access to gifted services, advocates who encourage them to reach their highest potential, and affirmation of their advanced abilities.

The Young Scholars model promotes the notion of nurturing continuous academic growth beginning in kindergarten. Early identification coupled with early intervention allows each Young Scholars school to provide learning experiences that strengthen basic skills and require students to think and apply knowledge on a higher, more complex level. At each YS school, classroom teachers in collaboration with Gifted and Talented (GT) resource teachers observe students, collect anecdotal records, review test scores, create portfolios, and identify students who show gifted potential. Once identified, Young Scholars may be clustered with teachers who are trained to differentiate curriculum and instruction in

order to nurture advanced academic ability. Teachers design curriculum and instruction that allow students to question, explore, and investigate content and ideas in engaging learning activities connecting to students' diverse backgrounds. Multiage classrooms, looping, flexible grouping, and vertical teaming of teachers are examples of service delivery options used to support students. Summer school, after-school sessions, and intersession classes provide Young Scholars challenging learning experiences with intellectual peers from similar backgrounds.

The model was initially piloted in twelve schools considered high impact by Fairfax County Public Schools (due to the large numbers of economically disadvantaged and limited English proficiency students). The YS model embraces current thinking and research-based practices for identifying and nurturing gifted potential in students historically overlooked for gifted services. Since its initial inception in 2000, the number of schools using the Young Scholars model has grown from twelve to sixty-nine. The demographics of gifted programs at these schools now reflect the demographics of their school population.

Young Scholars are held to the same high standards and performance expectations as other gifted students. The main difference is in the amount of support that is provided to promote and nurture their advanced ability. Early identification coupled with early intervention allows each Young Scholars school to provide learning experiences that increase the students' self-efficacy and likelihood that they will be identified for gifted programs. Because gifted programs are a major gateway for participation in challenging and advanced classes in high school and higher education, access to these advanced learning opportunities must be provided to all students who have the potential to succeed. The long term goal for the Young Scholars is that they participate and succeed in Advanced Placement or International Baccalaureate High School programs in high school and continue on to higher education.

# The Role of Administrators

## Six Guiding Principles for Leadership in a Young Scholars (YS) School

1. **YS principals meet and collaborate to generate and share ideas.** Principals generate ideas for successful implementation by working together and comparing and contrasting their experiences with the Young Scholars model. The GT Programs Office provides research information and YS student data. Meetings occur three to four times each year.
2. **Identify early (grades K, 1, 2), differentiate instruction, and build on student strengths.** In order to identify students at an early age, school administrators create a committee that may include a school administrator, classroom teachers, GT resource teacher, specialists, reading teachers, guidance counselors, and/or the media specialist. The committee meets throughout the school year to assess students' strengths, and to collaborate on ways to appropriately challenge Young Scholars.
3. **Cluster, guide, and support students in grades K-6.** Clustering Young Scholars provides more opportunities for students to be challenged and motivated by intellectual peers. It also facilitates better use of the GT resource teacher's time to work directly with the students and to develop a close partnership with teachers in YS classrooms.
4. **Provide ongoing staff development opportunities for teachers.** A highly effective teacher implements a variety of best teaching practices and differentiates instruction in order to make curriculum meaningful for all students. Ongoing professional development is essential in providing teachers with models and strategies that challenge and enrich learning experiences.
5. **Offer enriched and challenging learning experiences via Summer School/After School/Intersession.** Through year-round learning opportunities, students develop "Habits of Mind" that support the application of higher level thinking strategies more independently in their regular classrooms.
6. **Involve guidance counselors, parents/guardians, parent liaisons, and community.** Teachers and students gain knowledge and expertise from specialists and members of the school community. Students benefit from a wealth of opportunities as a result of collaboration and access to a variety of resources. These may include field trips, mentorships, tutors, and real-world problem-solving.

# The Role of the GT Resource Teachers and Classroom Teachers

**Ten Best Practices to Support and Nurture Young Scholars:**

1. **Identify Young Scholars Early.** Committees of teachers, specialists, and administrators meet periodically throughout the school year to review criteria and identify Young Scholars beginning in kindergarten. They collaborate to find ways to nurture and support advanced academic potential.
2. **Participate in ongoing professional development.** Through various types of professional development, educators maintain a high level of knowledge about research and teaching practices in gifted education. Examples of opportunities for learning are FCPS Academy courses, conferences, in-services, workshops, focus groups, coaching, and mentoring programs.
3. **Provide a safe and nurturing learning environment.** A safe and nurturing learning environment provides opportunities for risk taking as Young Scholars explore new ways to think and pursue real-world applications of their knowledge, understandings, and skills. It also helps to develop self-efficacy as they successfully take on new challenges. When the school and classroom community employ a total collaborative effort, students understand rules and limits, identify issues and problems they want to pursue, and work together on projects that accept and encourage diverse ideas and multiple modes of learning. Empathy and self-regulation, two important characteristics for future success, are nurtured and cultivated in such an environment.
4. **Differentiate instruction and build on student strengths.** Teachers and specialists implement research-based best practices that capitalize on and develop student strengths. Teaching practices are differentiated based on

students' interests, readiness, and learning profiles. When students are encouraged to think critically and creatively, they build on their strengths constructing products and presentations that incorporate their unique talents. Young Scholars are provided opportunities to develop and strengthen their knowledge, understanding, and skills in work challenging to their minds and meaningful to their lives.

5. **Support social and emotional development.** As Young Scholars develop confidence in themselves, they also develop a desire to rise to new challenges and raise the bar for their achievement. Teachers, specialists, counselors, and other professionals work together to support and nurture the social and emotional growth of these young learners. Not only must teachers believe that such students can achieve at higher levels, but the students must also believe they can do the work. This becomes possible when the curriculum is organized around meaningful learning experiences that challenge students to use their strengths in ways that will support and nurture continuous academic achievement and growth.
6. **Incorporate concept-based instruction.** Teaching through concepts allows the classroom teacher to enrich the curriculum by connecting it to "big ideas" (e.g., systems, change, patterns etc). Through concept-based instruction, students make connections across subject areas and to real life situations in ways that are designed to endure.
7. **Design open-ended learning experiences.** Ambiguous and open-ended learning experiences help students develop the practices and thinking habits of experts in the field. As Young Scholars explore issues on a variety of levels from multiple perspectives, they become problem-*finders* as well as problem-*solvers*.
8. **Plan real-world learning opportunities.** Young Scholars gain a greater understanding of and begin to appreciate their place in the world when they become active community participants. By identifying and investigating real-world problems as experts in a field, students apply higher level thinking skills and learned knowledge in a way that may impact their community and their environment.
9. **Infuse a global perspective.** As we evolve into a diverse global society, curriculum and instruction need to incorporate and reflect the changing, varied perspectives that are an integral part of today's world. When multicultural learning activities are integrated throughout the curriculum, students have the opportunity to connect new knowledge to their own life experiences. Poems, stories, and plays that contain dialect, global role models, and varying cultural lifestyles may be used to add relevancy to learning experiences. By integrating poets, authors,

inventors, scientists, mathematicians, world leaders, and others of diverse backgrounds who have made significant contributions to society into learning experiences, students' self-worth is increased and possibilities for the future are enhanced. It is vital that students see their reflections in leaders that have made important contributions in specific fields as they become aware of the diversity in our world. When students are given the opportunity to study a diverse group of leaders who have changed the world for the better, they are able to recognize that the traits and characteristics they possess cross all lines of color, class, and culture. Finally, it is important to create a classroom environment where all students feel accepted, valued, and respected for the contributions they make.

10. **Develop critical and creative thinking skills.** Critical and creative thinking skills are nurtured through problem-solving and problem-posing activities that challenge students to question the answers, formulate their own ideas, and seek solutions that are not ordinarily considered. When higher-level thinking skills are embedded in the total school experience, students learn to apply and use these skills in other areas of their lives as well. Critical thinking, reasoning, reflecting, discussing, and applying new ideas are essential characteristics of a climate of learning that encourages students to think on a higher level, challenge existing ideas, and entertain new possibilities for the future.

*I see, I forget.*
*I hear, I remember.*
*I do, I understand.*
*~Chinese Proverb*

Products of a mind nurtured!

# Setting the Stage:

## Creating an Atmosphere of High Academic Achievement for All Students

Though all schools look different due to individual needs and resources, the following suggestions can be considered to develop a successful program that nurtures Young Scholar students.

**1. Provide Levels of GT Service.** Whether or not a student's potential develops depends on the match between the child and the nurturance they are provided. With appropriate levels of challenge and guidance, students will flourish and begin to recognize and develop their own strengths and abilities.

**2. Cluster Young Scholars.** If clustered into small groups within regular classrooms, Young Scholars can be nurtured, challenged, and can challenge each other. Clustering allows students to develop socially and emotionally as they collaborate with intellectual peers from similar backgrounds.

**3. Provide Support on Multiple Levels.** YS teachers nurture their students' social and emotional growth as they challenge students academically. As students gain a greater understanding of themselves and their roles in the world, they develop a sense of self-efficacy. As students' self-images develop, so does their willingness to take risks and raise expectations for their own achievement.

**4. Implement Flexible Instructional Groupings.** Learning experiences are most effective when they are differentiated for readiness levels, student interests, and/or learning profiles. Flexible instructional groupings allow teachers and specialists to tailor instruction in a way that provides appropriate levels of challenge and support for various learning styles and needs. Through ongoing assessment, groups may be formed and modified throughout the school year as students' strengths and needs change.

**5. Utilize Young Scholars Matrix.** (p. 12-14) The Young Scholars Curriculum Matrix provides suggestions of quality resources and materials to use with Young Scholars. These materials have been endorsed for use by the GT office because they encourage the critical thinking, creativity, and rigor that our Young Scholars need to reach their highest potential. See level III matrix for additional resource ideas for students in grades 3-6.

**6. Infuse Challenge through Curriculum.** Curriculum for Young Scholars should be modified to provide levels of challenge matched to students' readiness, interests, and learning profiles. Two key components of YS curriculum, Concept-Based Curriculum and the Parallel Curriculum Model, provide a framework for developing differentiated units that are standards-based.

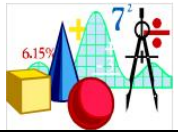
- **Concept-Based Curriculum**

  A concept is an idea that is timeless, abstract, broad, and can be connected to all areas of the curriculum. Through concept-based instruction, students learn to consider subject matter on a higher level that allows them to make connections between subjects and to the real world.

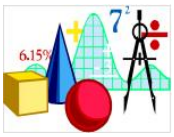
- **Parallel Curriculum Model**

  The Parallel Curriculum Model is an integrated framework for designing challenging, differentiated curriculum that is linked to state and national standards for learning. The four parallel approaches extend the depth and breadth of curriculum units to create an upward spiral of learning.

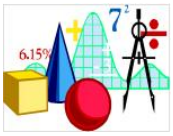
# Curriculum and Resources to Support Early Interventions Young Scholars

| Subject | Kindergarten | |
|---|---|---|
| **Mathematics**  | K-2 Response Lessons (24/7)<br>Primary Source Learning Experiences<br>*Patterns, Patterns Everywhere* (PCM – 24/7)<br>TOPS (Techniques of Problem Solving)<br>Activities Integrating Math & Science (AIMS)<br>*Fundamentals* | ThinkFun: Younger Players<br>Interact Simulations<br>Webquests K-2 Math<br>Renzulli Learning<br>Marcy Cook Math<br>Chess |
| **Social Studies**   | K-2 Response Lessons (24/7)<br>Primary Source Learning Experiences<br>*The Significance of the Flag* (24/7)<br>*Your Story, My Story* (PCM) | Interact Simulations<br>WebQuests K-2 Social Studies<br>Renzulli Learning<br>Odyssey of the Mind |
| **Language Arts**   | K-2 Response Lessons (24/7)<br>K-2 Socratic Seminar Guide (24/7)<br>Junior Great Books Read Aloud Series (K-1)<br>William and Mary Research Skills and Strategies for Elementary Students (24/7)<br>I-search (24/7)<br>Primary Source Learning Experiences | *Linking Books to Questions* (24/7)<br>WebQuests K-2 Language Arts<br>Renzulli Learning<br>Odyssey of the Mind<br><br>Destination Imagination |
| **Science**  | K-2 Response Lessons (24/7)<br>Project Clarion Unit: *How You're your Garden Grow* (24/7)<br>Project Clarion Unit: *How the Sun Makes Our Day* (24/7)<br>Project Clarion Unit: *Water Works and Magnet Quirks* (24/7)<br>Project Clarion Unit: *Survive and Thrive* (24/7)<br>*Save the Plants* (PCM, 24/7)<br>*Wetlands* (PCM, 24/7)<br>*The Human Body* (PCM, 24/7)<br>*Earth Patterns, Cycles and Change* (PCM, 24/7)<br>Primary Source Learning Experiences<br>*Dust Bowl* (W & M, PBL)<br>*It's An Ant's Life* (PCM - 24/7)<br>*Ant Colony* (PCM - 24/7)<br>*Discovering Ants and Me* (PCM – 24/7)<br>Exploravision<br>Webquests K-2 Science<br>Activities Integrating Math & Science (AIMS)<br>Odyssey of the Mind | Children's Engineering<br>Interact Simulations<br>Renzulli Learning<br>Destination Imagination |

# Curriculum and Resources to Support Early Interventions Young Scholars

| Subject | Grade 1 | |
|---|---|---|
| **Mathematics**  | K-2 Response Lessons (24/7)<br>Challenge 24<br>First in Math Online<br>*Discovering Math All Around Us* (PCM, 24/7)<br>Roads to Reasoning Series<br>Activities Integrating Math & Science (AIMS)<br>Nimble with Numbers<br>Interact Simulations<br>Puddle Questions for Math<br>Chess | Primary Source Learning Experiences<br>Primary Grade Challenge Math<br>TOPS (Techniques of Problem Solving)<br>Groundworks Series<br>*Fundamentals*<br>Marcy Cook Math<br>ThinkFun: Younger Players<br>Webquests K-2 Math<br>Renzulli Learning |
| **Social Studies**   | K-2 Response Lessons (24/7)<br>*Your Story, My Story* (PCM, 24/7)<br>*Maps: Where Am I?* (PCM, 24/7)<br>Interact Simulations<br>Renzulli Learning | Primary Source Learning Experiences<br>*The Impact of Inventions* (24/7)<br>*The Significance of the Flag* (24/7)<br>WebQuests K-2 Social Studies<br>Odyssey of the Mind |
| **Language Arts**   | K-2 Response Lessons (24/7)<br>K-2 Socratic Seminar Guide (24/7)<br>William and Mary Research Skills and Strategies for Elementary Students (24/7)<br>Primary Source Learning Experiences<br>*Linking Books to Questions* (24/7)<br>Renzulli Learning<br>Destination Imagination | *Beyond Words* (W & M)<br>JGB Read Aloud Series (K-1)<br>I-search (24/7)<br>*Organizing Vocabulary* (24/7)<br>WebQuests K-2 Language Arts<br>Odyssey of the Mind |
| **Science**  | K-2 Response Lessons (24/7)<br>Project Clarion: *How the Sun Makes Our Day* (24/7)<br>Project Clarion: *Water Works and Magnet Quirks* (24/7)<br>*Wetlands* (PCM, 24/7)<br>*Earth Patterns, Cycles and Change* (PCM, 24/7)<br>*The Impact of Inventions* (24/7)<br>Exploravision<br>Activities Integrating Math & Science (AIMS)<br>Interact Simulations<br>TIMS (Teaching Integrated Mathematics & Science)<br>Destination Imagination | Project Clarion: *Survive and Thrive* (24/7)<br>Project Clarion: *Budding Botanists* (24/7)<br>*Save the Plants* (PCM, 24/7)<br>*The Human Body* (PCM, 24/7)<br>*Dust Bowl* (W & M, PBL)<br>Primary Source Learning Experiences<br>Webquests K-2 Science<br>Children's Engineering<br>Renzulli Learning<br>Odyssey of the Mind |

# Curriculum and Resources to Support Early Interventions Young Scholars

| Subject | Grade 2 | |
|---|---|---|
| **Mathematics**  | K-2 Response Lessons (24/7)<br>*Exploring Mathematical Relationships* (PCM,24/7)<br>Primary Grade Challenge Math<br>TOPS (Techniques of Problem Solving)<br>Puddle Questions Assessing Mathematical Thinking<br>Roads to Reasoning<br>Activities Integrating Math & Science (AIMS)<br>Nimble with Numbers<br>ThinkFun: Younger Players<br>Webquests K-2 Math<br>Chess | Continental Math League<br>Challenge 24<br>First in Math Online<br>Primary Source Learning Experiences<br>Groundworks Series<br>*Think Tanks*<br>*Fundamentals*<br>Marcy Cook Math<br>Interact Simulations<br>Renzulli Learning |
| **Social Studies**   | K-2 Response Lessons (24/7)<br>*Your Story, My Story* (PCM, 24/7)<br>*Maps: Where Am I?* (PCM, 24/7)<br>*Determining Scarcity: Wants and Needs* (24/7)<br>WebQuests K-2 Social Studies<br>Odyssey of the Mind | Primary Source Learning Experiences<br>*The Impact of Inventions* (24/7)<br>*Explorers* (PCM, 24/7)<br>Interact Simulations<br>Renzulli Learning |
| **Language Arts**   | K-2 Response Lessons (24/7)<br>*Beyond Words* (W & M)<br>William and Mary Navigators Novel Guides Online<br>William and Mary Research Skills and Strategies for Elementary Students (24/7)<br>I-search (24/7)<br>Renzulli Learning<br>WebQuests K-2 Language Arts<br>Destination Imagination | K-2 Socratic Seminar Guide (24/7)<br>Touchstone Discussion Project<br>Philosophers Club (24/7)<br>JGB Series 2<br>Primary Source Learning Experiences<br>*Linking Books to Questions* (24/7)<br>*Organizing Vocabulary* (24/7)<br>Odyssey of the Mind |
| **Science**  | K-2 Response Lessons (24/7)<br>Project Clarion: *Budding Botanists at Work* (24/7)<br>Project Clarion: *The Weather Reporter* (24/7)<br>*Wetlands* (PCM, 24/7)<br>*Earth Patterns, Cycles and Change* (PCM, 24/7)<br>*What a Find* (W & M, PBL)<br>*Save the Plants – Accompany Publishing* Play<br>*Measured for Life – Accompany Publishing* Play<br>Children's Engineering<br>Activities Integrating Math & Science (AIMS)<br>TIMS (Teaching Integrated Mathematics & Science)<br>Renzulli Learning<br>Destination Imagination | Project Clarion: *What's the Matter (24/7)*<br>*Save the Plants* (PCM, 24/7)<br>*The Human Body* (PCM, 24/7)<br>Primary Source Learning Experiences<br>*Dust Bowl* (W & M, PBL)<br>Puddle Questions for Science<br>Exploravision<br>Webquests K-2 Science<br>*The Impact of Inventions* (24/7)<br>Interact Simulations<br>Webquests K-2 Science<br>Odyssey of the Mind |

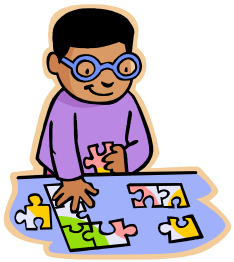
# Summer School, After School, and Intersession Programs

Developed to maintain continuity in education, summer school, after school, and intersession programs provide year-round learning opportunities for Young Scholars. Each program is built upon the following integral components:

- Multiage groupings are available for identified students in kindergarten through third grade, and in grades four through six.
- No tuition is required.
- Students participate in real-world investigations, field trips, and guest speaker presentations.
- Curriculum is created using the *Parallel Curriculum Model.*
- Robert Marzano's *Research-Based Strategies for Increasing Student Achievement* are incorporated into all lessons.
- Teachers participate in professional development.
- GT resource teachers work closely with classroom teachers to plan and design learning experiences for Young Scholars.

# Parent/Guardian Involvement and Support

Continued support for Young Scholars at home is integral to their academic and emotional development. Some enriching activities that parents/guardians can offer include:



- Visits to museums and historical sites
- Attending art performances
- Exploring community resources – taking family day trips and vacations
- Going to the library – set aside time for reading and investigating a variety of topics and reading genres
- Exploring various hobbies, collections, sports, clubs and/or activities of interest
- Volunteering time for a cause or project


- Researching a topic of personal interest
- Keeping a journal or diary; writing a family newsletter or letters to the editor
- Solving jigsaw puzzles, crosswords, and other word games and creating new ones
- Writing poems, prose, or plays; researching possible publication options
- Experimenting with a variety of art medium; taking art classes
- Singing and/or playing a musical instrument; composing music and/or lyrics
- Learning a dance form; choreographing dances
- Creating/producing musicals, ballets, opera; designing costumes and sets
- Reading cookbooks and recipes; be a chef – creating meals for the family
- Inventing new games, puzzles, toys, scientific experiments, or machines
- Designing futuristic clothing, sporting equipment, graphics, jewelry, commercial products, buildings, transportation vehicles, or communication methods
- Learning about horticulture/gardening; planting vegetables, flowers, or herb gardens

# Section II
# Creating a Diverse Learning Community


*Multicultural education, and all good teaching, is about transformation. I do not refer to just individual awareness but to a deep transformation on a number of levels – individual, collective, and institutional. Each of these is needed to foster student learning.*

Sonia Nieto - author of *The Light in Their Eyes*

# Creating a Diverse Learning Community

*Classroom Activities*

Research has found, one of the strongest and most effective ways to promote a diverse learning community, is to educate each of us on the similarities and differences our cultures share. For example, we all wear clothing – some looks very similar to each other and some looks very special and different. Our native clothing is what makes us unique and our cultures special. All cultures wear their native clothing more frequently during times of celebration such as holidays, ceremonies, and weddings. These issues and activities can help bring your class together as a well educated multicultural society rather than separate any one culture from being different. Activities such as these can be spread out over the course of the year and interwoven into your studies of other cultures both past and present.

## Clothing Customs

**Issues:**

What is acceptable in one culture can be unacceptable in another

**Activity:**

Have students bring in an item of ethnic or antique clothing, jewelry, or hair ornament belonging to a family member or friend. Have them share the artifact, where it comes from, on what occasion(s) it is/was used, how old it is, how the owner obtained it and other relevant information.

**Purpose:**

This activity provides students with an opportunity to appreciate cultural differences. With this activity, it is possible to show students how ordinary objects like clothing and jewelry can provide lessons in history and culture. It is important for students to also see that clothing customs are not static; they are constantly changing.

**Questions to Pose:**

- Do you or does anyone in your family have native clothing from another country? What kind? When do they wear it?
- In your family, is there a special way women or men are supposed to wear their hair?
- Does anyone in your family have a piece of ethnic jewelry or heirloom jewelry? Describe it.

**Further Study:**

Have students explore: clothing customs in other countries, the history of costume in the US and/or other countries, hairdo customs, body ornamentation, and the history and geography of clothing materials.

*I Felt Like I Was From Another Planet* by Norine Dresser

# Holidays

**Issues**

- Accepting customs that are different

**Activities:**

- Have students write a letter to someone planning to visit their classroom. In the letter, have them describe one holiday custom in their family that may surprise that person.
- Have students create a new holiday.
- Have students describe a favorite holiday that they celebrate as a family and why it is important.

**Purpose:**
In discussing holidays, students will find that even if they celebrate the same holiday, family traditions and variations exist. When teachers recognize and celebrate these differences, students are assured that there is no right or wrong way to celebrate.

**Questions to Pose:**

- What holiday(s) does your family celebrate?
- Which is your favorite family holiday? What do you do on this holiday?
- Has a friend ever introduced you to a new kind of holiday? Which one?
- Is there a holiday that you are curious about and would like to find out more about? Which one? Why?


**Further Study:**
Have students explore: Hanukkah, Kwanzaa, Chinese New Year, Obon Festival, Dia De Los Muertos, Juneteenth, Cheyenne Frontier Days, or Laguna Indian San Jose Day.

From *I Felt Like I Was From Another Planet* by Norine Dresser

# Food Taboos

**Issues:**

- Accepting someone who is different from yourself
- Not being judgmental about other people's ways
- What is acceptable in one culture can be unacceptable in another

**Activity:**
Have students pick a partner and pretend they are a food server and a customer in a restaurant. The food server has to talk to the customer into ordering a new and unusual food. Have them brainstorm the benefits or positive aspects of the food. Have them act out the "drama" for the rest of the class.

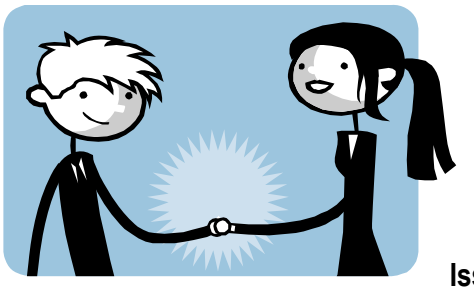
**Purpose:**
Food taboos have always separated different groups of people. This is the result of learned food habits. When students learn about other culture's food practices and taboos, it helps students to accept someone's practices that may be different from their own.

**Questions to Pose:**

- Are there foods that you are not permitted to eat because of cultural or religious beliefs?
- What is the most recent food that you have learned to eat and enjoy?
- Are there certain foods that you must eat only on specific occasions or certain days?

**Further Study:**
Have students explore cultural foods and food taboos.

From *I Felt Like I Was From Another Planet* by Norine Dresser



# Manners

**Issues:**

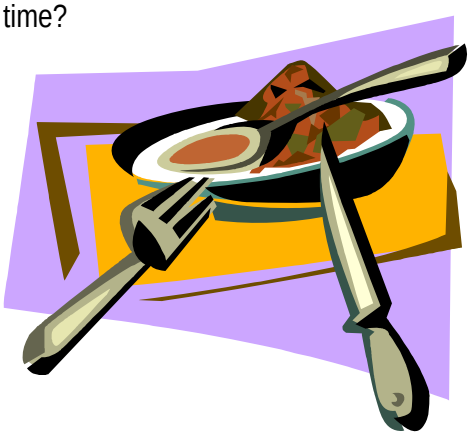
- Influence of cultural rules and customs that have been learned and accepted yet rarely questioned
- What is acceptable in one culture can be offensive to others

**Purpose:**
Students will learn that cultures are different. When students learn about other cultures' manners and table habits, it helps them accept practices that may be different from their own.

**Activity:**
Have students talk about a time when you made a mistake in eating rules when dining in a restaurant or at someone else's house or tell about a time when someone who had different eating rules visited your home.

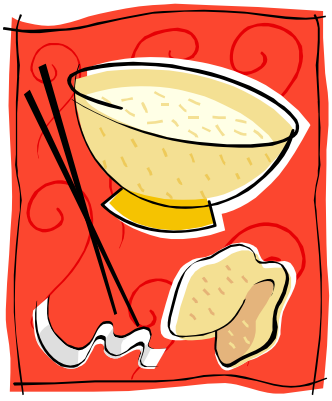
**Questions to Pose:**

- In your family, how do you show appreciation if you have enjoyed a meal?
- Does your family say grace or give a blessing before or after a meal?
- In your family, does everyone eat dinner around the table at the same time?
- What table rules do you and your family observe?



**Further Study:**
Have students explore etiquette and table rules in different countries.

From *I Felt Like I Was From Another Planet* by Norine Dresser



# Physical Contact

**Issues:**

- Taboo physical contact in our culture
- Physical contact in other cultures
- Taboo physical contact in other cultures

**Activity:**

Have students divide a piece of paper into two parts. Label one side Greeting Family Members and the other Greeting Friends. Have students illustrate how their family members greet one another. On the other side, have students illustrate how their family members greet a friend.

**Purpose:**

This activity as well as the ensuing discussion heightens students' awareness of differing perspectives on acceptable physical contact in various cultures. A lack of information can give a distorted view of reality that can be potentially harmful or embarrassing to students.

**Questions to pose:**

- When your family members greet friends, do they shake hands, bow, kiss cheeks or greet each other in another way?
- In your family, how do children say goodnight to parents? Good morning?

From *I Felt Like I Was From Another Planet* by Norine Dresser

# Family Life

**Issues:**

- Attitudes toward children around the world

**Activities:**

Have students make a list of chores you do at home. Next, have them compare your chore list with that of a classmate. Ask them to compare and contrast their list with their partner's. Ask them to consider the following question: Should children have a carefree childhood (no chores) or should children have responsibilities early in life so that they will be prepared for the future?

**Purpose:**

Allows students to consider that they have options to change or continue with current family patterns.

**Questions to Pose:**

- In your family, are you expected to do household chores for free, or do you receive an allowance for doing them?
- Should students receive an allowance or should chores be an accepted part of family participation?

**Further Study:**

Have students explore child raising customs around the world, children's responsibilities, and family member roles.

From *I Felt Like I Was From Another Planet* by Norine Dresser

# Prejudice

**Issues:**

- Accepting someone who is different
- Stereotypes
- Xenophobia

**Activities:**

Find two objects from nature, such as two leaves from the same tree, two rocks, two peas, two kernels of corn, or two flowers of the same kind. Ask students to make a list of how the two objects are similar and how they are different. Have students observe them for a few minutes every day for at least three days and have them keep adding to their list. At the end ask them what they learned from the activity.

**Purpose:**

The purpose of the activity is that all things in nature are unique; even identical twins have differences. Students learn that it is important to reach out to those who are different than us – as we can learn so much from people who are different.

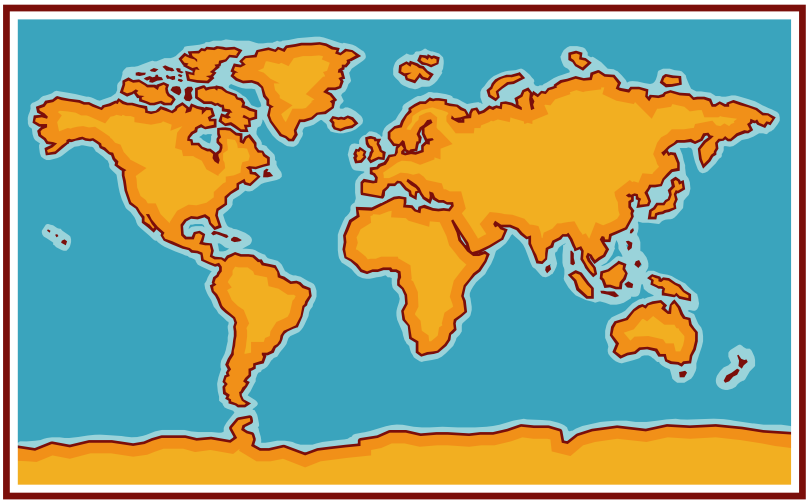
**Questions to Pose:**

- Have you ever had a friend who was different than you?
- What did you learn from that person?

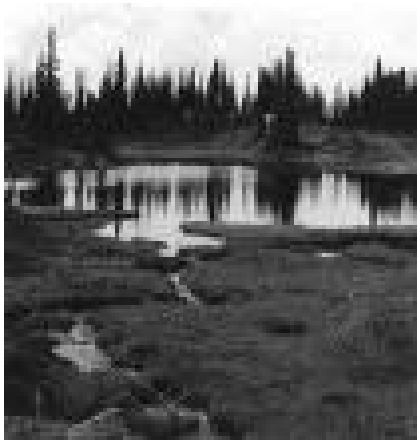
**Further Study:**

Have students explore other countries and their heroes' contributions.

From *I Felt Like I Was From Another Planet* by Norine Dresser



# Section III
# Identifying Young Scholars



*I May, I might, I must*

*If you will tell me why the fence*
*appears impassable, I then*
*will tell you why I think that I*
*can get across it if I try.*

Marianne Moore

**Identification at each school must have:**

- **A screening committee to include a wide spectrum of who works with the students (ex. guidance counselor, reading specialist, math specialist, special education, ESOL, art, music, PE, etc.)**
- **Gifted and Talented Resource Teacher facilitating conversations about the students and recording notes to keep on file at the school for future reference**

*When people keep telling you that*
*you can't do a thing; you kind of like to try it.*

Young Scholar, grade three

# Young Scholar Screening Timeline

The following section provides information and procedures for screening potential Young Scholar students. It provides an outline with instructions for any school to use when screening children in grades K-6 for participation in the Young Scholars program. Please note that this process may be used in its entirety or tailored to meet the needs of individual schools.

## September/October

- Meet with school staff members at a staff meeting, a PLC meeting, or a team meeting to share the YS initiative; the YS PowerPoint and/or DVD may be used.

- Highlight the following important information when showing the YS PowerPoint/DVD overview to school staff:

    - Young Scholars are students from diverse cultural, linguistic, and ethnic backgrounds who are at risk of not being identified by traditional methods for gifted programs. These students have been historically overlooked for any and all programs where students are considered gifted.

    - The YS model provides **access** to resources and experiences that nurture gifted potential, **affirmation** of their potential to develop their self-confidence, and **advocates** who ensure that their potential is recognized and developed.

    - The screening process is more flexible than regular GT screening – erring on the side of inclusion. A combination of Naglieri test scores, GBRS scores, Gifted Behavioral Continuum letters, anecdotal records, portfolios, YS Behavioral Identification card, and work samples that reflect the behaviors on the continuum and connect with the GBRS may be used. (See overview for specific details.)

    - Screening takes place in all grade levels and the first meeting will occur after classroom teachers have had time to review general information about the identification process and plans for implementation.

- Explain that there will be an ongoing discussion about such students. Teachers should use the blue folder to keep anecdotal notes and work samples for all students demonstrating gifted potential.

- Each student must be considered using the Young Scholar Student Profile (page 32). Refer to page 29 for further explanation.

- After classroom teachers have had the opportunity to think about each of their students, establish a list of students to *consider* for the Young Scholars program and begin collecting data on those individuals.

- Encourage teachers to get to know their students using a variety of interest surveys in order to find out the learning styles, interests, and preferences of their students (See section V).

- Keep all student documents together for the purpose of establishing a portfolio.

## November/December

- Meet with grade level teams to revise list of potential YS students based on the Young Scholar Student Profile (p. 32), beginning of year assessments, and content indicators.

- While meeting with grade level teams, explain the Gifted Behaviors Continuum (p. 33) and the importance of collecting work samples that help to provide information on how we service students. Teachers should know that both you and they should be collecting samples to include in a portfolio kept of all Young Scholars.

- Using the Gifted Behaviors Continuum (p. 33) to identify Young Scholars is a key factor in ensuring the success of your program.

    - Helps identify student strengths progressing over time through intensity, frequency, and complexity

    - Based on eight targeted behavioral areas **(Perspective, Strategic, Communicative, Resourceful, Creative, Curious, Leadership, and Resilient)** that provide additional support for creating GBRS scores for each student

- The Gifted Behaviors Rating Scale (p. 35) relates to the complexity and consistency of the behaviors you will use to identify student strengths. The GBRS scores should match the student behaviors on the behavioral continuum.

- In addition, several Response and Model Thinking lessons have been highlighted in Section III. These lessons have been chosen because they clearly allow students to demonstrate gifted behaviors.

    - These lessons include rubrics for teachers showing what emergent, novice, maturing, and independent behaviors might look like for each of the selected lessons and targeted behaviors.

- Allow teachers time to review the documents, ask questions, and gain clarification before evaluating their students.

- As you plan with grade level teams, revisit the behavioral continuum and blue folder with teachers and specialists in order to demonstrate the effectiveness of using these tools. Remind teachers that this information will be invaluable when establishing a sound list of YS students during screening.

- Continue working with previously identified Young Scholars.

- Use the Gifted Behaviors Continuum (p. 33) and suggested language when consulting with teachers about students.

- Continue to provide classroom teachers with resources and ideas for challenging potential and current Young Scholars.

## February/March/April

- Complete screening for YS students in February to secure students for summer school (see p. 36 for Young Scholars Screening Meeting Procedures).
    - Invitation to and registration for YS summer school begins in April, which is why screening must take place prior to May.
- Continue working with the identified Young Scholars and encourage teachers to refer to additional students who are demonstrating evidence of advanced academic potential in their classrooms.
- New students in grades K-6 that may have recently entered FCPS may be screened at any time.
- Please be reminded that each student must have a YS code in SASI if they are a Young Scholar student.
- Invite Young Scholars to the YS summer school program.
    - Students and parents should be made aware that YS is an enrichment summer program, not a remedial class.
    - Young Scholar summer classes should have between 14 and 18 students, depending on travel and transience habits at your school, you may need to invite up to twice that many students to fill a class.
    - Sending home information in the students' home languages will allow for more complete understanding of the program and aid in return of signed registration forms.
    - Keep a careful list of students who return registration forms and the date they were returned, some classes fill before all students have returned forms.

## May/June

- Continue to invite students to the summer program. Follow-up (possibly using parent liaison) with those students who have not returned forms.
- Hold parent meeting and explain YS summer school (optional but suggested).
- Continue to collect and organize summer school registration forms.
- Take completed Summer School Registration forms to an ACE Summer School registration office.
    - Make and keep a copy for GTS, YS SS teachers, building administrator, and YS Lead.

# Overview of the Identification Items

**Young Scholar Student Profile (p. 32):**
A document designed to initiate a conversation ensuring that students who have been historically overlooked for gifted programs are considered based on the students' **access** to resources and experiences that nurture gifted potential, **affirmation** of their potential to develop their self-confidence, and **advocates** who ensure that their potential is recognized and developed.

**Gifted Behavioral Continuum (p. 33):**
Structured to show a continuum of intensity, frequency, and complexity of demonstrated behaviors by Young Scholar students and how they develop over time. Students are observed and evaluated on the following categories: Perceptive, Strategic, Communicative, Resourceful, Creative, Curious, Leadership, and Resilient. Each student progresses along the continuum based on four target descriptors: **Emergent, Novice, Maturing, and Independent**. Below is an explanation of each descriptor:

| Emergent (1) | Novice (2) | Maturing (3) | Independent (4) |
|---|---|---|---|
| Exploratory and discovery behaviors demonstrated sporadically or rarely. | Application behaviors observed occasionally; acquires and integrates knowledge. | Analysis behaviors observed frequently; extends and refines learning. | Synthesis and evaluative behaviors observed consistently; uses knowledge meaningfully. |

**Young Scholar Behavioral Identification Card (p. 34):**
This card is used in conjunction with the rubrics and lessons to determine a student's progress through the continuum of gifted behaviors. This behavior identification card also helps find a student's area of strength by correlating the target descriptors as gifted behaviors are observed. Quantitative data also recorded on this card are the NNAT scores (kindergarten and second grade) and the GBRS score each year. This card should be completed during screening and kept in a student's portfolio.

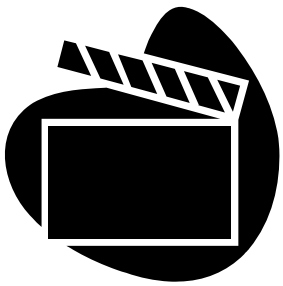
**Blue Folder/Work Samples:**
The blue folder provides a working portfolio for classroom teachers to use in combination with Response/Model Thinking Lessons. Work samples, rubrics, and assessments may be kept inside the folder for future review. It provides a place for teachers and GT Resource teachers to write anecdotal notes of observations made during and after each lesson. In addition, the card will be used when identifying students for gifted services. It gives a description of the gifted levels of services, suggested evidence of gifted behaviors, and provides a place to record lessons by both GTS and classroom teachers. The gifted behaviors continuum is on the front cover for quick reference by classroom teachers and GT Resource teachers.

**Portfolio:**
A portfolio is an assessment tool at its best. A student portfolio is a tool used to encourage teachers to keep work that demonstrates student's strengths and progress throughout their elementary experience. Both the GT Resource teacher and classroom teachers should add to the student's portfolio throughout the year. The GT Resource Teacher will maintain the portfolio to ensure that the materials and records are updated from year to year. A portfolio can also serve as a learning strategy by having students focus on a process, judge their own work, guide their own learning, and become responsible learners. Having an established portfolio makes learning fun for students while sharing responsibility between the student and teacher.

**Portfolio pieces may include the following:**

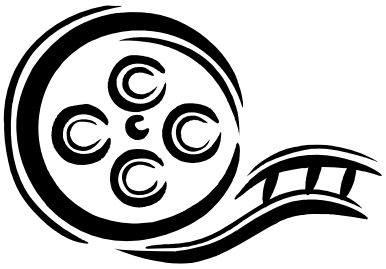
- Work Samples that demonstrate strengths, choices, and learning behaviors
- Student self-assessments or reflections of their work
- Goals set by students, how they will meet them, and if they were accomplished
- Rubrics, anecdotal notes, and products generated by Response and Model Thinking Lessons
- Problem finding and solving strategies
- Learning style/multiple intelligence preferences
- Reflective writing (all content areas)
- Drawings/art work (preferably copied)
- Photographs

**Portfolio Scenarios:** Below are two different scenarios that a GT Resource Teacher might encounter that provide them with pieces to include in a Young Scholar's portfolio.



## Scene 1

One day while conducting a Response Lesson in a creative kindergarten class, Miss GTS notices that Scholar Stephan has an exceptional ability to summarize through drawings. His drawings are labeled carefully and have amazing color! Miss GTS makes a mental note while asking some probing questions about the topic being discussed. She then realizes he has talent! Miss GTS points this out to the teacher Mr. Smarty, who explains that Sammy has exhibited other gifted behaviors as well. Together, they decide to keep a close eye on this student along with a few others. They begin by collecting work samples and writing notes about those samples using the GBRS and Young Scholars Behavior Identification Card. Aha - a child is nurtured and a portfolio is born!



## Scene 2

Before picking up her students for a weekly pull-out, a classroom teacher stops Miss GTS in the hallway and asks if Scholar Sarah can join the group. The teacher, Ms. Brilliant, has had opportunities to work with potentially gifted students and believes that Sarah is exhibiting some of those behaviors. Miss GTS accepts the student with open arms and thoughtfully reminds the teacher about the power of "two heads are better than one." She asks Ms. Brilliant to begin compiling the work samples that identify the student's gifted behaviors. Miss GTS considerately asks the teacher to keep the documents in the blue folder along with anecdotal notes about the student. As Miss GTS works with Sarah, she too sees the potential giftedness. Together, Ms. Brilliant and Miss GTS work together to meet the needs of the learner. More importantly, because the two of them are collecting portfolio pieces, they can collaborate to see similarities and differences that identify Sarah's areas of strength.

# DO… DON'T…

| Young Scholar Profile Sheet | |
|---|---|
| Do…<br>Use the profile sheet to screen all students<br><br>Use the information to jumpstart conversations about children<br><br>Use the information to determine the students' level of access, affirmation, and advocates | Don't…<br>Give preference to any one area over the other in order to make a decision about a student<br><br>Use a checklist or a piece of documentation for student files |
| **Gifted Behaviors Continuum** | |
| Do…<br>Realize that each student will progress at his or her level<br><br>Use best professional judgment to record observable behaviors<br><br>Use the continuum as a point of reference when looking at students over a period of time<br><br>Use as a means to highlight student strengths<br><br>Make reference to the GBRS and how this information correlates for screening purposes | Don't…<br>Compare students using the continuum<br><br>Use the information as a way to keep students' out of the YS program<br><br>Use as a way to document students weaknesses |
| **Behavioral Identification Card** | |
| Do…<br>Allow the card to follow students as a record of student strengths<br><br>Complete the card during screening | Don't…<br>Use the form as an end all, be all, but as another piece of information about the student |
| **Young Scholars Curriculum Matrix** | |
| Do…<br>Refer to the YS Curriculum Matrix for optimal resources that provide quality instruction for Young Scholars | Don't…<br>Hesitate to ask for additional training on resources recommended on the Young Scholars Curriculum Matrix |

# Young Scholar Student Profile

This graphic organizer is designed to initiate conversations about all learners to determine if each child in the school is a potential candidate for the YS Program. Young Scholars are students demonstrating gifted potential, but may not be identified through regular gifted screening methods due to their access to gifted services and resources, advocates seeking appropriate services and challenges for their children, or affirmation of their own abilities in the school atmosphere. Their potential for success is high.

| | | | | |
|---|---|---|---|---|
| **Ethnicity** | Hispanic | Multiracial | Un-designated | Asian/ Pacific Islander |
| | Black | American Indian/ Alaskan | Native Hawaiian | White |
| **Advocacy Source** | School | Community or Mentor Program | Single Adult | Parents or Guardians |
| **Academic Background Knowledge** | Little | Limited | Sufficient | Extensive |
| **English Language Proficiency** | English Proficient | ESOL Receiving services Level 1& 2 | ESOL Receiving Services Level 2 & 3 | LEP Not receiving services |
| **Other factors** | Socio-economic | Exceptionality | Dual-exceptionality | |

# Gifted Behaviors Continuum

← Continuum of Intensity, Frequency, and Complexity of Demonstrated Behaviors →

| Behavioral Areas | Emergent (1)<br>Exploratory and discovery behaviors demonstrated sporadically or rarely. | Novice (2)<br>Application behaviors observed occasionally; acquires and integrates knowledge. | Maturing (3)<br>Analysis behaviors observed frequently; extends and refines learning. | Independent (4)<br>Synthesis and evaluative behaviors observed consistently; uses knowledge meaningfully. | GBRS Connections<br>Student demonstrates exceptional: |
|---|---|---|---|---|---|
| **Perceptive** | Recognizes basic patterns in the environment | Applies understanding of similarities and differences | Seeks and examines novel patterns and relationships | Transfers patterns and relationships to new situations; looks beyond the obvious to notice verbal and nonverbal subtleties | **Ability to Learn**<br>• Memory<br>• In-depth knowledge<br>• Persistent/Intense focus<br>• Sensitivity to environment<br>• Ability to adapt to new cultures<br>• Ability to learn quickly/easily<br>• Acquisition of a new language<br>• Ability to independently make connections |
| **Strategic** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems | |
| **Communicative** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics | **Application of Knowledge**<br>• Reasoning skills<br>• Problem solving strategies<br>• Ability to interpret symbols<br>• Understanding of abstract concepts<br>• Technology skills<br>• Ability to transfer learning to other situations<br>• Communication through the arts |
| **Resourceful** | Recognizes and uses available resources to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive | |
| **Creative** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses | **Creative/Productive Thinking**<br>• Ability to see the familiar in unusual ways<br>• Ability to think independently of peers<br>• Inventive skills<br>• Fluency and flexibility in thinking<br>• Expression of ideas, feelings, and beliefs<br>• Sense of humor<br>• Generation of new ideas<br>• Ability to perceive and manipulate patterns |
| **Curious** | Asks questions on topics of interest | Demonstrates curiosity and actively seeks new ideas | Asks deep questions to initiate investigation and meaningful dialogue | Asks complex questions to explore, test, and evaluate sustained investigations | |
| **Leadership** | Interacts effectively with others on assigned tasks | Initiates ideas and is sensitive to the contributions of others | Refines and extends the idea of others to build and foster the talents of a group | Organizes groups in various settings to implement plans of action, seeing complex tasks through to completion | **Motivation to Succeed**<br>• Ability to lead groups<br>• Ability to meet personal and academic challenges<br>• Independent exploration/research skills<br>• Adult conversation skills/poise<br>• Sense of loyalty<br>• Adaptation skills<br>• Personal standards in areas of strength and interest<br>• Initiative, self-direction, and confidence |
| **Resilient** | Remains on task when faced with a difficult task | Demonstrates ability to work through difficult times in and out of the school environment | Recovers quickly from environmental and personal challenges | Exudes strength in times of personal hardship and maintains integrity | |

# Young Scholar Behavioral Identification Card

Student Name: _____ School: _____
Kindergarten Teacher: _____ Grade One Teacher: _____
Grade Two Teacher: _____ Grade Three Teacher: _____
Grade Four Teacher: _____ Grade Five Teacher: _____
Grade Six Teacher: _____ ID Number: _____

NNAT Scores: K _____ Grade Two: _____ Other Test Data: _____

| | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| **Perceptive**<br>**E**mergent - Recognizes basic patterns in the environment<br>**N**ovice - Applies an understanding of similarities and differences<br>**M**aturing - Seeks and examines novel patterns and relationships<br>**I**ndependent - Transfers patterns to new situations; notices subtleties | | | | | | | |
| **Strategic**<br>**E**mergent - Employs learned thinking strategies to solve problems<br>**N**ovice - Investigates alternative solutions to problems<br>**M**aturing - Analyzes situations and diligently works to find multiple solutions<br>**I**ndependent - Analyzes and tests multiple theories, verifying conclusions | | | | | | | |
| **Communicative**<br>**E**mergent - Expresses ideas simply but clearly<br>**N**ovice - Expands on ideas and provides additional information<br>**M**aturing - Compares and contrasts, and gives examples<br>**I**ndependent - Initiates and elaborates on complex ideas | | | | | | | |
| **Resourceful**<br>**E**mergent - Recognizes and uses available resources to complete a task<br>**N**ovice - Completes tasks using resources in a traditional manner<br>**M**aturing - Adapts resources to use in a new and different way<br>**I**ndependent - Transfers understandings to new situations; inventive | | | | | | | |
| **Creative**<br>**E**mergent - Explores ideas and materials freely<br>**N**ovice - Expands on ideas and adds details<br>**M**aturing - Uses fluency and flexibility to view ideas in unusual ways<br>**I**ndependent - Demonstrates innovative ideas to show new relationships | | | | | | | |
| **Curious**<br>**E**mergent - Asks questions on topics of interest<br>**N**ovice - Demonstrates curiosity and actively seeks new ideas<br>**M**aturing - Asks questions to initiate investigation and meaningful dialogue<br>**I**ndependent - Asks complex questions to explore, test, and evaluate | | | | | | | |
| **Leadership**<br>**E**mergent - Interacts effectively with others on assigned tasks<br>**N**ovice - Initiates ideas and is sensitive to the contributions of others<br>**M**aturing - Refines and extends others ideas, fosters group talents<br>**I**ndependent - Implements action plans to see complex tasks to completion | | | | | | | |
| **Resilient**<br>**E**mergent - Remains on task when faced with a difficult task<br>**N**ovice - Demonstrates ability to work through difficult times<br>**M**aturing - Recovers quickly from environmental and personal challenges<br>**I**ndependent - Exudes strength in times of hardship and maintains integrity | | | | | | | |
| **GBRS Score (4 – 16)** | | | | | | | |

Student Name_____ Grade_____ Date_____

Fairfax County Public Schools

# GIFTED BEHAVIORS RATING SCALE

A Gifted Behaviors Rating Scale (GBRS) is required for screening for GT services.

Review each category and the list of descriptors. Assign to each student an overall rating using the scale below.
Add the four scores and place in the total box.

**Behaviors Demonstrated:**
**1 – rarely**
**2 – occasionally**
**3 – frequently**
**4 – consistently**

**TOTAL** ☐

1. Exceptional Ability to Learn ☐

Exhibits exceptional memory
Demonstrates in-depth knowledge
Displays persistent / intense focus on one or more topics
Is highly reflective and/or sensitive to his/her environment
Readily learns and adapts to new cultures
Learns quickly and easily
Is acquiring language at a rapid pace
Learns skills independently and makes connections without formal instruction

2. Exceptional Application of Knowledge ☐

Demonstrates highly developed reasoning
Employs complex problem-solving strategies
Uses and interprets advanced symbol systems in academics, visual arts, and/or performing arts
Understands / applies / transfers abstract concepts
Uses technology in advanced applications
Acts as an interpreter, translator, and/or facilitator to help others
Makes advanced connections and transfers learning to other subjects / situations / cultures
Communicates learned concepts through role playing and/or detailed artwork

3. Exceptional Creative / Productive Thinking ☐

Sees the familiar in unusual ways / Does not conform to typical ways of thinking or perceiving
Is highly creative, and/or inventive
Demonstrates unusual fluency and flexibility in thinking and problem-solving
Expresses ideas, feelings, experiences, and/or beliefs in original ways
Displays keen sense of humor
Is highly curious
Easily generates new ideas / new uses / new solutions
Perceives and manipulates patterns, colors, and/or symbols

4. Exceptional Motivation to Succeed ☐

Demonstrates ability to lead large and/or small groups
Meets exceptional personal and/or academic challenges
Independently explores, researches, questions topics / ideas / issues
Is poised with adults and engages them in adult conversations
Exhibits a strong sense of loyalty and responsibility
Demonstrates exceptional ability to adapt to new experiences
Strives to achieve high standards especially in areas of strength and/or interest
Shows initiative, self-direction, and/or high level of confidence

**Directions for Completing YS Identification Form**

1. The YS Identification Form may be filled out by the classroom teacher **electronically** or it may be printed out and completed **by hand**.

2. **Student Information:** Fill in the information about the student being referred for YS identification on the top part of the YS Form.

3. **Section I: Gifted Behaviors Continuum and Rating Scale**

- **Gifted Behaviors Continuum:** Using the behavior scale, (see top of this section) 1-Emergent to 4-Independent, rate the student using the eight gifted behaviors explanations. Put the number in the box on the right. Write the total GB Continuum Score in the box at the bottom of chart.
- **GBRS Connection:** Circle the behavior(s) observed in each of the four gifted behaviors categories. Write the number that corresponds with the frequency the behavior is observed (1-rarely to 4-consistently) in the box on the right. Write the total GBRS score in the box provided at the bottom of the chart.

4. **Section II: Specific Examples of Verbal and/or Non-verbal Behavior**
   Write one or two sentences describing a specific example of the student demonstrating verbal and/or non-verbal gifted behavior. An example of a demonstrated non-verbal behavior might be: *When the students were asked to draw their favorite animal, Sally drew three animals- one for her favorite sea animal; one for her favorite forest animal; and one for her favorite desert animal.*

5. **Section III: Young Scholars Referral Questions**
   Put an "X" in the yes/no box at the end of each question.

6. **Section IV: Young Scholars Student Profile**
   Circle <u>one</u> descriptor in <u>each</u> of the <u>five</u> categories that applies to the student.

7. **Section V: Comments**
   Use this section to write at least one specific reason why you think this student is a candidate for Young Scholars. This comment is helpful for the student's future teachers to understand what gifted behaviors you observed in this student.

**Committee Decision: ☐ Monitor ☐ DE ☐ Young Scholars**

**Island Creek ES**
**Referral Form for Level II GT Services**
**Differentiated Services or Young Scholars** (Circle one)

Name: Gender: ☐ Male ☐ Female
Current grade: Classroom teacher:
Referred by: Date:
Ethnic code: Primary language: ESOL level:
NNAT: _____ CogAT: *Verbal*_____ *Non-verbal* _____ *Quantitative* _____

***Explanation of Standard Age Scores (SAS):***
*85 or less –* ***below average****; 85-115 –* ***average****; 115-129 –****above average****(school-based scores) and 130-150 –* ***superior****(center-based scores)*

Use the behavior scales below to indicate the frequency the gifted behaviors have been observed:
**1** – Emergent/Rarely **2** – Novice/Occasionally **3** – Maturing/Frequently **4** – Independent/Consistently

| I. Gifted Behaviors Continuum | | GBRS Connection | | |
|---|---|---|---|---|
| **Perceptive** | | **Ability to Learn** | | |
| Emergent – Recognizes basic patterns | | Memory | In-depth knowledge | |
| Novice – Applies an understanding of similarities and differences | | Persistent/Intense focus | Sensitivity to environment | |
| Maturing – Seeks and examines novel patterns and relationships | | Ability to adapt to new cultures | Ability to learn quickly/easily | |
| Independent – Transfers patterns to new situations; notices subtleties | | Acquisition of a new language | Ability to independently make connections | |
| **Strategic** | | **Application of Knowledge** | | |
| Emergent – Employs learned thinking strategies to solve problems | | Reasoning skills | Problem solving strategies | |
| Novice – Investigates alternative solutions to problems | | Ability to interpret symbols | Understanding of abstract concepts | |
| Maturing – Analyzes situations and diligently works to find solutions | | Technology skills | Ability to transfer learning to other situations | |
| Independent – Analyzes and test mult. Theories, verify conclusions | | Communication through arts | | |
| **Communicative** | | **Creative/Productive Thinking** | | |
| Emergent – Expresses ideas simply but clearly | | Ability to see the familiar in unusual ways | Ability to think independently of peers | |
| Novice – Expands on ideas and provides additional information | | Inventive skills | Fluency and flexibility in thinking | |
| Maturing – Compares and contrasts, and gives examples | | Expression of ideas, feelings, beliefs | Sense of humor | |
| Independent – Initiates and elaborates on complex ideas | | Generation of new ideas | Ability to perceive and manipulate patterns | |
| **Resourceful** | | **Motivation to Succeed** | | |
| Emergent – Recognizes and uses available resources to complete tasks | | Ability to lead groups | Ability to meet personal and academic challenges | |
| Novice - Completes tasks using resources in a traditional manner | | Independent exploration/research skills | Adult conversation skills/poise | |
| Maturing – Adapts resources to use in a new and different way | | Sense of loyalty | Adaptation skills | |
| Independent – Transfers understandings to new situations; inventive | | Personal standards in areas of strength and interest | Initiative, self-direction, and confidence | |
| **Creative** | | | | |
| Emergent – Explores ideas and materials freely | | | | |
| Novice – Expands on ideas and adds details | | | | |
| Maturing – Uses fluency and flexibility to view ideas in unusual ways | | | | |
| Independent – Demonstrates innovative ideas to show new relationships | | | | |
| **Curious** | | | | |
| Emergent – Ask questions on topics of interest | | | | |
| Novice – Demonstrates curiosity and actively seeks new ideas | | | | |
| Maturing – Ask questions to initiate investigation & meaning dialogue | | | | |
| Independent – Asks complex questions to explore, test, and evaluate | | | | |
| **Leadership** | | | | |
| Emergent – Interacts effectively with others on assigned tasks | | | | |
| Novice – Initiates ideas and is sensitive to the contribution of others | | | | |
| Maturing – Refines and extends other's ideas, fosters group talents | | | | |
| Independent – Implements action plan to see complex task to completion | | | | |
| **Resilient** | | | | |
| Emergent – Remains on task when faced with difficult tasks | | | | |
| Novice – Demonstrates ability to work through difficult times | | | | |
| Maturing – Recovers quickly from environmental & personal challenges | | | | |
| Independent – Exudes strength in times of hardship & maintains integrity | | | | |
| Total GB Continuum Score: | | | Total GBRS Score: | |

II**. Provide an example of specific *verbal and/or *non-verbal behavior that helps illustrate the child's strengths and need for Level II GT services.**

| Verbal: | Nonverbal: |
|---|---|
| | |

III. **Young Scholars Referrals**

- Does this student lack **access** to enrichment opportunities, but need them? ☐ Yes ☐ No
- Does this student lack **affirmation** of academic ability from home or in their environment? ☐ Yes ☐ No
- Does this student lack **advocates** supporting and promoting their abilities? ☐ Yes ☐ No
- Does this student have **potential** as evidenced by their thinking ability, but who may not have all the basic skills due to being a second language learner or some other exceptionality? ☐ Yes ☐ No

IV. **Young Scholars Student Profile**

This graphic organizer is designed to assist in determining if a child is a potential candidate for the YS Program.

Circle <u>one</u> descriptor in <u>each</u> of the <u>five</u> categories that applies to this student.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Ethnicity** | Hispanic | Black | Multiracial | American Indian/ Alaskan | Un-designated | Native Hawaiian | Asian/Pacific Islander | White |
| **Advocacy Source** | School | | Community/Mentor Program | | Single Adult | | Parents/Guardians | |
| **Academic Background Knowledge** | Little | | Limited | | Sufficient | | Extensive | |
| **Other Factors** | Socio Economic | | Exceptionality | | Dual Exceptionality | | | |
| **English Language Proficiency** | English Proficient | | LEP – Not receiving services | | ESOL – Receiving Services (Levels 2+3) | | ESOL – Receiving Services (Levels 1+2) | |

V. Comments Section (Why do you think this student is a candidate for Young Scholars?)

| |
|---|
| |
| |
| |
| |
| |

# Young Scholars Screening Meeting Procedures

## Before the meeting:

1. All student identification materials should be placed in the student's portfolio to aid in screening and identification. This portfolio should be maintained by the GT Resource teacher and should be kept with GT files from year to year.
2. Meet with the staff (earlier in the school year) and Jigsaw the Young Scholar video with school staff in order to help establish a clear view of who Young Scholar students are in your building.
3. Share with classroom teachers the portfolio you have begun and plan to make additions during the screening meeting. Documents that you may wish to include are: the GBRS, anecdotal notes, response/model thinking lesson responses, etc. Encourage teachers to include these forms of assessment and work samples in the blue folder when they return for the screening meeting.
4. Review the list of students being considered for YS identification using the Young Scholar Student Profile (p. 35).
5. Invite teachers, an administrator, and specialists who work with specific grade levels/teams to participate in the screening process. Select a date and time to meet.
6. Meet with your SAI to retrieve a copy of a test data sheet for all students being considered for the YS program.

## During the meeting:

1. Emphasize that we are looking for students who may not be identified through the traditional gifted screening process, (e.g., ESOL students, students from poverty, and underrepresented minority groups).
2. Invite teachers to present the students one at a time. The teacher should supply the supporting documentation to share with the group.
3. Together, the committee completes the YS Behavioral Identification Card and determines if the student should receive the Young Scholar distinction or should the student be monitored for future services. The YS Behavioral Identification Card, GBRS with commentary, test data sheet, and any work samples (or copies of) should be kept in the student portfolio maintained by the GT Resource teacher. Students not labeled YS may also have a folder that will be used to continue to monitor the student for services in later years.

## After the meeting:

1. Combine current and newly enrolled YS students to create a list for teachers and yourself.
2. Alert your Student Information Assistant to enter YS codes for all identified Young Scholars in the student atom. All students that were considered for YS services should be entered in SASI as a referral for that school year.
3. If the schedule permits, invite newly identified YS students to an already existing group and observe behaviors using the continuum.
4. Invite all YS students to summer or intersession programs.
5. Begin your long-range plan for working with YS students for the upcoming school year.

## PUT ON SCHOOL LETTERHEAD

Dear Parents/Guardians:

Staff members who work with _____ have recommended that he/she be included in the Young Scholars Initiative at our school. The goal of Young Scholars is to nurture high academic potential at an early age so that students will be prepared to engage in challenging subject matter and rigorous courses in upper-elementary school and beyond.

Young Scholars receive documented extension activities in their educational program in one or more curriculum areas. Most services take place within the regular classroom and are provided by the classroom teacher. These may include adaptations provided within large- or small-group settings or as individual extensions to the instructional program.

Please sign the permission form below and return it to your child's teacher. If you have questions, please contact your child's classroom teacher or the Gifted and Talented specialist assigned to your child's school.

Sincerely,

GT Resource Teacher
School

.....

## YOUNG SCHOLARS PERMISSION FORM

Child's Name: _____

Grade Level: _____ Classroom Teacher: _____

❑ I have read the information regarding Young Scholars and give permission for my child to receive differentiated services during the school year. I understand that documentation for the services provided will be included in my child's student scholastic record.

❑ I do not give permission for my child to participate in Young Scholars at this time.

_____ _____
Parent/Guardian Signature Date

**PLEASE RETURN THIS FORM TO YOUR CHILD'S CLASSROOM TEACHER.**

# Section IV
# Lessons and Rubrics


*Beyond Words*
William and Mary Language Arts Unit

# Response and Model Thinking Lessons

*Response Lessons* (for students in grades K-2) are open-ended lessons designed to develop critical and creative thinking skills in all students. These lessons align with Level I gifted services – services for ALL students. These lessons can be used to identify and nurture gifted potential among students. The problem solving skills, thinking processes, and student products are all observable means of assessment. Teachers look for:

- **Quality** – a unique caliber of performance or product and high standard of excellence
- **Intensity** – the amount of intellectual, emotional, or physical energy that the child invests in the behavioral activity
- **Frequency** – how often the behavior is demonstrated in proportion to the opportunities to do so

*Model Thinking lessons* (for students in grades 3-6) are designed to teach students how to think more effectively. Each lesson focuses on specific thinking strategy. The lessons may be used to develop creative and critical thinking skills in all learners. Each thinking strategy can be leveled to meet the needs of all learners in any curriculum area. Teachers are evaluating students using the three categories above as well.

# Using Rubrics to Assess Student Work

In *Solving the Assessment Puzzle Piece by Piece,* authors Carolyn Coil and Dodie Merritt describe a rubric as a set of criteria, expressed as a scale, used to assess levels of performance on a given assignment or performance. Rubrics are most effective in promoting student success when they are used along with models of student work. In the pages following, there are several lessons that may be used for identifying and nurturing Young Scholars students. Each of the lessons provided include a rubric of targeted behavior areas and potential student responses that correspond with the behavioral targets located on the blue folder and on the Gifted Behaviors Continuum (p. 36).

It is important to note that the rubrics provide a suggested framework for ways to assess a student's responses and overall understanding of the concepts taught. Rubrics can be used in conjunction with other types of evaluation.

**The Response and Model Thinking Lesson Rubrics:**

- Provide a list of behavioral targets and expected student responses that move through a continuum of descriptors: emergent, novice, maturing and independent
- Provide an explicit list of behaviors, processes, or products, which can be observed
- Provide a discussion point for GT resource teachers and classroom teachers to discuss where students fall on the continuum of expected responses/products

# Kindergarten

# Changes Everywhere

**Accommodations for ESOL students**: This lesson may be difficult for ESOL students since the concept of change is abstract. The discussion under PROCESS may be particularly relevant to

## Link

**POS/SOL:** LA K.8, SCI K.9 **Marzano Connection:** Generating & Testing Hypotheses

We have been discussing how change is everywhere and how changes can happen slowly or quickly.

Assessment: Class discussion

## Engage and Educate

How has your classroom changed since September? What things change in your house? outside? in space? in science? What causes things in nature to change? What causes people to change? Are there things that never change? Read the book *Changes* by Anthony Browne.
***Note:** If the book is not available, select another that illustrates how things can change by using your imagination. Possible selections: (Ah-ha, Changes to Changes, Look Alike Jr.)

Assessment: Class discussion

## Active Learning

Draw a picture of something that changes into something completely different when you use your imagination. (Students should draw the before and after or they may choose to show the object as it is changing.) Try to think of something no one else will.

Assessment: Completed

## Reflect

Have students share their completed drawings with the class.

## Now and Then

Today we read a book on change and drew pictures to illustrate our understanding of change.

*Grade: Kindergarten*
*Content Area: Language Arts*
*Lesson Title: Changes Everywhere*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Perceptive Descriptors** | Recognizes basic patterns in the environment | Applies an understanding of similarities and differences | Seeks and examines novel patterns and relationships | Transfers patterns and relationships to new situations; looks beyond the obvious to notice verbal and nonverbal subtleties |
| **Perceptive Examples** | Student is able to identify at least one object that has changed in school environment (i.e., classroom) since September | Student is able to identify more than one object that has changed and express that some things change routinely (i.e., day and night) while others change more randomly | Student is able to identify objects in his or her surroundings that have changed; begins to make generalizations and applies concepts of change to his/her product- utilizes one or more generalization of change | Student is able to identify more than one object that has changed and able to express that some things change routinely (i.e., day and night) while others change more randomly; begins to think in generalizations (positive/negative, random/orderly, man made/ natural) and applies these ideas to his or her product |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student draws a picture of something they saw in the book that changed | Uses an idea that was presented in the book, i.e., a teapot but changes the object into something different | Chooses something in his or her environment at school (in the classroom) and changes it into something new and different (the yardstick changes into a tree) | Student chooses an unusual object and changes the object into something altogether new; shows the before and after or shows the object transitioning |

# Ant Abode

**Accommodations for ESOL students:** The prepositions might prove challenging for students who haven't learned under, around, through, in and out. Visual aids provided.

## Link

**POS/SOL:** SS K. 3 **Marzano Connection:** Nonlinguistic Representations

We have been learning positional words that help us describe the relative location of people, places, and things. Who can name a positional word that we have learned?

Assessment: Class discussion

## Engage and Educate

Be an ant! Hold your hands up like feelers. What do you feel with your feelers? What do you see in front of you? Above you? How are you different from an ant? How are you like an ant? What do you go over, under, around, through, and in and out of? Discuss mountains, valleys, tunnels, etc. What do ants go over, around, through, and in and out of? If ants had ant-cars and could travel anywhere they wanted, where would they go? What obstacles would they encounter?

Assessment: Class discussion

## Active Learning

Design a room for an ant. Think about the things that an ant should have in his room. Show all of the features that he would have to go under, around, over, through, and in and out of. Make his home special for him.

Assessment: Completed

## Reflect

Have students share their completed illustrations with the class.

## Now and Then

Today we learned how positional words can help describe the location of people, places, and things. Tomorrow we will learn how maps and globes show us the location of places.

*Grade: Kindergarten*
*Content Area: Social Studies*
*Lesson Title: Ant Abode*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Student is able to recognize what animals need in order to live and may use this in house design | Student successfully utilizes what he or she knows of habitat and adjusts housing to size and needs of ant | Student uses at least two mediums in the design of the ant abode; design is adjusted to the appropriate habitat for an ant | Adds 3-D elements or different mediums to design a home for the ant, uses knowledge of habitat and size when designing home, embellishes work- considers creature comforts – i.e., what would make life easy for an ant in home design |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student is able to articulate what it is like to pretend to be an ant; able to articulate what an ant may see (i.e., grass, other insects, other ants, flowers) | Student is able to articulate what ants go over, around, through and in; but not able to see how people are like ants | Student successfully utilizes target vocabulary (in, through, over, around); able to give several examples of similarities and differences between self and ant | Student successfully utilizes target vocabulary; articulates how life may be difficult for an ant, how an ant's life is similar and different to ours, and able to articulate inferred qualities of ants (i.e., loyal because they are always marching together) |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Student uses class generated ideas for obstacles an ant might face and considers those issues when designing the ant abode | Student considers and solves other issues that ants may face in abode design | Student seeks additional information in classroom (or outside sources) about ants and obstacles they may face to utilize information in abode design | After seeking additional information, the student creates multiple designs prior to crafting their final ant abode |

# Giving

## Link

**POS/SOL:** SS K.8 **Marzano Connection:** Nonlinguistic Representations

We have been learning how to be a good citizen. Who can name a way to be a good citizen?

Assessment: Class discussion

## Engage and Educate

What have you given to other people? Why do you think it's important to share? Why do you think it's important to take turns? Why do people give each other gifts? When selecting a gift for someone, what do you consider? Read *The story of Johnny Appleseed* by Aliki. What would George Washington have liked to receive? Betsy Ross? Johnny Appleseed?

Assessment: Class discussion

## Active Learning

Divide students into three groups (suggestion: each group can be assigned to work with one of three people: teacher, kindergarten aide, and GTS). Students will design special and creative gifts to give to Johnny Appleseed. Students will tell why they are giving this gift to this special person.

Assessment: Completed

Divide students into three groups (suggestion: each group can be assigned to work with one of three people: teacher, kindergarten aide, and GTS). Students will design special and creative gifts to give to Betsy Ross, George Washington, or other famous people studied.

Assessment: Completed

Divide students into three groups (suggestion: each group can be assigned to work with one of three people: teacher, kindergarten aide, and GTS). Students will design special and creative gifts to give to their community, neighborhood, and or family.

Suggested books:
*The Flag We Love* by Pam Muñoz Ryan
*Betsy Ross* by Alexandra Wallner
*The Story of Johnny Appleseed* by Aliki

Assessment: Completed

## Reflect

Have students share their gifts with the class. Students should tell why they are giving this gift to this special person.

## Now and Then

We have been learning that being a good citizen involves taking turns and sharing. We will continue to learn other attributes of a good citizen.

*Grade: Kindergarten*
*Content Area: Social Studies*
*Lesson Title: Giving*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Leadership Descriptors** | Interacts effectively with others on assigned tasks | Initiates ideas and is sensitive to the contributions of others | Refines and extends the ideas of others to build and foster the talents of a group | Organizes groups in various settings to implement plans of action, seeing complex tasks through to completion |
| **Leadership Examples** | Student works and participates in group work- helps design the creative gift | Student gives one or more creative gift ideas for the chosen person – listens to other group members | Student listens to the ideas of others and incorporates those ideas into the gift design - may delegate tasks to students (i.e., I will color while you…) | Student listens to the ideas of others, incorporates all ideas into project, delegates tasks, helps others finish tasks, and demonstrates ideas when group shares |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student volunteers one or more ideas of gifts that the chosen person might receive | Student is able to articulate several ideas of gifts that the chosen person may receive | Student gives many ideas for gifts that the chosen person may receive and is able to articulate connections between gift ideas and what we know about the person (explain why the gift would be appropriate) | Student is able to articulate many gift ideas and able to connect ideas to what is known about the individual; gift ideas are elaborate and creative and applicable to the person receiving the gift |


1st grade

# Catch An Elephant

## Link

**POS/SOL:** LA 1.1 **Marzano Connection:** Generating and Testing Hypotheses

We have been learning how to express our ideas orally. Today we are going to use our imaginations to create an invention that will catch an elephant. We are then going to communicate the process to our classmates.

Assessment: Class discussion

## Engage and Educate

Have you ever caught anything? What was it? Show us how you caught it. You have a big problem today to catch an elephant. Why would you want to catch an elephant? Do you think elephants are hard to catch? Why or why not? Which would be easier, to catch an elephant that is small as mouse or as big as a house? Explain your choice. What are some techniques you could use to catch an elephant safely? You may use things you invented or created yourself.

Assessment: class discussion

## Active Learning

Use your imagination to think of a new way to catch an elephant. Try to think of something no one else will. Using pictures show how you would catch the elephant. Think about what you would do first, second, and third.

Assessment: Completed

## Reflect

Have students orally explain how their machine will catch an elephant.

## Now and Then

We have been learning that you can use oral language to communicate ideas. We will continue to develop our oral language through retelling of stories and choral readings.

*Grade: First*
*Content Area: Language Arts*
*Lesson Title: Catch an Elephant*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Student uses ideas from the book to design a way to catch an elephant | Student uses ideas from the book, ideas generated as a class, and knowledge about elephants to design a way to catch an elephant | Student successfully uses both invented ideas and ideas from the book to design a way to catch an elephant; uses materials creatively to design an individual method | Student successfully and creatively uses different mediums and materials to make a 3-D or "off the paper" way to catch an elephant, uses several innovative and inventive ideas, and incorporates knowledge of elephants in design idea |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student draws a picture of something he/she saw in the book | Student uses an idea that was presented in the book, but adds details to the idea to make it his or her own | Student creates a new way to catch an elephant | Student creates an innovative way to catch an elephant, incorporates several creative steps in idea, able to sequence what would happen first, second, third, etc. |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Uses book or class generated ideas to assist in design of ways to catch an elephant | Considers and solves issues one may face while trying to catch an elephant (i.e., size ) | Seeks additional information in or out of classroom about elephants and utilizes researched information in design of ways to catch an elephant | Considers the successful method for catching an elephant in the book and utilizes knowledge to create new and innovative ways to catch an elephant |

# Finding Your Way

## Link

**POS/SOL:** SS 1.4 **Marzano Connection**: Nonlinguistic Representations

We have been studying maps and their features. Who can name a map feature? Today we are going to apply our knowledge of map symbols to construct a map for a story book character.

Assessment: Class discussion

## Engage and Educate

Have you ever gone on a car trip with your family? How does your parent know how to get there? Show a US map. Ask students what they see on the map. Ask for volunteers to show how you would go form Virginia to Florida, to California, etc. What direction are you traveling? How do you know that? Show a road map. What's different about this map? If we were to create a map of our neighborhood, what would we include? How would someone know where the houses, schools, and library are?

Assessment: Class discussion

## Active Learning

What story characters may need a map? e.g., Little Red Hen, Hansel and Gretel, Curious George…

Students create their own map for one of the characters in a story or fairy tale.

Assessment: Completed

## Reflect

Have students share their completed maps with the class.

## Now and Then

We have been using maps to help us find the locations of specific places in the world. We will begin learning how a places' location, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.

*Grade: First*
*Content Area: Social Studies*
*Lesson Title: Finding Your Way*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Perceptive Descriptors** | Recognizes basic patterns in the environment | Applies an understanding of similarities and differences | Seeks and examines novel patterns and relationships | Transfers patterns and relationships to new situations; looks beyond the obvious to notice verbal and nonverbal subtleties |
| **Perceptive Examples** | Student correctly identifies a character or characters in a story that may need a map | Student correctly identifies characters in a story that may need a map and able to identify that a person might need a map to locate an object or place | Student is able to use basic map features to create a map specific to a character | Able to create a detailed product utilizing features of maps for a specific character in a story; incorporates knowledge of character and setting within the map |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student draws a map for a character in a book | Student uses an idea that was presented in class, may add new features to his/her map | Student creates a map for a character in the book, utilizes knowledge of features of maps as well as character, plot and setting | Student creates a map that incorporates features of maps (map legend, key) while using knowledge of character, setting and plot to design an imaginative map; color and design are carefully considered, student uses artistic flair to embellish the work |

# Cityscape

## Link

**POS/SOL:** SS 1.6 **Marzano Connection:** Nonlinguistic Representations

We have learned how location, climate, and physical surroundings affect the way people live. Today we will use this knowledge to create a cityscape mural that includes the types of shelter, transportation, and recreational activities we would see in a city.

Assessment: Class discussion

## Engage and Educate

Who has been to Washington D.C.? What if you see? How is Washington D.C. different from where you live? Where do people live in a city? (types of homes) How are buildings in your neighborhood different from what you see in a city? How do people travel from place to place in a city? What else would you see in a city? (Record on the board to refer to when creating mural). What are the good things about living in a city? What are the bad things? What would be interesting? What questions do you have about life in a city?

Assessment: Class discussion

## Active Learning

As a class, we are going to create a mural of a cityscape. Think about what we need to include. What will make our cityscape attractive? What details do we need to include? How will we show texture on objects?

Assessment: Completed

## Reflect

Discuss the completed mural with students. Have students share about the parts he/she created.

## Now and Then

Today we applied our knowledge of how physical surroundings affect peoples' lives by creating cityscape mural.

*Grade: First*
*Content Area: Social Studies*
*Lesson Title: Cityscape*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Leadership Descriptors** | Interacts effectively with others on assigned tasks | Initiates ideas and is sensitive to the contributions of others | Refines and extends the ideas of others to build and foster the talents of a group | Organizes groups in various settings to implement plans of action, seeing complex tasks through to completion |
| **Leadership Examples** | Student works and participates when designing a class mural | Student shares one or more creative ideas for cityscape | Student listens to the ideas of others and incorporates those ideas into cityscape plan; may delegate tasks to students (i.e., I will color while you…) | Student listens to the ideas of others, incorporates all ideas into project, delegates tasks, and helps others finish tasks |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Uses ideas generated in class to assist in creating the class cityscape | Uses ideas generated in class and one or more of his/her own ideas to assist in creating class cityscape | Uses both invented ideas and knowledge of cities to create cityscape, incorporates one or more mediums in design | Uses different mediums and materials to make a 3-D or "off the paper" cityscape, several innovative and inventive ideas, and incorporates knowledge of cities in design idea |


WELCOME
TO
SECOND
GRADE!!

# Retelling Traditions

## Link

**POS/SOL:** LA 2.11 **Marzano Connection:** Nonlinguistic Representations

Today we are going to create as symbol that signifies a family tradition and then write a paragraph to explain its meaning.

Assessment: Class discussion

## Engage and Educate

How does retelling a story keep traditions? Why do you think the author of the book The Keeping Quilt chose this particular title for the story? Read aloud The Keeping Quilt. What are some of the things the quilt is used for in the story? Why do you think the quilt is so important? (Chart responses) Discuss the meaning of tradition? Do you have traditions in your family that keep your family history alive? What are traditions that families celebrate? Why do you think passing family traditions and/or memories from generation to generation in families is important? Ask students some of the traditions that their families celebrate. Chart responses.

Assessment: Class discussion

## Active Learning

Give each student a blank index card to illustrate a symbol that signifies a tradition and/or memory of his/her family. They will tell why they have chosen to illustrate this symbol by writing a paragraph entitled, Retelling Traditions.

***Note:** (optional) you may choose to have students bring in a fabric swatch that signifies a tradition and/or memory of his/ her family and allow students to connect the fabric swatches into a quilt to hang in the classroom.

Assessment: Completed

## Reflect

Have students share their symbols and explanations with the class.

## Now and Then

We have been writing stories and letters. Today we wrote explanations to explain a created symbol. We will continue to write stories, letters, and explanations throughout the year.

*Grade: Second*
*Content Area: Language Arts*
*Lesson Title: Retelling Traditions*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates once during class discussion of traditions | Student participates two or more times during class discussion, shares a family tradition with the class | Student participates more than two times during the class discussion, able to identify the meaning of tradition (passed down) | Student participates several times during discussions, asks meaningful questions and/or gives detailed responses to questions about traditions, able to connect ideas of traditions and how it keeps family history alive; able to articulate importance of traditions to culture and family |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student draws and illustrates a simple symbol to depict a general tradition (i.e., a Christmas Tree to symbolize a holiday) | Student draws and illustrates a symbol to depict a personal family tradition | Student draws and illustrates a symbol to capture tradition/memories of a family tradition, creative; use of symbolism | Student designs a creative symbol to depict a family tradition; symbol is unique to his or her cultural traditions; personal details may be inferred through the use of symbolism |

# Math, Math, Everywhere

## Link

**POS/SOL:** MA 2.26 **Marzano Connection:** Nonlinguistic Representations

Math can be found everywhere. Today we are going to read a book that shows us how math is used in our daily lives.

Assessment: Class discussion

## Engage and Educate

Have students give examples of things from the classroom that could be thought of in terms of a math problem. Ask students if they had to use math anytime during the day thus far. Read the *Math Curse* by Jon Scieszka and Lane Smith to the class.

Assessment: Class discussion

## Active Learning

Create a Math Curse Class book. Have each student write a page to the book that includes an illustration.

Assessment: Completed

## Reflect

Have students share their completed math page. Make a class book using all of the students work.

## Now and Then

Today we saw that math can be found everywhere and how important math is in our everyday lives. We will continue to see how math is used in language arts, social studies, and science.

*Grade: Second*
*Content Area: Math*
*Lesson Title: Math, Math Everywhere*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Students work together to build a simple maze that shows one repeating pattern | Students work together to build a maze; maze incorporates one or more repeating patterns | Student(s) work together to build a maze; maze incorporates several different repeating patterns, is three dimensional in construct and is created with character, insect or stuffed animal in mind | Students work together to build a complex maze; maze incorporates several different repeating patterns, is three dimensional in construct and is unique in design. Maze design is created with character, insect ,etc. in mind |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Leadership Descriptors** | Interacts effectively with others on assigned tasks | Initiates ideas and is sensitive to the contributions of others | Refines and extends the ideas of others to build and foster the talents of a group | Organizes groups in various settings to implement plans of action, seeing complex tasks through to completion |
| **Leadership Examples** | Student assists partner or group to create maze | Student initiates and assists group to create a maze; listens to group members ideas | Student initiates work and assists group to create a maze, incorporates own as well as group ideas in maze, helps to delegate tasks | Student initiates, organizes, and assists group to create a complex maze, incorporates own as well as group ideas in the maze, delegates tasks fairly and assists group in finishing tasks, shares group ideas with the rest of the class |

# The Questioning Cricket

**POS/SOL:** LA 2.11 **Marzano Connection:** Cues, Questions, and Advanced Organizers

## Link

Today we are going to take on the role of an interviewer and an interviewee. We will then write a letter from the point of view of a cricket to explain our day stuck inside of a lunchbox.

Assessment: Class discussion

## Engage and Educate

Have you ever imagined what things might look like around you if you were the size of an ant, a mouse, or even a cricket? Read, Christopher Cricket Comes to Your School! After reading, ask "Who is telling the story? What has happened?" What do we already know about crickets? (chart responses) What would have happened if you were the cricket? In what ways might the cricket have escaped?

Assessment: Class discussion

## Active Learning

Assign students to work in pairs. One student will become the Questioning Cricket Interviewer, and the other will become the Answering Cricket Interviewee. The interviewer will ask the cricket four questions about himself. Students will then trade places and repeat this process.
***Note:** "Questioning" is a very valuable strategy to use with children. It is an important part of their communication, thinking, and problem-solving skills. Students can prepare their interview questions before starting the interview, or students can ask the four questions randomly. Here are some sample question starters that each interviewer can choose from:

How _____?
Why _____?
What if _____?
What are all the ways_____?
Where did _____?
Where _____?
Who _____?

Assessment:

Students will write from a point of view of a cricket. Students will write a letter to another cricket friend explaining his or her day stuck inside of a lunchbox! Illustrate a creative, colorful picture related to the letter.

Assessment:

## Reflect

Have students share their letters with the class.

## Now and Then

Today we wrote letters to inform a friend of our day. We will continue to write for many purposes throughout the year.

# Christopher Cricket Comes to Your School

*Well, there I was rollicking peacefully in the grass with my friends, when I felt myself being lifted into a container. Yikes!! Imagine my surprise at this revolting state of affairs! Why we were right in the middle of a Star Wars game and I had finally gotten to play Darth Maul!!*

*I sensed my container (felt like a Styrofoam coffee cup to me) being loaded into some sort of vehicle. It was quite crowded in there, and we were all tumbling over each other. I have a problem with crowds too!!*

*And then… as if that wasn't bad enough…we ended up in a school. I could tell this because I heard all these young voices. Not that I could see anything! Oh no…they were not kind enough to give me even a peep hole! How rude!!*

*After a short stay in what I learned later was a teacher's mailbox, I found myself in the worst new place of all. I was FREEZING in there! I have never felt so cold in my life! It was so painful, I finally fell asleep. I don't remember too much after that until my rude awakening!*

*I was hurtling through space, and landed in some sand! There was a little place to hide (which I appreciated more than you can imagine, after ordeal) and looked up to see several huge faces staring a me! I had no privacy at all, and quite resented it until I realized that these small humans were actually keeping me alive! They made sure I had water and food, sometimes what they didn't eat for lunch, sometimes even fish food! Oh please… did they want me to swim? I have to admit the fish food was quite tasty though. Anyway, it was quite a pleasant stay. Except, of course for the occasions when one of those big face accidentally sent our entire home crashing to the ground. That quite upsetting for all of use, with sand and food spread everywhere!*

*The small humans seemed to actually care for us. Besides providing us with our basic needs, they watched us, named us, and even plated with us. This was quite a new experience, and when they let us free, quite a few human and cricket tears were shed. As we burrowed our way to our winter homes, we thought about our time in second grade. Come next spring, we will be sure to visit.*

.

*Grade: Second*
*Content Area: Language Arts*
*Lesson Title: The Questioning Cricket*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student able to generate one or more questions to ask during the interview | Student generates at least two questions for interview, able to answer interview questions | Student generates several well developed questions to ask during the interview, able to answer the questions asked easily and utilizes information about crickets to answer the questions | Student generates four or more questions for interview, able to answer questions in a creative way while also utilizing information about crickets in answers |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student writes a letter to a cricket | Student writes a letter to a cricket from the point of view of a cricket | Student writes a letter to a cricket from the point of view of a cricket with details and creative specifics | Student writes a letter to a cricket from the point of view of a cricket, unique word choices enhance story and creative pictures connect to the letter and show a cricket's perspective |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Curious Descriptors** | Asks questions on topics of interest | Demonstrates curiosity and actively seeks new ideas | Asks deep questions to initiate investigation and meaningful dialogue | Asks complex questions to explore, test, and evaluate sustained investigations |
| **Curious Examples** | Student utilizes class generated example questions for interview | Student generates new questions for interview | Student generates new questions; some questions are fat (complex) questions (not just yes or no questions) that require thoughtful discussion | Student generates many new, creative questions that require analysis to answer |


Welcome to
Third Grade!!

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# WHO HAS THE QUESTION?

**Lesson Description:** Students will generate questions orally from multiple answer choices. Use this strategy to learn a concept or as a method of review.

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Questioning strategy through the introductory lesson (p. 21).

**SOL/POS Objective:**

*Mathematics Standards of Learning:*

- Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the standards.

*English Standards of Learning:*

3.1 The student will use effective communication skills in group activities.
   a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said.
   b) Ask and respond to questions from teachers and other group members.
   c) Explain what has been learned.

3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.
   a) Use complete and varied sentences.

**Instructional Strategy:**

*Cues, Questions, and Advance Organizers*- Students develop quality questions using mathematical terminology.

**Materials:**

- Projector
- *Mix-Freeze-Pair* (p. 61)
- *Who Has the Question?* (p. 64)

**Enduring Understanding:**

- Mathematics has its own language.
- Mathematicians acquire a specialized mathematical vocabulary and explore the mathematical patterns in order to understand concepts.
- Clearly stated specific questions lead to specific answers.
- Asking and answering questions creates opportunities for more in-depth learning.

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Introduction/Essential Questions**:

- Which type of question gives you the most information?
- Why does the study of mathematics have its own special vocabulary?
- How does asking questions help people learn?
- How can you create a question when given an answer?

**Teach and Explore Strategy:**

- Prepare an overhead transparency of the concept template, *Who Has the Question?* (p. 64) related to a topic of mathematical study. (For sample templates, see pp. 62-63)
- Discuss how to create quality questions. Review question words. Ask students to share examples of questions students have experienced related to mathematics.
- Use the overhead to project *Who Has the Question?* for the class to see as a whole. Model for the students how to create a question from the possible answer choices on the template. Allow students to provide the answer to your model question.
- Guided Practice: Ask for volunteers to provide a question that would match one of the answer options. Consider the question as a class. Discuss other ways the question could have been stated. Always allow students to identify the answer from the template. Discuss another student question orally as a class.
- Complete more questions orally as a class by allowing more students to model creating questions.
- Practice: *Mix-Freeze-Pair* (p. 61)
    - "Mix!": Students mill quietly around the room.
    - "Freeze": Students stop and freeze in place.
    - "Pair": Students pair up with the closest person for a partner.
    - Each time students are paired with a new partner; one person creates a question from the answers projected from the overhead. The other person locates the answer from the template and shares the answer with the question generator. Allow time for each person in the pair to ask a question before announcing "Mix" again. The teacher should mingle among the students listening to the question development and checking for answer accuracy. Continue the Mix-Freeze-Pair student practice as long as time allows.
- The teacher may want to introduce a new template. Continue with oral questioning or ask students to write a question as a final assessment.

**Assessment Evidence:**

- Student generated questions
- Teacher observations
- Written questions

**Metacognition:**

- ***Why is creating questions an important thinking skill?***
- ***How is creating the question harder than supplying the answer?***

**Extensions:**

Student teams create an original "Who Has the Question?" template for a math concept. Students should brainstorm the math concepts and vocabulary first then use the textbook as a resource for concepts that have been forgotten.

# Mix-Freeze-Pair

## Procedures

- **Mix** - When the teacher announces “Mix,” move quietly around the room.
- **Freeze** - As soon as the teacher announces “Freeze,” stop and stand in place.
- **Pair** - As soon as the teacher announces “Pair,” locate the person standing closest to you and stand facing each other.
- Choose one person to create the first question.
- Look at the template and think of a question from the answer choices given.
- Share the question with your partner. Allow your partner to answer your question.
- Swap roles.
- As soon as you hear the teacher announce “Mix,” move around the room again until you are paired with a new partner.

## Focus

Do your best to create good questions.

Listen carefully to your partner’s question.

If you have time before the next MIX round, critique each person’s question. Decide how you can improve the questions that each person shared.

# Who Has the Question?

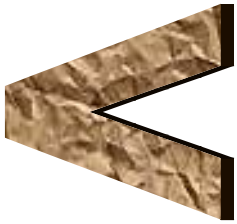
Number Sense

*Here are the answers…*

$ 19.99

thousand

Hundredths



5:35

round

36

estimate

feet

feet

÷

cm

Greater than

1,000,000

# Who Has the Question?

FRACTIONS

*Here are the answers…*

Simplify

$ 0.20

Numerator

¾

Denominator

one-third

Fifths

⅔

50%

Mixed Numeral

⅞

Half

Improper Fraction


*Here are the answers…*

*Grade: Three*
*Content Area: Language Arts/ Math*
*Lesson Title: Who Has The Question?*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Curious Descriptors** | Asks questions on topics of interest | Demonstrates curiosity and actively seeks new ideas | Asks deep questions to initiate investigation and meaningful dialogue | Asks complex questions to explore, test, and evaluate sustained investigations |
| **Curious Examples** | Student generates at least one question that pertains to the vocabulary | Student generates at least two questions that pertain to the vocabulary; questions relate to what has been learned | Student generates new questions; some questions show application of learned material – student produces a question that is unique | Student generates new, creative, and complex questions that require analysis and demonstrate application and synthesis of what has been learned |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates once during class discussion, student participates in the Mix! Freeze! Pair game | Student participates twice or more during class discussion, actively participates in the game | Student participates twice or more during the class discussion, generates at least one model question for the class to discuss | Student participates several times during discussions, asks meaningful questions and/or gives detailed, responses to questions, able to connect ideas of why the skill of questioning is an important thinking skill |

FLUENCY, ORIGINALITY, FLEXIBILITY & ELABORATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# ZOO KEEPER PROBLEM

**Lesson Description:** Students solve a story problem by using various problem-solving strategies. Students are encouraged to generate many possible solutions, consider connections and expand their solutions to produce a justifiable answer.

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Fluency, Originality, Flexibility & Elaboration strategy through the introductory lesson (p. 26).

**SOL/POS Objective**:

3.8 The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

3.4 The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, tables, and pictures).

Problem Solving/Applications

Students:

- use strategies (e.g., build a model, make a chart or table, make a list, make a graph, use a pattern, work backward) and appropriate materials to solve routine and non-routine problems
- solve problems using a plan
- identify information needed and not needed to solve problems
- share and explain thinking about how a problem is solved

**Marzano Connection:**

*Generating and Testing Hypotheses*- Students apply multiple strategies to formulate and test solutions to a problem.

**Materials:**

- *Problem Solving Strategies* (p. 75)
- *Zoo Keeper Problem* (p. 76)
- large chart paper (for the small group sharing option)

**Enduring Understanding:**

- ***Fluency of ideas creates multiple approaches to problem solving.***
- ***Selecting a specific problem solving strategy allows you to focus on multiple solutions.***
- ***Elaboration is the process of embellishing an idea by adding details.***
- ***Flexible thinking looks for connections between ideas and goes beyond the obvious to devise alternative situations or solutions.***

FLUENCY, ORIGINALITY, FLEXIBILITY & ELABORATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Teach and Explore Strategy:**

- Introduce the problem: Distribute the problem to the students. Read the problem together and clarify any questions regarding the parameters of the problem. If students decide to use zero as an option then the problem generates many more answers. The teacher may elect to eliminate zero as an option or allow the class to discuss the option and decide as a whole. (Note: The best way to determine all the answers for this problem is to create an organized list. The goal of this lesson should not be to get the problem correct with all the possible answers, but to encourage fluency of thinking and for each student to showcase his/her ability to generate multiple answers. The teacher will be able to assess the student's mathematical thinking by observing the each student's approach to the problem.)
- Guided Practice: Ask students to provide a couple of possible answers. Discuss with students that because of the communicative property it will be easy to duplicate answers. For example, 1-2-3-9 is the same answer as 2-9-1-3. Encourage students to look for original solutions without repeating the same solution. Brainstorm problem solving strategies. (*Problem Solving Strategies,* p. 75) Encourage students to select a strategy and create a plan for solving the problem.
- Practice: Allow students to work independently or with a partner on this problem. Allow enough time for a closure discussion as the students will not find all the alternates in one session. While the students work, the teacher should mingle among them looking at their thinking and problem solving strategies.
- Share/Closure: Ask students to share their thinking and how they attempted to solve the problem. Ask students if anyone feels they have found all the possible answers. Ask students to defend their thinking and rationale. Create a class list of solutions. Have students check the solutions for duplications. In this elaboration stage, allow for new ideas and flexible thinking to emerge. As students collaborate as a whole class, someone may discover a better method for recording the answers. Allow students' problem solving and mathematical thinking to guide the teacher's instruction. *An alternate to whole group teacher directed sharing:* After the independent practice time, assign students to groups of 4 or 5. Each group should be given a large sheet of chart paper. The group members will merge all their solutions into one solution that represents the groups thinking. Each group should be given time to share their solution to the problem to the whole class.

**Assessment Evidence:**

- Teacher observations
- Zoo Keeper Problem completed work
- Whole group solution discussion or small group solution
- Student discussions

FLUENCY, ORIGINALITY, FLEXIBILITY & ELABORATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

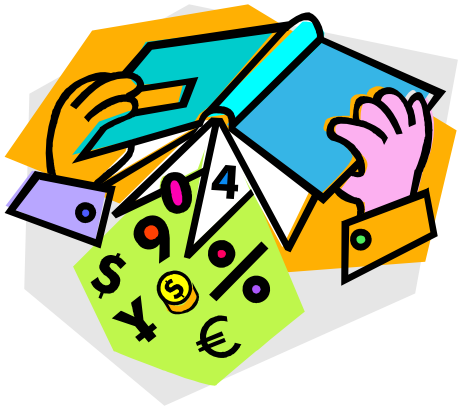
**Metacognition:**

- Why is fluent thinking important for mathematicians?
- Why is it important for mathematicians to elaborate on the ideas of other mathematicians?
- How does flexible thinking allow you to try a new approach?

**Extensions:**

- To make this problem easier or harder, change the number of tigers.
- Allow students to find all the solutions by working on this problem over time and creating a class chart where any student can record options. Eventually, students should come to the realization that to prevent duplications, the list has to be organized in a systematic fashion. This extension will lead to more elaboration and original thinking.

# Problem Solving Strategies



1. Act it out or use objects
2. Draw a picture
3. Look for patterns
4. Guess and check
5. Use logical reasoning
6. Make an organized list
7. Make a table
8. Solve a simpler problem
9. Work backwards/sdrawkcab

Student Name: _____ Date: _____

# The Zoo Keeper Problem

*The zoo keeper has a problem. He just received 15 tigers from Asia to add to the zoo's collection. However, he only has four habitat cages available. The zoo keeper must decide how to display the tigers to the zoo's visitors. The owner of the zoo likes for each animal habitat to be unique so the zoo keeper knows he cannot put the same number of tigers in any two cages.*
***How many different ways could the zoo keeper display the tigers in the four habitat cages so that each habitat has a unique number of tigers?***

**Pick a problem-solving strategy and show your thinking.**
*Think, how will you know if you have found all the possible answers?*

*Grade: Three*
*Content Area: Math*
*Lesson Title: Zoo Keeper Problem*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Student attempts to solve the zoo keeper problem-needs assistance to complete the problem | Student is able to select an appropriate strategy to solve; needs assistance to solve the problem | Student successfully selects and uses a strategy or strategies to solve the problem correctly | Student comes up with a creative or unique way of solving the problem; solves problem independently and correctly |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Student attempts to use a strategy learned in class to solve the problem | Student attempts to use a strategy learned in class; attempts to utilize manipulatives | Student successfully uses one or more strategies (may or may not have been directly taught); student uses manipulatives to assist | Student successfully uses strategies and manipulatives creatively to successfully solve the problem |

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# CELEBRATE!

**Lesson Description:** Students create a mind map to display celebrations in ancient cultures**.**

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Mind Mapping strategy through the introductory lesson (p. 30).

**SOL/POS Objective**:
**History**
**3.1** The student will study families, family life and celebrations in ancient cultures.
**3.2** Students develop strategies to acquire, organize and communicate information about ancient civilizations.

**Marzano Connection:**
*Cues, Questions and Advance Organizers*- Students create mind maps to organize their knowledge of cultural celebrations.

**Materials:**

- Large, unlined drawing paper
- colored pencils or thin markers
- *Mind Map Guidelines* (p. 28)
- mind map samples from the Introductory Lesson
- books on ancient cultures

*Enduring Understanding:*

- ***Mind maps organize important content by making visual connections.***
- ***Celebrations occur across cultures.***

**Essential Questions**:

- Why do people celebrate?
- What are some of the things that you and your family celebrate?
- How do other cultures celebrate special occasions?
- What special occasions were celebrated by ancient societies such as China, Greece, Rome and Egypt and how did they celebrate?

**Teach and Explore Strategy**:

- Ask students, "What are some things that you and your family celebrate? What things do you do that are special when you celebrate?
- Ancient cultures such as China, Egypt, Rome and Greece had different traditions. Discuss what and how they celebrated.

MINDMAPPING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

- Students draw a symbol which represents the word "celebration" in the middle of their paper as the topic for their mind-map. There should be at least 4 branches attached to the center to represent each of the ancient cultures. (Students may add a 5th branch for a personal celebration of their own.)
- For each branch, students will attach symbols, color, and key words to describe different cultural celebrations that they remember.
- Remind them to add as many details as possible.

**Assessment Evidence**:

- Quantity/Quality of accurate information recorded on the mind-map.

*Metacognition/ Reflection:*

- ***Consider other details that can be added to enhance mind-maps.***

*Extension:*

- ***In small groups, students could be assigned to create a short PowerPoint presentation for one of the celebrations using the information from each student's mind map. This could then be shared with the whole class and used as a review of the ancient cultures.***

*Grade: Three*
*Content Area: Social Studies*
*Lesson Title: Celebrate!*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student is able to design an appropriate symbol for the culture | Student is able to design symbols for the main ideas and for some details relating to the ancient culture | Student designs appropriate symbols for main ideas and details relating to the ancient culture and is able to make some connections between big ideas | Student designs unique and creative symbols for the main ideas and details relating to the ancient culture and is able to make connections between the ideas |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates during class discussion of celebrations and ancient cultures | Student participates two or more times during class discussion of celebrations and ancient cultures | Student participates more than two times during the class discussion. Student is able to articulate that traditions tell us about ancient people | Student participates several times during discussions, asks meaningful questions and/or gives detailed, responses to questions, able to connect how traditions and celebrations tell us about the values of ancient cultures- and how our own traditions/celebrations are similar and different to ancient times |


Welcome to
Fourth Grade

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# THINK-PAIR-QUESTION-SHARE!

**Lesson Description:** Students will create questions by connecting given terms and vocabulary. Students will create question and answer cards for mathematical vocabulary and concepts.

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Questioning strategy through the introductory lesson (p. 21).

**SOL/POS Objective:**
*Mathematics Standards of Learning*
Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.
**4.1.1** Students explain and apply properties of whole numbers.
**4.1.2** Students explain and apply properties of fractions and decimals.
**4.2.1** Students explain and analyze strategies for estimation.
**4.4.1** Students identify, classify, describe, draw, and transform geometric shapes.
**4.1.3.7** Solve problems by working collaboratively with peers; entertain others' points of view.

**Marzano Connection:**
*Cues, Questions, and Advance Organizers*- Students respond to cues in order to formulate mathematical questions.

**Materials:**

- *Think-Pair-QUESTION-Share* student handout (p. 168)
- *Who Has the Question* template transparency (p. 171)
- projector

**Enduring Understanding:**

- Mathematics has its own language. Mathematicians acquire a specialized mathematical vocabulary and explore the mathematical patterns in order to understand concepts.
- ***Clearly stated specific questions lead to specific answers.***
- ***Asking and answering questions creates opportunities for more in-depth learning.***

**Introduction/Essential Questions**:

- Which types of questions give us the most information?
- Why does the study of mathematics have its own special vocabulary?
- How does asking questions help people learn?
- How can you create a question when given an answer?

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Teach and Explore Strategy:**

- Prior to the lesson, complete *Who Has the Question* template (p. 171) so that it relates to a pertinent topic of mathematical study. You may elect to use a sample template (pp. 160-170)
- As a class, discuss how to create good questions. Review question words. Ask students to share examples of questions students have experienced related to mathematics.
- Project *Who Has the Question* template for the class to see as a whole. Model how to create a question by making connections between the terms and symbols on the template. Use two of the terms and/or symbols to write a good question. Encourage students to make a variety of connections and to create open-ended questions that require more thought. After you share a model question, ask a student to provide the answer. With more open-ended questions, ask several students to explain the answer to encourage students to think and verbalize mathematically.
    - Sample model questions from the "Fractions and Decimals" template. (The words from the template are in bold.)
        - How do you **simplify** an **improper fraction**?
        - What fractions is **equivalent** to **2/3**?
        - How do you **round $3.21** to the nearest tenth place?
        - What is the connection between **50%** and **Half**?
    - Sample model questions from the "Geometry" template. (The words from the template are in bold.)
        - What is the difference between a **flip** and a **turn**?
        - What is the difference between **similar** and **congruent**?
        - How do you find the **volume** of a **cube**?
        - Why is finding **area** important for laying carpet and finding **perimeter** important for putting up a wallpaper border?
- Guided Practice: Students volunteer to create questions. Discuss the strengths and limitations of the questions as a class. Discuss other ways the question could have been stated. Always allow students to provide a sample answer.
- Practice: Think-Pair-QUESTION-Share
    - **Think**: Tell students to study the words on the template. Tell them to look for a connection and to create a question using two words from the template. Pair:
    - **Pair**: After students are given sufficient think time, pair them together with a partner. The teacher can use an appropriate instruction strategy for pairing the students.
    - **Question**: Distribute *Think-Pair-QUESTION-Share* handout (p. 168). Each student writes his or her question on the handout.
    - **Share**: Each student in turn will share the question with his or her partner. The partner answers the question. Both students record the answer and their partner's question after it is discussed orally. Time permitting; allow partner groups to share one of their questions and answers with the class. Collect the handouts as an assessment.

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Assessment Evidence**

- Student generated questions and answers: *Think-Pair-QUESTION-Share* handout
- Teacher observations
- Class discussion

**Metacognition:**

- ***Why is creating questions an important thinking skill?***
- ***How is creating the question harder than supplying the answer?***
- ***When is supplying the answer harder than creating the question?***
- ***Which kind of question is the easiest to answer?***

**Extensions:**

- Ask student teams to create a "Who Has the Question?" template for a math concept. Students should brainstorm the math concepts and vocabulary first then use the textbook as a resource for concepts that have been forgotten

# Think-Pair-QUESTION-Share!

My Name: _____ Date: _____

My Partner's Name: _____

**My Question:** _____

**My Partner's Answer:** _____

**My Question:** _____

**My Partner's Answer:** _____

# Who Has the Question?

Fractions and Decimals

*Make the connections!*

Simplify

$ 3.21

Numerator

¾

Demominator

4⅓

round

equivalent

one-third

Fifths

⅔

/

Mixed Numeral

part

Half

whole

Improper Fraction

# Who Has the Question?

*Make the connections!*

Geometry

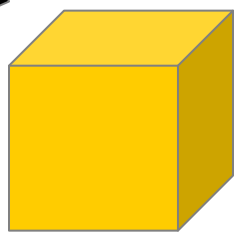
symmetry

plane

Sphere

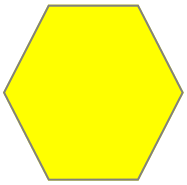
volume

parallel

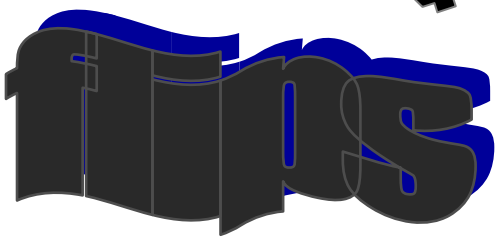


rectangle

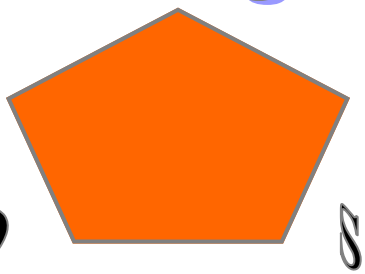
turns



Perimeter



congruent



Area

triangle

similar

angle

circumference

line segment

# Who Has the Question?

*Make the connections!*

*Grade: Fourth*
*Content Area: Math/ Language Arts*
*Lesson Title: Think-Pair-Question-Share!*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Curious Descriptors** | Asks questions on topics of interest | Demonstrates curiosity and actively seeks new ideas | Asks deep questions to initiate investigation and meaningful dialogue | Asks complex questions to explore, test, and evaluate sustained investigations |
| **Curious Examples** | Student generates at least one question that pertains to the vocabulary | Student generates at least two questions that pertain to the vocabulary; questions relate to what has been learned | Student generates new questions; some questions show application of learned material; student produces a question that is unique | Student generates new, creative, and complex questions that require analysis and demonstrate application and synthesis of what has been learned |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare./contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates once during class discussion, student participates in the Mix! Freeze! Pair game | Student participates two or more times during class discussion, actively participates in the game | Student participates more than two times during the class discussion, generates at least one model question for the class to discuss | Student participates several times during discussions, asks meaningful questions and/or gives detailed, responses to questions, able to connect ideas of why the skill of questioning is an important thinking skill |

VISUALIZATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*



# SO MANY RECTANGLES!!

**Lesson Description:** The students will visualize in order to count the number of rectangles in several complex visual problems. Students will use visualization and other problem solving strategies to record the number of rectangles.

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Visualization strategy through the introductory lesson (p. 21).

**SOL/POS Objective:**

4.4.1 Students identify, classify, describe, draw, and transform geometric shapes.
4.4.2 Students use problem solving approaches to understand concepts and skills. Students pose problems; solve routine, non-routine and multi-step problems.
4.4.2.8 Share and explain (verbalize/ record) thinking during and after solving a problem. Verify and interpret results with respect to the original problem situation to determine if answers are reasonable.
4.4.2.9 Investigate alternative ways of solving a problem.
4.4.2.10 Solve problems by using geometric models (manipulatives, pictorial representations, real-world examples) and applying properties.

**Marzano Connection:**
*Nonlinguistic Representations*- Students explore visualization through mathematical concepts and problems.

**Materials:**
Student Handout: *Visual Thinking* (p. 196)

**Enduring Understanding:**

- The process of visualization aids in problem solving situations.
- Spatial visualization is a critical skill for mathematical understanding.
- Visualization provides visual spatial cues which strengthen connections and aids in the retention of knowledge.
- Visualization is an effective math strategy that builds spatial intelligence.

**Introduction/Essential Questions**:

- Why should we use visualization in mathematics?
- What does visualization allow you to do that differs from other problem solving strategies?
- When does visualization help you in mathematical situations?
- What other ways is visualization used in mathematics?
- What influences your mathematical visualization?
- How does visualization foster creativity and problem solving?

VISUALIZATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Teach and Explore Strategy:**

- Rationale: Visualization is the conscious act of forming mental images of pictures of something that is not actually present to the senses. Mathematical concepts are based on mental images. The ability to visualize is an essential element of mathematical understanding.
- Introduce mathematical visualization: ask students to close their ideas and visualize the following math concepts. After each concept, ask students to share and explain the details of their mental images. Discuss which concepts are harder to visualize. Sample math concepts to visualize: the number three, a cube, triangle, the number 20, the number 100, the number thousand, one-half, one dollar and seventy-five cents.
- Practice: Distribute *Visual Thinking* (p. 196). Remind students: All squares are rectangles but not all rectangles are squares.
    - Think- Allow students to work independently to discover all the rectangles in the various problems. This independent time is important for each student to become invested in the problem solving process and visualization.
    - Pair- Pair students together to continue working on the problems. Students should collaborate and discuss strategies for solving the problems.
    - Share- Share each problem together as a whole class. Each student group shares their solutions and justifies their thinking. Ask each student how they visualized the problems. What strategies did they use for compiling their answer? For any unsolved problems, encourage the students to continue working on the problems over time.
- Closure: Discuss how visualization is important for mathematicians. Brainstorm other ways to develop spatial intelligence.

**Assessment Evidence:**

- Teacher observations.
- Completed products and sharing.
- Student discussions.

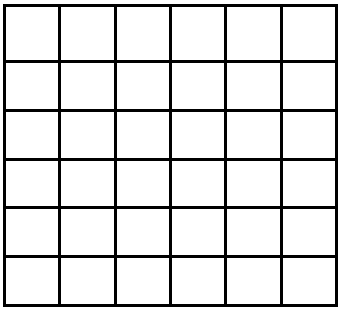
**Metacognition:**

- How can the process of visualization help you solve problems?
- Visualization is beneficial in what other subjects? Why?
- How would you describe the process of visualization to someone?
- How else can you use this thinking strategy in your daily life?
- What thinking is involved in using the strategy of visualization?

# Visual Thinking

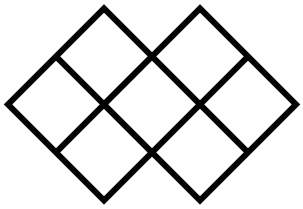
**Can you see them all?**

1. How many squares?

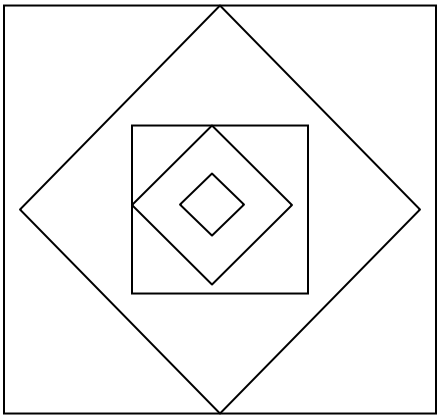


2. How many rectangles?

3. How many rectangles?



4. How many squares?



Extension:

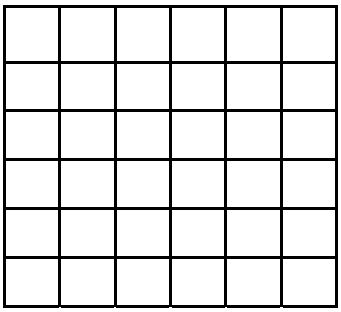
*How many quadrilaterals are in a 1x1, a 2x2, a 3x3 or a 4x4 grid?*
*Try to find a pattern!*

# Visual Thinking

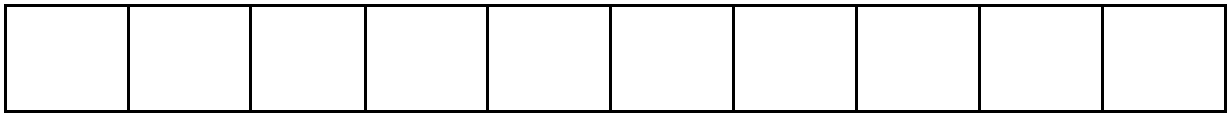
**Can you see them all?**

1. How many squares?

**FIFTY-FIVE**

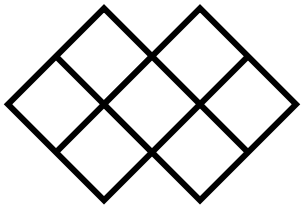


2. How many rectangles? **THIRTY-SIX**



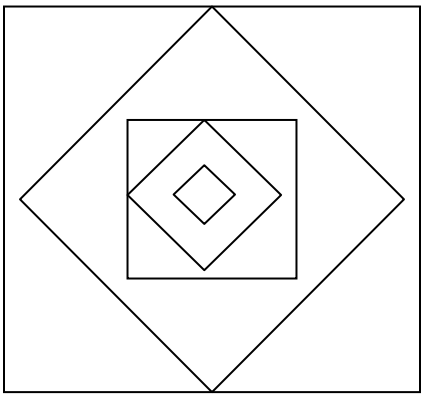
3. How many rectangles?

**NINETEEN**



4. How many squares?

**SIX**



Extension:

*How many quadrilaterals are in a 1x1, a 2x2, a 3x3 or a 4x4 grid?*
*Try to find a pattern!*

*Grade: Fourth*
*Content Area: Math*
*Lesson Title: So Many Rectangles!*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Student attempts to solve the *Visual Thinking* worksheet | Student is able to select an appropriate strategy to solve; needs assistance to solve the problem | Student successfully selects and uses a strategy or strategies to solve the problem correctly; For example, student may make a chart or number the squares to find the answer | Student develops a creative or unique way of solving the problem; solves problem independently and correctly; able to articulate the importance of visualization in solving problems |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Able to define visualization | Able to define visualization and is able to articulate how visualization can help solve problems | Student participates more than two times during the class discussion, able to articulate how visualization can help solve problems and is able to assist group in using the strategy | Student participates several times during discussions, asks meaningful questions and/or gives detailed, responses to questions, able to connect ideas of math and visualization are linked and that visualization is an important thinking skill that we use in all subjects |

QUESTIONING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# INTERVIEW AN INDENTURED SERVANT

**Brief Description of the Lesson:** Students role play being reporters for a colonial newspaper. As reporters they will think of questions used in an interview with John Harrower, a Scottish merchant who came to the American colonies as an indentured servant. His experiences are shared through a primary source, his journal from 1774. The questions are used to gain information about his past life, his present situation and his future plans. As a follow-up lesson, students use the interview information to create an article about John Harrower for a colonial newspaper. (Historical fiction)

**SOL/POS Objective**: (*List number and specific objective*)
**History 4.3** The student will explain economic, social, and political life of the Virginia colony with emphasis on the characteristics and contributions of various groups of people.

**Materials:** Pencil, writing paper, the handout: John Harrower's Journal

**Enduring Understanding:**
- Composing good questions is an important first step in conducting an interview.
- A variety of questions provides a wide range of information about a person.
- Open-ended questions lead to more detailed, in depth responses and create opportunities for discussion .

**Introduction/Essential Questions**: (*What influences your reaction to an issue or a problem?)*
- What kinds of questions are best for an interview?
- Why is interviewing an important research method?
- What motivated people to leave their homes and come to the American colonies as indentured servants?
- What did people living in the 1700's think about the political events of the time?
- How is colonial life the similar to and different from life in the 21st century?

**Teach and Explore Strategy:** *(Steps in teaching the process and exploring applications)*
Prior to teaching this lesson, be sure to have taught or reviewed the introductory thinking process lesson on questioning. Help focus students' thinking by reminding them of the metacognitive component of this lesson.
- Discuss with the class that in this lesson they will role play being reporters for a colonial newspaper. They have been assigned to write an article about an indentured servant, John Harrower who came to the colonies from Scotland. They have some information about him from his journal, but need to find out more about him through an interview.

Hand out the excerpt from Harrower's journal. Explain that in the 18th Century

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

spelling was irregular. It is probably best to read the selection together. Remind students that John Harrower was a real person and that we know some very specific things about him from letters he wrote to his wife and his journal entries. His journal is a **primary source** of information.

- Their assignment as reporters is to write an article for the *Colonial Times* that includes information about his past, what he is currently doing and about his future plans.
- Ask: What are these journal entries mostly about? (His situation as an indentured servant, his thoughts about current political events, everyday events like eating and drinking)
- How can you get the rest of the information you need to write your newspaper story? (**interview** John Harrower)
- Review the basics for writing good interview questions (fat rather than skinny questions). Remind students to include some questions related to his life before he came to the colonies, some about his current situation, and questions about his future plans.
- Give students 15 -20 minutes to write their questions. Their goal should be a total of 5-6 questions or enough to write an interesting article.
- Have students share their questions with the group. If time in this lesson, continue with answering the interview questions below.
- Explain since John can't answer the interview questions, they will use their imaginations and write responses from John. (Students could also exchange papers and respond to each other's questions.)

**Assessment Evidence:** (Discussion, teacher observation, completed product, student reflection…)

- Student responses in teacher-led discussion
- Student questions for the interview
- Student responses to John Harrower's questions

**Metacognition:**

- Why are strong questioning skills important when you do research?
- Was it easy or challenging to think of several questions? If challenging, what could have made it less difficult?
- Is composing questions a critical thinking skill, creative thinking or both?

**Extensions:**

- Students use information gathered from John's answers in the interview and write an article for the *Colonial Times* about him. The article should include a headline and share information about John's past, present and future.
- Students can research John Harrower on the internet and find out more about his real life through other primary sources.

# The Journal of John Harrower

John Harrower was a Scottish merchant who, after failing to find profitable work in Scotland or England, set out in 1774 for the American colonies as an indentured servant. Upon his arrival in Virginia, Harrower's four-year indenture contract was sold to Colonel William Daingerfield. Harrower went to live at Belvidera, Daingerfield's plantation in Fredericksburg, where he served as tutor to the Colonel's children and the children of other local planters. He kept a journal of his life at Belvidera, providing insight into the daily activities of an eighteenth-century plantation. Harrower sent letters to his wife in Scotland which he also copied into his journal. In the following excerpts from these letters, Harrower describes the meals he shared with the Daingerfield family and also alludes to some of the political events taking place in the colonies at the time.

"Belvidera 14th. June 1774.

". . . As to my living I eat at their own table, & our witualls are all Dressed in the english taste. We have for breackfast either Coffie or [Chocolate], and warm loaf bread of the best floor, we have also at Table warm loaf bread of Indian corn, which is extreamly good but we use the floor bread always at breackfast. For Dinner smoack'd bacon or what we cal pork ham is a standing dish either warm or cold. When warm we have greens with it, and when cold we have sparrow grass. We have also either warm roast pigg, Lamb, Ducks, or chickens, green pease or any thing else they fancy. As for Tea there is none drunk by any in this Government since 1st. June last, nor will they buy a 2d. worth of any kind of east India goods, which is owing to the difference at present betwixt the Parliament of great Brittan and the North Americans about laying a tax on the tea; and I'm afraid if the Parliament do not give it over it will cause a total revolt as all the North Americans are determined to stand by one another, and resolute on it that they will not submit."

"Belvidera 6th. Decr. 1774.

". . . Know that I have not drunk a dish of Tea this six Mos. past, nor have I drunk a dram of plain spirits this seven Mos. past, nor have I tasted broth or any kind of supping mate for the above time unless three or four times some soup; Notwithstanding I want for nothing that I cou'd desire, and am only affraid of getting fatt, tho we seldom eat here but twice a day. For Breackfast we have always Coffie with plenty of warm loaf bread and fine butter. At 12 oClock when I leave School, I have as much good rum toddie as I chuse to drink, and for Dinner we have plenty of roast & boyld and good strong beer, but seldom eat any supper."

Source: John Harrower, *The Journal of John Harrower*, ed. Edward Miles Riley. Williamsburg, Va: Colonial Williamsburg Foundation, 1963. pp. 56, 73.

*Grade: Fourth*
*Content Area: Social Studies*
*Lesson Title: Interview an Indentured Servant*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expands on ideas, compares and contrasts, and gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student able to generate one or more questions to ask during the interview | Student generates at least two appropriate questions for interview, able to answer interview questions | Student generates several well developed, time period appropriate questions to ask during the interview, able to write the interview by using information about indentured servitude and the 1700's | Student generates four or more creative and time period appropriate questions for interview and is able to write the responses in a creative way while utilizing information about indentured servitude and the 1700's |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student writes interview question and brief interview responses | Student writes a interview questions and responses from the point of view of an indentured servant; responses are minimal but accurate | Student writes interview questions and responses from the point of view of an indentured servant; some questions and responses are unique | Student writes interview questions and detailed responses from the point of view of an indentured servant, unique word choice enhance his/her work |


Welcome
To Fifth
Grade

# Introducing Mind Mapping

**Mind Mapping** is a creative and critical thinking strategy which helps students to organize information visually by illustrating how they connect main ideas and supporting ideas. While the ideas and information illustrated may be similar, each mind map is an individual creation. The benefits of Mind Mapping help the student to recall and record information more rapidly and effectively.

**ACTIVITY** (time required: 60-90 minutes)

1. Share examples of MIND MAPS with students, and explain that Mind Maps are similar to webs but use color, words and pictures to express ideas. *Mapping Inner Space* by Nancy Margulies is an excellent resource for this. Also share and discuss examples of symbols, small drawings, and innovative ways to write words.

2. Use the following guidelines to focus your introduction of Mind Maps:

    a. As you develop a mind map, place the central idea in the middle of your paper. Write supporting information, connections, or creative ideas on the "roads" that come out from the main idea.
    b. Find interesting ways to illustrate the roads between the main idea and supporting ideas. Students should try to think of symbols or pictures that relate to the map to create the connections.
    c. Sketch your mind map in pencil first, then use crayons or colored pencils to make your mind map memorable. If markers are used, they work best for drawing lines and outlining.
    d. Let ideas flow and record them on the Mind Map as they relate to the central theme. If students need to review content materials, establish a fair amount of time (a 90 minute block is suggested) to allow the connections to flow naturally. Students should never copy information from a book as this is a map of THEIR thinking.

3. Explain to students that they will be creating Mind Maps illustrating themselves. (Hint: This can be a nice "get-to-know-you activity" for the beginning of the year and looks great on students' desks at Back-to-School Night!)

# Mind Mapping Guidelines

1. Start in the **center** of the page with the topic idea.
2. Work outward in ALL directions.
3. Keep between FIVE and SEVEN groupings in each cluster.
4. Use **keywords** and phrases.
5. Use **color** and **symbols** or **pictures.**
6. **Print the words**. Use CAPITOL letters for main topics.
7. *Put the words on the lines*, not at the end of the lines.
8. Use one word per line.
9. Make a pattern.
10. Use arrows, colors, designs, etc. to show connections.
11. Use **personal codes** for fun and effectiveness.
12. Build at a fast pace.
13. Be **creative** and original.
14. Have fun.

Steps form *The Brain Book* by Peter Russell reprint in *Seven Ways of Knowing* by David Lazear. Also based on *Mapping Inner Space: Learning and Teaching Visual Mind Mapping* by Nancy Margulies, Nusa Maal.

*Grade: Fifth*
*Content Area: Language Arts/ Social Studies*
*Lesson Title: Mind Mapping*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student is able to design symbols for the main ideas | Student is able to design symbols for the main ideas and for some details | Student designs symbols for main ideas and details and is able to make some connections between big ideas | Student designs unique and creative symbols for the main ideas and details and is able to make connections between the ideas |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student is able to articulate why he/she chose a main symbol to represent self | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent self | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent self; able to articulate how the strategy of mind mapping helps organize information | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent self; clearly articulates how the strategy of mind mapping can be used to organize information and is able to articulate its usefulness in other subjects |

FLUENCY, ORIGINALITY, FLEXIBILITY & ELABORATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*



# AVOIDING VOCABULARY DISASTER

**Brief Description of the Lesson:** After listening to Miss Alaineus, A Vocabulary Disaster by Debra Frasier, students will use the thinking processes of originality and elaboration to design (and optionally construct) a costume element that creatively yet accurately clarifies the meaning of the word.

**SOL/POS Objective**: (*List number and specific objective)*
**English 5.3**
The student uses multiple strategies to bring meaning to new vocabulary.

**Marzano Connection:**
Generating and Testing Hypotheses- Students apply thinking skills to generate original ideas for a costume that depicts the meaning of a word.

**Materials**: Miss Alaineus, A Vocabulary Disaster by Debra Frasier (check your school library)
Desired vocabulary words presented in context (e.g., copies of the *Fifth Grade Preparation Packet for Virginia SOL Assessment* concept pages), dictionary and thesaurus, drawing paper for designing costume elements, variety of costume construction materials (optional)

*Enduring Understandings:*

- ***A rich and wide vocabulary is necessary in the understanding of new concepts.***
- ***Utilizing a variety of thinking strategies, including originality and elaboration, is effective in mastering new vocabulary words.***

**Introduction/Essential Questions**: (For example, *What influences your reaction to an issue or a problem?*)

- How do people learn new words?
- What strategies do you use to expand your vocabulary? How do you learn the new vocabulary in specific subject areas?
- How does using a precise vocabulary affect your understanding of a concept or topic? Do you think it affects what people think about you? How?
- Fluency, flexibility, originality, and elaboration are creative thinking skills. How can they be used to improve your critical thinking skills?

**Teach and Explore Strategy**: (Steps in teaching the process and exploring applications)

- Choose (or ask students to choose) a familiar vocabulary word from a recent topic of study for guided practice of the thinking strategies.
- Ask students to list or make quick sketches of what the chosen word brings to mind.

After a brief time period, have students star the association they consider their most *original,* yet *relevant,* idea. List these ideas on the board. Ask students to explain

FLUENCY, ORIGINALITY, FLEXIBILITY & ELABORATION

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

- their thinking; which seem the most original, yet relevant? **Which might best help someone to learn and remember the meaning of the word? Why?**
- Read aloud ***Miss Alaineus, A Vocabulary Disaster*** by Debra Frasier. Help students to note the original aspects of some of the costumes pictured in the story. How does this strategy help students learn word meanings?
- Revisit the list of original associations on the board. How can we elaborate and/or combine the elements listed to design a costume for the "Vocabulary Parade?"
- Model the strategy with another selected word. Allow students time to think/pair/share possibilities for costume design. Together evaluate ideas for relevance to the true meaning(s) of the word.
- Students apply the process to a vocabulary word from a recent unit of study. (Teachers may also provide a list of upcoming vocabulary words that may be unfamiliar to students.) Ask each student to sketch, label, and/or describe his/her own costume design for the word. Remind them to evaluate each idea for **originality and relevance.** Encourage students to elaborate on their ideas by including multiple costume elements (hat, cape, vest, hand, and foot coverings, etc.).

**Assessment Evidence**: (Discussion, teacher observation, completed product, student reflection…)

- Student discussion
- Final product

**SAMPLE RUBRIC**

4 The completed design and/or costume element incorporates **unique yet relevant** interpretations of the word. The design reflects **unusual** elaboration.

3 The completed design and/or costume element incorporates a **relevant** interpretation of the word and the design **reflects** elaboration.

2 The completed design and/or costume element incorporates **some interpretation** of the word. The design reflects a **minimum amount** of elaboration.

*1 The design and/or costume element is* ***incomplete.***

0 No product is available for evaluation.

*Metacognition:* ***(Discuss thinking involved and applications for using the strategy.)***
*Students discuss the importance of the thinking processes of originality and elaboration and determine other applications of the skills.*

A scrapbook could be made of figurative language and alliteration used in sentences complete with digital camera photos and/or slide show.

*Grade: Fifth*
*Content Area: Language Arts*
*Lesson Title: Avoiding a Vocabulary Disaster*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Creates a vocabulary costume | Creates a costume showing a basic interpretation of the vocabulary word | Costume is creative and a detailed interpretation of vocabulary word and definition | Costume is exceptionally creative and unique, the vocabulary costume is not just a literal interpretation but demonstrates the multiple meanings or uses the word can have |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Student attempts to use available materials to create the vocabulary costume | Student uses one or more available materials to create the vocabulary costume | Student successfully uses several materials to create a colorful and creative vocabulary costume | Student utilizes materials provided by the teacher and those found in the classroom to design an exceptionally creative vocabulary costume |

# VISUALIZING THE HANDSHAKE PROBLEM

**Brief Description of the Lesson:** The students will investigate various forms of the handshake problem by using visualization problem solving strategies like drawing, acting it out and making a chart/table.

**SOL/POS Objective:** *(List number and specific objective.)*
**Math 5.1.3**
Students will use problem solving approaches to understand concepts and skills. Students pose problems; solve routine, non-routine and multi-step problems.
**5.1.3.1**
Develop and apply operations and strategies (e.g., act it out, build a model, draw a picture or diagram, guess and check, make a chart or table, make a list, make a graph, use a pattern, use logical reasoning, solve a simpler problem, work backward) to solve a wide variety of routine and non-routine problems.
**5.1.3.2**
Solve problems using logical procedure (a plan).
**5.1.3.6**
Identify information that is available but not needed. Identify additional information needed to solve a problem.
**5.1.3.8**
Share and explain (verbalize/ record) thinking during and after solving a problem. Verify and interpret results with respect to the original problem situation to determine if answers are reasonable.

**Marzano Connection:**
Nonlinguistic Representations: Students explore a mathematical problem through visualization.

**Materials:** Handshake Problem handout

**Enduring Understanding:**
- The process of visualization aids in problem solving situations.
- Spatial visualization is a critical skill for mathematical understanding.
- Visualization provides visual spatial cues which strengthen connections and aids in the retention of knowledge.
- Visualization is an effective math strategy that builds spatial intelligence.
- Problem solving strategies like drawing and acting it out can be helpful for visualizing complex problems.

**Introduction/Essential Questions**: (*What influences your reaction to an issue or a problem?)*
- Why should we use visualization in mathematics?
- When does visualization help you in mathematical situations?
- What other ways can visualization be used in mathematics?
- What influences your mathematical visualization?

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

- How does visualization foster creativity and problem solving?

**Teach and Explore Strategy:** *(Steps in teaching the process and exploring applications)* Prior to teaching this lesson, be sure to have taught or reviewed the introductory thinking process lesson. Help focus students' thinking by reminding them of the metacognitive component of this lesson.

- Rationale: Visualization is the conscious act of forming mental images of pictures of something that is not actually present to the senses. Mathematical concepts are based on mental images. The ability to visualize is an essential element of mathematical understanding. Drawing, Making a Chart and Acting It Out are useful strategies to promote the visualization of problems and concepts.
- Introduce mathematical visualization: Describe this scenario orally to the students. Tell them to close their eyes to visualize the events.
    - *Two business personnel meet at a local restaurant for lunch. They greet each other with a handshake. How many handshakes were exchanged? (1) 5 minutes later another person arrives at the table and greets the others with a handshake. How many more handshakes were exchanged? (2) Therefore, 3 people exchange 3 handshakes.*
- Bring the visualization to life by having 3 student act out the scenario. Expand the scenario to include two business people meeting two clients for lunch (6 handshakes)
- Ask if anyone can think of another good strategy for solving visualization problems. Ask for a volunteer to demonstrate the above scenarios using drawing as a strategy.
- Exploration and Discovery: Distribute the handshake problem handout. Allow students to work independently or with a partner. Allow for exploration and discovery by making the students struggle with the problem on their own.
- Guided Practice: Lead a discussion half way through the work time. Ask students who are successfully visualizing the problem to share their strategy without giving the answer. Encourage the students to try new strategies of visualization. Students who finish early should create their own scenario and solve it.
- Closure: Allow students to share their approach to solving the problem. Encourage students to share the various paths to the solution. Ask the students to justify why they believe their answer is correct. As a class, come to a consensus about the correct answer. Students may agree or disagree with answers, even their own.
- Discuss how visualization is important for mathematicians. Brainstorm ways to develop spatial intelligence.

**Assessment Evidence:** (Discussion, teacher observation, completed product, student reflection…)

- Teacher observations
- Completed products and sharing

**Metacognition:**

- How can the process of visualization help you solve problems?

## Teacher Background Knowledge

**Grade: 5/Math**

VISUALIZATION

- How can you develop your spatial visualization intelligence?
- How does visualization help you discover patterns?
- What thinking is involved in using the strategy of visualization?

**Extensions:**

- Create new handshake problems to solve.

*Thinking*

*strategies*

*to enhance skills of analysis, creativity, and problem solving.*

These types of problems occur around a basic pattern. Students can act it out, draw pictures and create charts to visualize the information.

| # of People | # of Handshakes |
|---|---|
| 1 | 0 |
| 2 | 1 |
| 3 | 3 |
| 4 | 6 |
| 5 | 10 |
| 6 | 15 |
| 7 | 21 |
| 8 | 28 |

**The algebraic equation of this type of problem is $n^2$-n/2**
(The number of hand shakes squared, minus the number of people, divided by 2.)
**OR another version of the algebraic equation is n(n-1)/2**
(Multiply whatever the number is by one less, then divide by 2.)

### Handshake Problem Student Handout-KEY

If you had eight people in a group and each one had to shake everyone else's hand one, how many handshakes would take place?
***28 handshakes***

Suppose you shook hands with everyone in this math class. How many handshakes would occur? ***Answer varies according to the number of students in the class. Use the pattern or formula to check student answers.***

You are in a roomful of 35 people. Everyone is asked to shake hands with everyone. How many handshakes will there be? How can you figure this out? What strategies will you use?
***595 handshakes***

# The Handshake Problem

Student Name: _____

*Choose a strategy to visualize and solve the problems.*
*Try different strategies! Which strategy helps you visualize the best?*

If you had eight people in a group and each one had to shake everyone else's hand one, how many handshakes would take place?

Suppose you shook hands with everyone in this math class. How many handshakes would occur?

You are in a roomful of 35 people. Everyone is asked to shake hands with everyone. How many handshakes will there be? How can you figure this problem out? What strategies will you use?

Create your own handshake problem on the back!

Challenge: Can you discover the formula to solve for any number of people?

Super Challenge: Can you think of a way to use the diagonals of geometric figure with vertices to visualize this type of problem?

*Grade: Fifth*
*Content Area: Math*
*Lesson Title: Visualizing the Handshake Problem*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Strategic Descriptors** | Employs learned thinking strategies to solve problems | Investigates alternative solutions to problems | Analyzes situations, searches for additional information, and diligently works to find solutions to problems | Analyzes and researches potential solutions, tests theories, and verifies multiple conclusions to complex problems |
| **Strategic Examples** | Student attempts to solve the handshake problem using visualization-needs assistance to complete the problem | Student is able to use visualization strategy to solve; needs assistance to solve the problem | Student successfully selects and uses the taught strategy of visualization or uses additional strategies to solve the problem correctly | Student comes up with a creative or unique way of solving the problem that uses visualization; solves problem independently and correctly; student is able to articulate how visualization can aid in problem solving situations. |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Resourceful Descriptors** | Recognizes and uses available materials to complete a task | Completes tasks using available resources in a traditional manner | Adapts resources to use in a new and different way | Draws from experiences and transfers understandings to new situations; inventive |
| **Resourceful Examples** | Student attempts to use a strategy learned in class to solve the problem | Student attempts to use a strategy learned in class; attempts to utilize manipulatives | Student successfully uses one or more strategies (may or may not have been directly taught); student uses manipulatives to assist | Student successfully uses several strategies and manipulatives creatively to successfully solve the problem |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates in the visualization exercise; requires assistance in articulating how visualization can be used to aid in solving the problem | Student participates during the visualization exercise; able to see some connection between visualizing and solving the handshake problem | Student participates in the visualization exercise, sees the connection between visualizing the problem and solving the problem. | Student participates in the visualization exercise, able to articulate how this, as well as other strategies, may assist in solving the problem; able to identify other problem solving situations and/or other subjects the strategy of visualization would be helpful |

# Sixth Grade

MINDMAPPING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Grade: 6/LA**

# MAPPING YOUR WAY THROUGH LITERATURE

**Brief Description of the Lesson:** Overview of lesson
Students will use the mind-mapping strategy to organize an oral book share to give to the class.

**SOL/POS Objective:** *(List number and specific objective.)*
**English 6.5**
Students will read and demonstrate comprehension of a variety of informational selections
**English 6.6**
Students will write narratives, descriptions and explanations by establishing central ideas, organization, elaboration and unity

*Marzano Connection:*
***Cues, Questions, and Advance Organizers- Students create mind maps to organize a book share presentation.***

**Materials:** color pencils/crayons/markers, large unlined paper, pencils

**Enduring Understanding:**
- Mind maps organize important content to make visual connections.
- Mind maps help students organize thoughts about a book.
- Oral presentations can be enhanced by giving students a framework from which to speak.

**Introduction/Essential Questions**: (*What influences your reaction to an issue or a problem?)*
- How are the parts of the story linked together?
- How can I use mindmapping to improve my oral presentations

**Teach and Explore Strategy:** *(Steps in teaching the process and exploring applications)*
Prior to teaching this lesson, be sure to have taught or reviewed the introductory thinking process lesson. Help focus students' thinking by reminding them of the metacognitive component of this lesson.
- Students will select a story/novel that they are reading to mindmap and give a book talk on.
- Have students chose the focus for the book they are reading.
- Examples of focuses
    - Reasons I chose this book
    - Other possible endings
    - Why would you suggest someone read this book?

MINDMAPPING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

  - What questions would you ask the author about the book if you interviewed him?
  - Problems the characters dealt with
  - How this book is like…..
  - Main characters
- Students should write their focus in the center of the page and create a visual representation to accompany it.
- Have students create branches leading from the center focus.
- For each branch, students will attach symbols using color and short phrases to assist them in their oral presentations.
- Remind them to add as many details as possible.
- Students will use their mindmaps as a tool to help them give an oral presentation about their book.

**Assessment Evidence:** (Discussion, teacher observation, completed product, student reflection…)

- Quality/quantity of accurate information recorded

*Grade: Sixth*
*Content Area: Language Arts*
*Lesson Title: Mapping Your Way Through Literature*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student is able to design symbols for the main ideas of the novel | Student is able to design symbols for the main ideas and some details | Student designs symbols for main ideas and details and is able to make some connections between big ideas (themes) present in the novel | Student designs unique and creative symbols for the main ideas and details and is able to make connections between the main ideas and details and overall theme of the novel |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student able to describe main ideas to the class | Student is able to elaborate on mind map when describing it to the class | Student uses mind maps to connect to and compare their mind map with those of other students | Student communicates the symbolism and complexity of their and other students' mind maps |

MINDMAPPING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Grade: 6/SS**

# EXPLORERS

**Brief Description of the Lesson:** Students will mind-map the accomplishments of the early explorers.

**SOL/POS Objective:** (*List number and specific objective*)
**SS USI.1**
Students will develop skills for historical and geographical analysis including the ability:
a) to make connections between the past and present.
**SS USI.4.**
Students will demonstrate knowledge of European exploration in North America and West Africa by:
a) describing the motivations, obstacles, and accomplishments of the Spanish, French, Portuguese, and English exploration.

*Marzano Connection:*
***Cues, Questions, and Advance Organizers- Students will display the accomplishments of early explorers through mindmaping.***

**Materials**: Large white drawing paper, Mapping Inner Space by Nancy Margoles (optional, may be found in professional library), List of explorers (attached)

**Enduring Understanding:**
- Many factors motivate explorers.
- Exploration has contributed to the diversity in all cultures.
- Mind-mapping can be an important study strategy.

**Essential Questions**: (For example, What influences your reaction to an issue or a problem?)
- What was the motivation behind explorers?
- What were the goals of exploration?
- What contributions to diversity are attributed to exploration

**Teach and Explore Strategy:** (Steps in teaching the process and exploring applications)
Prior to teaching this lesson, be sure to have taught or reviewed the introductory thinking process lesson.
Help focus students' thinking by reminding them of the metacognitive component of this lesson.

MINDMAPPING

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

- At the beginning of the unit on Exploration, distribute a large sheet of blank paper (desk size) to each student.
- Review introductory lesson on mind-mapping to make sure students understand the guidelines.
- As each explorer is discussed in class, students should add that explorer and information deemed pertinent by teacher regarding that explorer, to their mind-map.
- Students should be given a period of time each day to add to their mind-maps.
- At the end of the Exploration unit, students should have a completed mind map from which to study for a unit test.

**Assessment Evidence**: (Discussion, teacher observation, completed product, student reflection…)

- Quality/accuracy of completed mind map
- Performance on unit test

***Thinking strategies to enhance skills of analysis, creativity, and problem solving.***

**Metacognition:** (Discuss thinking involved and applications for using the strategy.)
Even though you only use words and simple pictures to create a mind map, why is this graphic organizer an excellent study tool?

**Extension:**
Students can choose an explorer from a different to time period to mind map, to compare with one of the early explorers using a Venn Diagram.

# Explorers

**Early Explorers**
**Magellan**
**Vasco de Balboa**
**John Cabot**
**Jacques Cartier**
**Hernan Cortes**
**Hernando de Soto**
**Sir Francis Drake**
**Vasco de Gama**
**Marco Polo**
**Ponce de Leon**
**Henry the Navigator**
**Amerigo Vespucci**

**Early American Explorers**
**Sacagawea**
**Meriweather Lewis**
**William Clark**
**Danile Boone**

**Recent Explorers**
**Matthew Henson**
**Jacques Cousteau**
**Neil Armstrong**

*Grade: Sixth*
*Content Area: Social Studies*
*Lesson Title: Mind Mapping- Explorers*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student is able to design basic symbols for the chosen explorer | Student is able to design symbols for the main ideas and for some details relating to the chosen explorer | Student designs symbols for main ideas and details relating to the chosen explorer and is able to make some connections between big ideas (connects ideas on the map using arrows/symbols/words) | Student designs unique and creative symbols for the main ideas and details relating to the chosen explorer and is able to make connections and see subtle relationships between ideas presented on the map |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student is able to articulate why he/she chose a main symbol to represent chosen explorer | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent chosen explorer- reasons given are reasonable | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent chosen explorer; reasons given are reasonable and show thought; student able to articulate how the strategy of mind mapping helps organize information | Student is able to articulate why he/she chose the main symbol, as well as additional symbols, to represent chosen explorer; reasons given are reasonable, thoughtful, and creative. Student is able to clearly articulate how the strategy of mind mapping can be used to organize information and is able to articulate its usefulness in other subjects |

POINT OF VIEW

**Grade: 6/SS**

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

# LOOK AT IT THIS WAY

**Brief Description of the Lesson:** Students will use the RAFT strategy to examine the Civil War from different perspectives.

**SOL/POS Objective**: (*List number and specific objective*)
**SS USI.9**
The students will demonstrate knowledge of the causes, major events and effects of the Civil War by:
f) describing the effects of war from the perspectives of Union and Confederate Soldiers, including African-American soldiers, women and slaves.

*Marzano Connection:*
Identifying Similarities and Differences- Students will compare and contrast various perspectives on the Civil war.

*Materials:* ***Attached RAFT, pencils, paper***

*Enduring Understanding:*

- ***There are many different ways to view and interpret the world.***
- ***Personal experiences impact perspective.***
- ***An individual's perspective may impact their actions.***

**Essential Questions**: (For example, *What influences your reaction to an issue or a problem?*)

- How have individual perspectives shaped our history?
- How and why do people view the same things differently?
- How do differing perspectives cause conflict?

**Teach and Explore Strategy**: (Steps in teaching the process and exploring applications)
Prior to using this lesson, be sure to introduce what a RAFT is and how it is to be used to focus their products. (See attached description of RAFT's)

- Distribute the six different attached readings for the students to choose from.
- Explain to the students that the readings are composites of several people.
- After students have had a chance to read the composites, they will each choose one point of view, and use the attached RAFT.
- Students will be responsible for completing the product listed for their chosen point of view.

**Assessment Evidence**: (Discussion, teacher observation, completed product, student reflection…)

- Quality of student product
- Reflection

POINT OF VIEW

*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*

**Metacognition/ Reflection:** (Discuss thinking involved and applications for using the strategy.)

- Consider other details that could be added for more authenticity

**Extension:**

- Students may want to create a dramatization using their RAFT.

# R.A.F.T.

| Role | Audience | Format | Topic |
|---|---|---|---|
| Union Soldier | His family | Letter | Not what I expected. |
| 18 year old confederate spy | Newspaper subscribers in the local town | Interview questions with soldier's answers | I will not betray a friend. |
| Young woman growing up in Gettysburg, Pa. | Her Diary | At least three entries in her diary | I will do what I have to do. |
| Eleven-year-old drummer in the Vermont Infantry | A passerby | Overheard conversation | What is your life like? |
| Young African American soldier | Other African American soldiers around the camp fire | Speech | We **are** important! |
| Slave | Other slaves on the plantation | Quilt | Watch for the signs! |

*Grade: Sixth*
*Content Area: Social Studies /Language Arts*
*Lesson Title: RAFT- Look at it this Way*

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student creates a basic project from the RAFT choices | Student creates a project from the RAFT choices | Student chooses from the RAFT choices, also infuses own ideas into the creation of a product; some consideration is given to color, design and layout of project | Student utilizes RAFT ideas as well as his/her own ideas while using knowledge of the people, places, and events of the time period to design an imaginative product; color and design are carefully considered, student uses artistic flair to embellish the work |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Perceptive Descriptors** | Recognizes basic patterns in the environment | Applies an understanding of similarities and differences | Seeks and examines novel patterns and relationships | Transfers patterns and relationships to new situations; looks beyond the obvious to notice verbal and nonverbal subtleties |
| **Perceptive Examples** | Student is beginning to understand that there are different ways to view and interpret the world (for the Civil War may only see the viewpoint of the North and South); student uses basic knowledge of people and the time period to complete RAFT project | Student understands that there are different ways to view and interpret the world; student uses knowledge of people and the time period to complete RAFT project | Student understands that there are different ways to view and interpret the world; student uses knowledge of people and the time period to complete RAFT project- project reflects a different point of view than own | Student understands that there are different ways to view and interpret the world; student uses basic knowledge of people and the time period to complete RAFT project- project reflects a very different point than own; product exhibits strong voice and a deep understanding of the time period |

# Introducing Primary Analogies

Analogies help students connect new material to previously learned concepts on a sophisticated level. Analogies can help students to think or write creatively by connecting ideas in unlikely ways. Analogies are a structure for thinking that helps students connect new material to previously learned concepts on a sophisticated level.

**PRIMARY ACTIVITY** (time required: 40 – 60 minutes)

1. Introduce students to the concept of analogies by showing students pictures of a hand and a glove and provide the following wording; Hand is to Glove. Next, ask students how these two words are related. Expected responses include, "A glove goes on a hand," "A Glove keeps a hand warm." Ask students to finish the following sentence using the same relationship found above. Foot is to _____. Expected responses include a shoe or a sock. Ask students how they know.

2. Let them know that they just solved a puzzle- called an analogy. Show them what it looks like when written out: *Hand is to Glove as Foot is to Shoe or hand:glove as foot:shoe.*

3. Give one or two more examples to make sure students understand the concept (suggestion: green is to grass as blue is to sky)

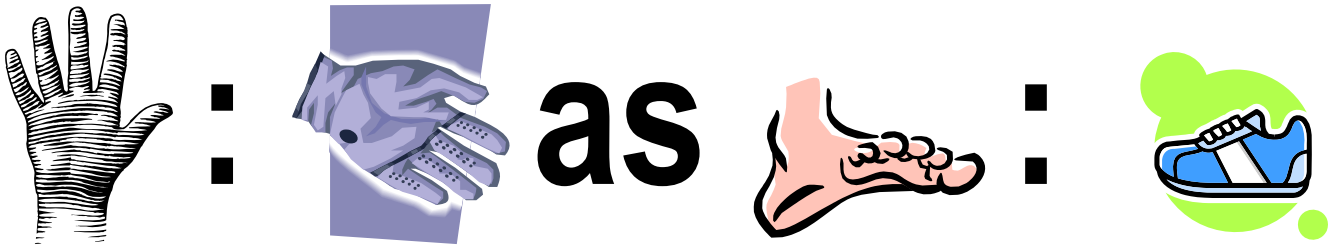
4. Give students the Picture Analogy Deck (for kindergarten and first grade students, it is important to have the pictures cut out already to save time). This deck allows for a variety of pairings- some more obvious than others. Similar, opposite, characteristics, whole to part, part to whole, and object to group are some of the possible matches in the cards. Show students the deck, but do not tell them the possible relationships.

5. Students may work in pairs or as individuals (having students work as pairs provides opportunities for discussion and more participation, as well as allow the teacher to hear more insight and ideas being expressed.

6. Remind students that order is important (refer back to examples).

7. Students can glue their analogies to construction paper. Encourage students to wait until the very end before gluing on their cards.

8. Accept any analogy that is reasonable- encourage the students to provide reasons for combining certain pictures – remembering that the reasoning is just as important as the number of analogies given.



# YS Primary Analogy Picture Card Deck

| | | | |
|---|---|---|---|
| Red |  | Green |  |
|  |  |  |  |
|  | 6 |  | 8 |
|  |  |  |  |
| | | | |

| | | | |
|---|---|---|---|
| Spring |  | Fall |  |
|  |  |  |  |
| + | X |  |  |
| Piggy Bank  |  |  |  |

# Introducing Secondary Analogies

**An analogy** is a creative and critical thinking strategy which helps students compare two items in order to discover a perceived resemblance or similarity. Analogies can help students to think or write creatively by connecting ideas in unlikely ways. Analogies are a structure for thinking that helps students connect new material to previously learned concepts on a sophisticated level.

**SECONDARY ACTIVITY** (time required: 30 - 60 minutes)

1. Share this analogy from the movie *Forrest Gump*: "Life is like a box of chocolates. You never know what you're going to get." Ask students to explain what it means, then discuss how analogies help us see the world in new and unusual ways.

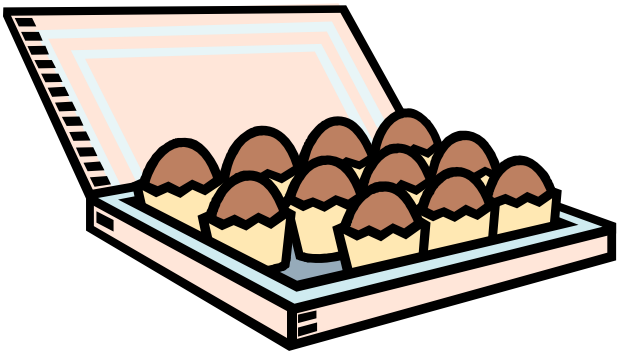
2. Explain to students that analogies can help us understand new concepts by connecting new information to familiar information. Using analogies in our writing captures the interest of our readers and helps them visualize our ideas.

3. Ask students if they can think of an unusual analogy for: Thinking is like _____ because _____ . (If students have trouble filling in the blank, ask them to compare thinking to a concrete object like a volcano.)

4. Explain that analogies can be expressed in other ways. Complete the first five examples on the "Analogy Relationships" transparency (attached) as a whole group.

5. Distribute the student handout "Analogy Relationships Practice" (attached), and allow students time to work in pairs or small groups to complete the handout.

6. Divide students into groups and assign a subject area to each group (math, science, or social studies). Using the "Sample Subject Analogy" page, students choose three analogies from their assigned subject area to discuss and then explain to the class.



Name _____ Date _____

# Analogy Relationships Practice

*Things to remember:*

**PARTS OF SPEECH -- If the words in the first pair compare a noun : noun, adjective or verb, or is an adjective : adjective relationship, the second pair should show the same relationship between parts of speech.**

**WORD ORDER – If the first pair expresses a "tool user: tool" relationship (for instance), the second pair must express the same relationship in the same order (tool user first, tool second).**

**EXACTNESS – Sometimes two or more of the given choices would make fairly good sense in the blank. When this happens, you should choose the word or pair of words that most exactly suits the relationship you're expressing.**

| | | |
|---|---|---|
| **1.** | **TOOL : OBJECT IT IS USED WITH** | **needle : thread :: _____** |
| **2.** | **CATEGORY : EXAMPLE** | **emotion : grief :: _____** |
| **3.** | **EFFECT : CAUSE** | **obesity : overeating :: _____** |
| **4.** | **CAUSE : EFFECT** | **fire : heat :: _____** |
| **5.** | **INCREASING INTENSITY** | **bright : dazzling :: _____** |
| **6.** | **DECREASING INTENSITY** | **glare : glow :: _____** |
| **7.** | **ACTION : THING ACTED UPON** | **braid : hair :: _____** |
| **8.** | **ACTION : SUBJECT PERFORMING ACTION** | **sell : merchant :: _____** |
| **9.** | **OBJECT OR PLACE : ITS USER** | **museum : art lover :: _____** |
| **10.** | **NOUN : CLOSELY RELATED ADJECTIVE** | **swamp : soggy :: _____** |

# ANALOGY RELATIONSHIPS

**1. ANTONYMS**

**sharp : blunt :: _____**

**2. SYNONYMS**

**dry : arid :: _____**

**3. PART : WHOLE**

**page : book :: _____**

**4. WHOLE : PART**

**automobile : fender :: _____**

**5. TOOL : ITS ACTION**

**scale : weighs :: _____**

**6. TOOL USER : TOOL**

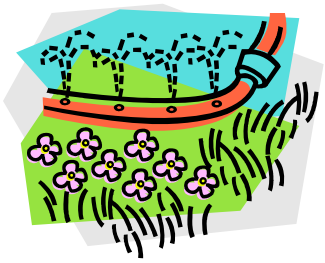
**sculptor : chisel :: _____**

# Sample Subject Analogies

## Science…

A seed is like a sculpture because…
Which constellation is like your best friend?
Which is more like a book – a cloud or a rainbow?
How are your friendships like an electrical circuit?
How is a snowstorm like the Internet?
Which is lighter – a wish or a cloud?
Words are like gardens because…
What would you describe as a "calm explosion?"
How is photosynthesis like a river?
The life cycle of _____ is like a book because…

## Mathematics…



How is multiplication like tap dancing?
How is solving a word problem like taking a bath?
Fractions are like scrambled eggs because…
How are decimals like the explorations in the New World?
Which geometric shape is most like you? Explain.
Which is heavier, long division or finding common factors?
Finding number patterns is like _____ because _____ .
What math activity is most like a mountain?
What math activity is most like a web page?
The process of division is like a food web because…

## Social Studies…

How is a government like a blueprint?
How is a colony like a new pair of shoes?
The Internet is like a printing press because…
Free expression is like a garden because…
When are you most like a city?
The writing of the Declaration of Independence was like the building up of a thunderstorm because…
General Lee is most like what animal?
Dr. Martin Luther King, Jr. is like the space shuttle because…
Dancing is like writing history because…
Beethoven is like Van Gogh because…
What is an example of a "disjointed connection?"
What were the unlimited boundaries of the colonies?

# Rubrics for Primary and Secondary Analogies

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Creative Descriptors** | Explores ideas and materials freely | Expands on ideas and adds details | Uses fluency and flexibility to view ideas in new and unusual ways | Demonstrates innovative ideas to show new relationships and uses |
| **Creative Examples** | Student is able to put together the most obvious analogous relationships | Student is able to put together most of the analogies and is able to see one or two unusual relationships between the words or pictures | Student can put together analogies and is able to see unusual relationships between the words or pictures-analogies are unique | Student can put together analogies and is able to see unusual relationships between the words or pictures-analogies are unique; student is able to clearly explain why the words or pictures fit together |

| Behavioral Area | Emergent | Novice | Maturing | Independent |
|---|---|---|---|---|
| **Communicative Descriptors** | Expresses ideas simply but clearly | Expands on ideas and provides additional information | Expand on ideas, compare/contrast, gives examples | Initiates and elaborates on complex ideas; providing examples, counter-examples, and inferred characteristics |
| **Communicative Examples** | Student participates during class discussion of analogies | Student participates two or more times during class discussion of analogies | Student participates more than two times during the class discussion. Student is able to articulate what an analogy is | Student participates several times during discussions, asks meaningful questions and/or gives detailed, responses to questions, able to articulate how analogies help us connect subjects and seemingly unrelated ideas; able to articulate how the words or pictures relate in an analogous way |

# Section V
# Learning Profile Activities


Students use these learning profile activities to help understand the processes they most enjoy learning through. Teachers use these activities to best meet the needs and interests of their students.

*If you treat an individual as he is he will stay as he is but if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be.*
Johann von Goethe

# Me... in a Nutshell

Words can tell a lot about a person. These are five words that best describe me.

_____ _____ _____ _____ _____

My best characteristic is…_____.

When people think of me, I would like them to think of these three words.

_____ _____ _____

If I could change myself into something or someone else, I would try to be… Tell me what or who you would be, why you chose them, and what characteristics they have that you admire!

_____

_____

_____.

This is a picture of me!

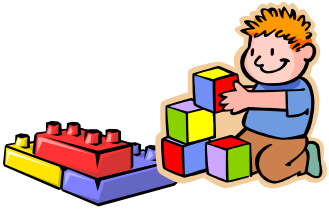
Name _____

# All About ME!

| | | |
|---|---|---|
| I know a lot about:  | I am really good at:  | One thing I like to do with friends: |
| One thing I like to do by myself: | I am proud of myself when:  | I really don't like to:  |
| When I grow up I would like to be:  | One thing that makes me really happy:  | Two words that tell about me are: |

Pre-Assessment of Interest/Background
Name _____

# How Do You Like to Learn?

| What do you like to do when you are learning? |  |  |  |
|---|---|---|---|
| | Write | Listen | Sing |
|  |  |  |  |
| Read | Draw | Build | Act |

How do you like to work?

|  |  |  |
|---|---|---|
| Alone | With a partner | In a group |

Do you like to work when it is…

|  |  |
|---|---|
| Quiet | Noisy |

Do you like to work…

|  |  |
|---|---|
| At a desk | On the floor |

# Section VI
# Best Practices for Teachers

*A child's life is like a piece of paper on which every person leaves a mark.*
*Chinese Proverb*

# Best Practices

**Scaffolding** is an instructional technique used to encourage students to work slightly above their comfort level while providing support that ultimately shifts responsibility to the students.

**Tiered Activities** are assignments that provide different tasks requiring different levels of thinking for the same concept or objective.

**Cubing** is an instructional strategy that allows students to look at a subject or topic in a variety of angles and multidimensional perspectives rather than just one.

**ThinkDots** is an form of cubing and tiering content. It's designed to alleviate the problem of completing a 3-D model. However, its use is significantly effective. The dots directly correlate with Bloom's Taxonomy in order to generate ideas and thoughts from a variety of levels.

**R.A.F.T.** offers students a creative tool for demonstrating their understanding. They communicate information by taking a unique point of view and writing for a specific audience. (R) Role of the writer, (A) Audience, (F) Format and (T) Topic.

**Think Tac-Toe** is a task designed to allow students to complete at least three activities whereby the levels of difficulty increase or decrease on each row. In order to complete the activities, the student(s) may travel diagonally or horizontally. It can be used with all students and is easily adaptable for all learning activities.

**De'Bono's Six Thinking Hats** provide a simple framework for encouraging productive thinking amongst all age groups while keeping the learner focused to get the most out of all participants.

**Interactive Notebooks** are used as a learning tool that can be adapted for any subject or concept. They are notebooks that are transformed into working documents made by both the student and teacher.

**Socratic Seminar** is an open-ended dialogue based on some portion of literature, art piece, primary source, or quote.

**Jacob's ladder** provides a way to enhance reading comprehension skills, build reading skills from lower to higher order, enhance student discussion, and promote sound assessment preparation.

**Primary Source Learning** is a collection of teaching materials focused on using primary historical sources to deepen student understanding of core subject matter. This resource was created through the Library of Congress Teaching with Primary Sources Northern Virginia Partnership. One resource new to the collection is Primary Access, an internet-based program that allows students to create documentary films using primary sources.

**"Habits of the Mind"** are characteristics of what intelligent people do when they are confronted with problems, the resolutions of which are not immediately apparent.

# Scaffolding

*What is Scaffolding?*

Scaffolding provides students with the crucial learning support they need to move from the basic acquisition of a concept and/or skill toward independent performance of the concept and/or skill. It is also commonly referred to as "guided practice." Scaffolding is the gradual fading of teacher modeling as students move toward mastery of a concept or skill.

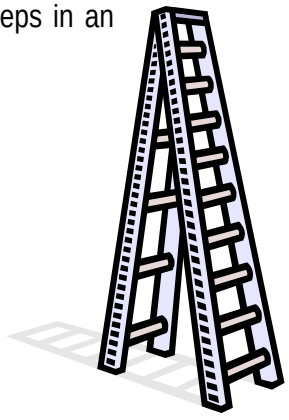
*Purpose of Scaffolding:*

- Promote learning when concepts and skills are being first introduced to students.
- Provides students with the crucial learning support they need to move from initial acquisition of a concept and or skill toward independent performance
- Reduces student anxiety because of teacher support and modeling
- Provides teachers with the opportunity to evaluate student understanding during instruction, time to model the skills again, provide corrective feedback to students, and emphasize specific elements of the concept/skill before students are expected to do it on their own.

*How to use Scaffolding in the classroom:*

A teacher begins by modeling a skill/concept. The teacher gradually fades his or her directions as students demonstrate increasing levels of understanding in performing the skill and understanding the concepts. Throughout the process, the teacher provides additional modeling when necessary, specific feedback to students (both corrective and positive) as needed. The progression continues until students have demonstrated mastery of the skill or concept and can demonstrate this readiness by performing the skill (s) independently. Decisions on when and how much to fade instruction should be based on teacher observations of student behavior during the scaffolding process through accuracy of student responses and/ or verbal and nonverbal cues.

**Some examples may include:** Providing directions that give more structure or less, recordings to help with reading or recording tools to help with writing that is beyond the student's grasp, modeling, SQ3R-type strategies, use of manipulatives, use of study guides, use of organizers, ascending levels of questioning, pictures or icons to help students interpret text, such as written directions or steps in an assignment, reading buddies, partner, or small group work.



** For more information on Scaffolding see GT Programs *24/7* site.

# Tiering

*What is Tiering?*

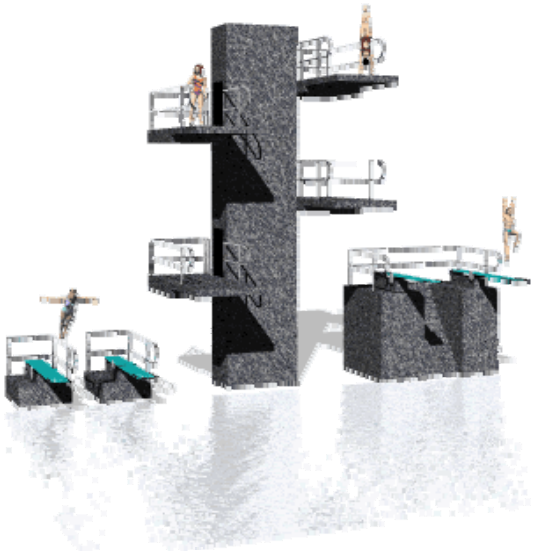
Tiered instruction is a means of teaching a concept or skill while meeting the different learning needs in the classroom. In tiering, the curricular content and objectives are the same, but the process and/or product are varied according to the student's level of readiness, interest, or learning profile. This instructional strategy is designed to ensure that all learners work with the critical knowledge and understanding specific to the given assignment but with a degree of difficulty appropriate for the learner. With tiered assignments students are stretched to complete the task at hand, but are able to do so with support.

*Purpose of Tiering:*

- *Address student readiness needs*
- *Challenge students appropriately*
- *Focuses on concepts*
- *Maximizes learning*
- *Creates more flexible assignments*

*How to use tiering in the classroom:*

When tiering instruction, a teacher should first determine what concept or skill students should **know**, **understand,** and **be able to do**. The teacher then creates activities that lead students to the same essential understanding, but are matched to the students' readiness, learning preferences, or interests. Finally, he or she must identify the range of students' needs and the materials needed to complete the activities, group students based on their readiness or interest and create working guidelines and rubrics for each assignment.



** For more information on tiered assignments see the GT Programs 24/7 site.

# Cubing

*What is Cubing?*
Cubing is an instructional strategy used to help students look at a particular issue or topic from a variety of ways and multidimensional perspectives. This technique uses six commands, one on each face of a cube or box. These commands are purposefully designed to force a different type of thinking.

*Purpose of Cubing:*
- *Force different points of view*
- *Promote higher level thinking and questioning*
- *Challenge al learners*
- *Provides a visual and kinesthetic experience*

*How to use Cubing in the classroom:*
Students may work independently, in groups, or with a partner. This activity is designed to offer students assessment choices and to add complexity to their thinking. In each section of the cube provide a question, statement or term that would provoke a certain type of thinking and require a matching response while placing an emphasis on Bloom's Taxonomy. Students may choose to work in groups where they will be assigned one part of the cube or some may opt to complete the cube independently. This activity will take longer than one class lesson. Upon finishing the cube, have group's present information to their classmates. When introducing this strategy, remember to model for the students the process of completing a cube and share a finished product with them. It's important for them to see the end result. Younger students will need help constructing the cube once all of the information has been placed on the cube.

** For more information on Cubing, see GT Programs 24/7 site

# ThinkDots

*What is ThinkDots?*
ThinkDots is a versatile strategy that may be used to review of essential knowledge and understanding about a topic or skill. It allows students to extend their thinking on the subject at varied levels of complexity. ThinkDots is a modified version of the cubing strategy. This tool is a teacher-friendly strategy that allows for maximum flexibility while providing differentiation for all learners.

*Purpose of ThinkDots:*
- Allows for differentiation for student readiness, interest or learning profile
- May serve as a review or extension of key concepts/skills at a level of difficulty appropriate for each child
- Allows students to apply key ideas and skills learned based on interest and or choice
- Promotes teacher and student creativity

*How to use ThinkDots in the classroom:*
A ThinkDots set consists of six cards that are hole-punched and held together with a notebook ring, a loop of string, or any device that allows students to flip through the set easily. Each card has one or more dots on its front (each card should correspond with one of the six dot configurations on a die). On the back of each card is a question or task that requires students to work directly with important knowledge, understanding, and skills directly related to the topic of study. In addition, the activities should be varied in degree of difficulty (using Bloom's Taxonomy levels) and type of product or response required. ThinkDot activities can also invite learners to apply key ideas and skills based on their own interests.

**For more information on the ThinkDots Strategy, see Carol Tomlinson's *Fulfilling the Promise of the Differentiated Classroom*

# RAFT

*What is RAFT?*

The RAFT strategy provides students a creative means for demonstrating understanding. Students communicate information by taking a point of view (role) and creating a product (format) for a specific audience (audience) on a topic (s). RAFT stands for:

**Role**- What is the writer's role (journalist, critic, songwriter)?
**Audience**- Who will be reading/listening to the piece (teachers, peers, parents, community members)?
**Format**- How will the information be presented (letter, diary, song, poem, debate)?
**Topic**- Who or what is the subject of the piece (famous Virginians, reactions to the Civil War)?

*Purpose of RAFT:*

- Facilitates differentiation by readiness, interest, and/or learning profile
- Can be used in all subject areas
- Allows for student and teacher creativity
- Provides opportunities for students to take on different points of view

*How to use RAFT in the classroom:*

**Step 1:** Explain to the class that all writers need to consider four components of every composition: the role of the writer, the intended audience, the format of the composition and the topic.
**Step 2:** Brainstorm ideas about a key health issue for action linked to the current unit of work being studied.
**Step 3:** Write RAFT on the board and list possible roles, audiences, formats and strong verbs that are appropriate for the identified key issues.
**Step 4:** After discussing the issues and possible points of view, students develop their own RAFT scaffold, from the combined list, for the composition they are going to develop. Students then create their composition from this scaffold.
This strategy can also be used by the teacher to develop a scaffold for a written task e.g., the teacher pre-selects the role, audience, format and topic for the class, rather than students choosing their own.

| Role | Audience | Format | Topic |
|---|---|---|---|
| Roots | Stem, leaf, flower and seeds | Letter | You'd be lost without me! |
| Flower | Stem, leaf, seeds, and roots | Advertisement | I'm more than just a pretty face. |
| Seeds | Stem, leaf, flower, and roots | Song or poem | Here's where you got your start. |

** For more information on RAFT see the GT Programs 24/7 site.

# Think-Tac-Toe

*What is Think-Tac-Toe?*
Think-Tac-Toe is an easy way to give students different ways of exploring and expressing ideas and using key skills. Typically, a Think-Tac-Toe board consists of nine "cells." As with all strategies, it is important that no matter which choices students make, they must grapple with the key ideas and use the skills central to the unit or topic of study.

*Purpose of Think-Tac-Toe:*

- Allows for differentiation by readiness, interest, and/or learning profile
- Provides opportunities for student and teacher creativity
- Encourages students to choose how to demonstrate learning

*How to use Think-Tac-Toe in the classroom:*
First, a teacher must consider what key concepts he/she wants the students to work with, as well as the skills he/she wants the students to use. Then, he or she should choose activities that address the higher levels of Bloom's Taxonomy as well as the multiple intelligences. Students simply choose three (can be more or less) activities going across, going down or going diagonally. This gives students choices and gives teachers some control of the activities that the students choose. In this format a teacher can be sure that any set of choices will include a variety of types of activities. In addition no matter which configuration students choose they will be completing activities that address the standards.

| | | |
|---|---|---|
| Create a pair of collages that compares you to a character in the book. Label your collages so your audience understands your thinking. | Write a bio-poem about yourself and a character in the book so your readers see how you are alike and different. Be sure to include important traits in each poem. | Interview a key character from the book to determine what lessons he/she think we should learn from events in the book. Make sure your interview is thorough. |
| Find 6-8 quotations that you feel reflect what is important about the novel's theme. Display them and explain your choices. | Find several songs that you think fit with the novel's "mood." Prepare an audio collage and prepare an exhibit card that helps your listener understand how the songs express the book's message. | The time and place in which people find affect them in important ways. Find a way to convincingly prove this using your book. |
| A character in your book is being written up in the newspaper 20 years after the book ended. Where has life taken him/her? Why? Write the article- be sure to make it an interesting feature article. | Make a model or map of a key place in the book. Include a description of what the place is like and why it is important in the novel. | Create a detailed timeline. The timeline should illustrate and describe at least 6-8 important events in the story. |

** For more information on Think-Tac-Toe see the GT Programs 24/7 site.

# Six Thinking Hats

*What is Edward De'Bono's Six Thinking Hats?*
This is an instructional strategy used to get the learner to look at problems decisions and opportunities systematically. These problems are looked at from a variety of different angles by being forced to view a topic or issue while only concentrating in one type of thinking.

*Purpose of DeBono's Six Thinking Hats:*
- To think clearly and objectively
- Take a stand from a different perspective
- To discover effective alternate solutions
- To see all sides of an issue

*How to use Six Thinking Hats in the classroom:*
The teacher may have students work independently or in groups according to a particular hat color. Decide on a topic or issue to explore. Explain each hat color and share the types of questions and thoughts that correlate with that hat specifically. If this is an introductory lesson to De'Bono's Thinking Hats you may want to spend some time exploring a topic together and creating a class chart for everyone to see each other's responses. Have students view the topic through the lens of a colored hat. For younger students, you may want to focus on one hat at a time. Older students are capable of creating responses using two or more hats. This strategy can be used with any topic.

** For more information on De'Bono's Thinking Hats see GT Programs 24/7 site.

# Interactive Notebooks

*What are Interactive Notebooks?*
Interactive Notebooks are learning tools that can be adapted for any subject or concept. They are composition or spiral notebooks transformed into working documents made by both the student and teacher. The interactive notebook began as a strategy in Addison Wesley's book, *History Alive!*

*Purpose of Interactive Notebooks:*

- Different multiple intelligences utilized (especially visual, artistic, and linguistic)
- Relevant and irrelevant details distinguished between and thoughtfully organized
- Information actively manipulated, compared, and contrasted from one or more texts
- Connections made: text-to-text, text-to-self, and/or text-to-world
- Portfolios of learning established and embellished over the course of time

*How to use Interactive Notebooks in the classroom:*
Students decorate the cover of their interactive notebook and include their name, teacher's name, and subject that the notebook will be used for. Next, the students create a Table of Contents that will be added for each unit and number each page through the end of the notebook. Throughout the year, the teacher and student add entries to their notebooks and make the appropriate notations on their Tables of Contents.

Entries of the notebooks are organized by "left side" and "right side." The left side is divided in half horizontally, with the top half titled RAP (Review and Preview) and the bottom half WIO (Work It Out). The RAP is often a preview into what the lesson will be about. The right side contains student completed notes in a format determined by the teacher and is called the WOW (Words of Wisdom). Though the information comes from a teacher, book, internet site, or novel, the students organize and write the information themselves. Lastly, the WIO is completed either at the end of the lesson, as homework, or as a later extension. This gives the student an opportunity to make the learning personal. They might apply their learning, make cross-curricular connections, or respond to a prompt from the teacher. Ideas of what to include in each section are in the sample interactive notebook entry below.

<table>
<tr><th>Left Side</th><th>Right Side</th></tr>
<tr><td>Review and Preview<br>Review of a previous chapter or lesson<br>Preview of what's to come<br>Activating prior knowledge<br>Making connections to personal experiences</td><td rowspan="2">Title of Lesson/Unit/Chapter<br><br>Words of Wisdom<br>Graphic Organizer<br>List<br>Table<br>Map<br>Timeline<br>Notes<br>Fill in the Blanks<br>Venn Diagram<br>Vocabulary</td></tr>
<tr><td>Work it Out<br>Mind Map<br>Flow Chart<br>Political Cartoons<br>Creating a Symbol<br>Caricature<br>Write an Invitation<br>Mind Notes<br>Write a Letter<br>Compose a Song<br>Comic Strips<br>Draw a Diagram<br>Write an analogy<br>Create CD Cover<br>Publish a poem</td></tr>
</table>

** For more information see PowerPoint presentations and sample activities on FCPS 24/7 or Gateways

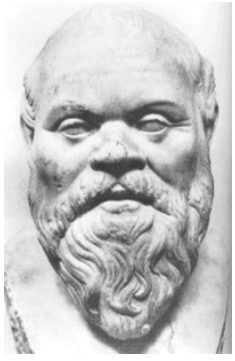
# Socratic Seminar

*What is Socratic Seminar?*
An open-ended, thoughtful, and collaborative dialogue based on a piece of literature, art, primary source, or quote. All students participate and give respect to each involved in the seminar. Students are encouraged to share their best thinking and viewpoints in order to gain a shared understanding of what they read or evaluated.

*Purpose of Socratic Seminar:*
- Utilizes different multiple intelligences (especially visual, artistic, and linguistic)
- Distinguishes between relevant and irrelevant details
- Manipulate, compare, contrast, and identify actively with one or more texts
- Makes connections: text-to-text, text-to-self, and/or text-to-world
- Encourages deep reflection and divergent versus convergent thinking
- Expands familiarity with texts and pieces from many different time periods and cultures
- Builds a community of inquisitive scholars and readers

*How to use Socratic Seminar in the classroom:*
The teacher introduces Socrates and the passage or piece that the class will explore through the seminar. Students should have several experiences with the piece, especially a piece of text. For homework or a follow up assignment, students complete a written response to the piece and vocabulary web(s) to prepare them for the seminar. Lastly, the students are assigned to create three open-ended discussion questions to contribute to the seminar the following day. As students participate in more Socratic dialogues, their questions will become deeper and more thought-provoking.

The next day, the group prepares for and holds the seminar. To prepare for seminar, participants review the Seminar Etiquette, make nametags (using last names), review the passage from yesterday, and move so all are facing each other. Students are given the opportunity to review their vocabulary webs, ask any questions, and share their open-ended questions generated for the discussion. The teacher creates the list of discussion questions on chart paper or the board for the group to see. The leader begins the seminar by posing a question (from chart), giving each student a chance to respond. The leader may decide if all students must answer the question or if only those that wish to respond, do so. Questions continue to be posed until the time allotted for seminar is up. It is suggested that teachers assign a form of follow-up for seminar participants.

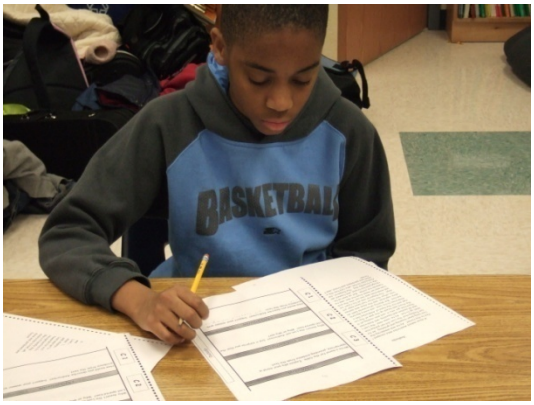


**Seminar Etiquette:**

1. Address each other as Mr. and Miss
2. Group is seated facing each other
3. Everyone must be prepared for seminar
4. Be courteous
5. Be patient
6. Speak one at a time
7. Use kind words
8. Be responsible for your own participation
9. Use the story or poem to form your opinions and words
10. Answer only the questions being asked
11. Pass if you are not ready to speak

** For more information see PowerPoint presentations on FCPS 24/7 or Seminar handbooks created by the GT Office.

# Jacob's Ladder Reading Comprehension Program



The College of William & Mary
Center for Gifted Education

*What is Jacob's Ladder?*
A supplemental language arts program that comes from The College of William and Mary's Project Athena designed for students reading at a 3rd – 5th grade level. Selections include myths/fables, poetry, non-fiction, short stories, and essays. Students move through an inquiry process from basic understanding to critical analysis of the texts read. Tasks are organized in skill ladders, containing questions and activities for students to complete independently or in a small group. Ladder rungs are organized to increase in intellectual complexity.

*Purpose of Jacob's Ladder:*
- To enhance reading comprehension skills
- To build reading and thinking skills from lower order to higher order thinking
    - Prediction
    - Deduction
    - Literary Analysis
    - Synthesis of Information
    - Summarization and Discussion of Text
- Employs poetry, fables, myths, short stories, essays, and longer nonfiction selections
- Engages learners in a discussion of textual meaning in dyads or small groups
- Employs questions and tasks as the stimulus for comprehending text
- Uses an interactive assessment system

*How to use Jacob's Ladder in the classroom:*
Jacob's Ladder is a supplemental reading program that can be used in conjunction with any reading program in a classroom, enrichment, or small group setting. The teacher selects the text that is appropriate for the learners from the teacher's guides (Levels III, IV, and V) recommended for 3rd, 4th, and 5th graders. As with many programs, the Level III unit can be adapted for 2nd or 4th grades depending on the strengths and needs of the class. The teacher guides can be purchased from Kendall Hunt or can be downloaded from the GT Programs site on 24/7. Nonfiction selections must be purchased separately.

Each passage or text has 2–3 ladders that correspond with reading comprehension strategies appropriate for the reading (also included in teacher guides). Passages are read and discussed prior to completing the ladders. Students are given the opportunity to work with a partner or small group when completing the ladders. Questions become more complex as students progress up the ladder, therefore students begin at the bottom. This is frequently modeled with the class, encouraging discussion and sharing of ideas before coming to a conclusion. Assessment and record-keeping strategies are also included in the teacher guides.

** For more information see PowerPoint presentations and available resources on FCPS 24/7.

# Teaching with Primary Sources

*What are Primary Sources?*
Primary sources are photographs, texts, documents, etc that originated during the time of an event/life (or a witness) used to learn about the past. Go to http://www.primarysourcelearning.org for a collection of teaching materials focused on using historical sources to deepen student understanding of the curriculum for all subjects. The Primary Source Learning teaching materials collection was created through the Library of Congress Teaching with Primary Sources Northern Virginia Partnership and uses primarily sources from http://www.loc.gov.

*Purpose of teaching with Primary Sources:*

- Enrich Curriculum Content
  - Allow students to consider continuity and change in relation to all subjects.
  - Add different perspectives to the curriculum.
  - Use varying levels of background knowledge and academic vocabulary growing from novice to expert levels with the topic under study.
  - Offer content to students with more questions than answers.
- Add Rigor and Relevance to the Learning Process
  - Challenge students to think and use what they know to make sense of the historical sources.
  - Require the use of literacy skills to read documents of real life.
- Access Student Learning through a Variety of Products
  - Use digital historical sources as evidence to support an opinion or theory.
  - Create a variety of products using the sources to support and further the ideas presented.
  - Demonstrate knowledge and academic vocabulary by evaluating and interpreting historical documents.

*Using Primary Sources and Primary Source Learning in the classroom:*

- Activity Maker: quickly make a differentiated Images Draw You In introduction activity to save, print, and/or project in your classroom.
- Transfer collections of primary sources without any searching from any Learning Experience to the digital movie making tool, Primary Access.
- Use the K-12 Social Studies Posters to begin Social Studies units with primary sources.
- Field-test Learning Experiences and share your experiences with other educators from around the world.
- Use premade learning experiences that correlate with the VA SOL's such as Zoom-In PowerPoints, Eye Spy Activities, and Jeopardy Review Games

Primary Source Learning


** For more information see the homepage: http://www.primarysourcelearning.org or the Library of Congress website: http://www.loc.gov

# PrimaryAccess

*What is PrimaryAccess?*
The web-based program PrimaryAccess offers unprecedented opportunities for students and teachers to access an impressive archive of primary source historical documents from the convenience of their web-browser and create historical narratives with the documents.

*Purpose of Primary Access:*

- Offers students and teachers the opportunity to use primary source documents to create digital movies
- Provides a compelling and meaningful learning experience
- Encourages student creativity
- Helps students develop better historical thinking skills

*How to use PrimaryAccess in the classroom?*
A historical narrative is a short digital movie that explores some facet of history. It is typically 1-3 minutes in length, contains a montage of images, text or movies accompanied by a narration done in the students own voice. With easy to use tools provided by PrimaryAccess, narrators can add motion to these otherwise static images (i.e., the "Ken Burns effect").
These narratives typically follow a story structure, with a beginning, middle, and end, providing an educational and entertaining experience for both creator and viewer alike. The act of producing the narrative provides a strong active learning experience, in which the learner must research the topic, actively construct meaning from the primary documents available, craft a written story that conveys that understanding to others, and finally, create a movie that uses the documents to accompany the narration in a visually compelling manner (from www.primaryaccess.org).

** For more information on PrimaryAccess see the Primary Access: A Short Course PowerPoint on the GT Programs 24/7 site and visit http://www.primaryaccess.org or the teacher site http://www.primaryaccess.org/teacher

# Habits of Mind

**What are Habits of Mind?**

A Habit of Mind is knowing how to behave intelligently when you DON'T know the answer. This means to have a disposition toward behaving intelligently when confronted with problems, the answers to which are not immediately known: dichotomies, dilemmas, enigmas and uncertainties. A goal of educators is to give all students the opportunity to develop these "habits" to use both in school and through their daily lives. The leaders in the educational field on the Habits of Mind include Arthur L. Costa and Bena Kallick.

**Managing impulsivity -** Take your time. Think before you act. Remain calm, thoughtful, and deliberate.

**Listening with understanding and empathy -** Seek to understand others. Devote mental energy to another person's thoughts and ideas. Hold your own thoughts in abeyance so you can better perceive another person's point of view and emotions.

**Thinking flexibly -** Look at a situation another way. Find a way to change perspectives, generate alternatives, and consider options.

**Striving for accuracy -** Check it again. Nurture a desire for exactness, fidelity, and craftsmanship.

**Questioning and posing problems -** How do you know? Develop a questioning attitude, consider what data are needed, and choose strategies to produce those data. Find problems to solve.

**Applying past knowledge to new situations -** Use what you learn. Access prior knowledge, transfer that knowledge beyond the situation in which it was learned.

**Thinking and communicating with clarity and precision -** Be clear. Strive for accurate communication in both written and oral form. Avoid overgeneralizations, distortions, and deletions.

**Persisting -** Stick to it! See a task through to completion, and remain focused.

**Creating, imagining, innovating -** Try a different way. Generate novel ideas, and seek fluency and originality.

**Responding with wonderment and awe -** Let yourself be intrigued by the world's phenomena and beauty. Find what is awesome and mysterious in the world.

**Taking responsible risks -** Venture out. Live on the edge of your competence.

**Finding humor -** Laugh a little. Look for the whimsical, incongruous, and unexpected in life. Laugh at yourself when you can.

**Thinking interdependently -** Work together. Truly work hard with and learn from others in reciprocal situations.

**Remaining open to continuous learning -** Learn from experiences. Be proud and humble enough to admit you don't know. Resist complacency.

**Thinking about thinking (metacognition) -** Know you're knowing. Be aware of your own thoughts, strategies, feelings, and actions – and how they affect others.

**Gathering data through all senses -** Gather data through all sensory paths: gustatory, olfactory, tactile, kinesthetic, auditory, and visual.