



MAP Growth, MAP Growth K-2

# RIT Reference Charts



Common Core and Next Generation Science Standards\*

# Contents

<b>Mathematics K-2 .....</b>	<b>3</b>
Operations and Algebraic Thinking .....	4
Number and Operations .....	5
Measurement and Data .....	6
Geometry.....	7
<b>Mathematics 2-5 .....</b>	<b>8</b>
Operations and Algebraic Thinking .....	9
Number and Operations .....	10
Measurement and Data .....	11
Geometry.....	12
<b>Mathematics 6+ .....</b>	<b>13</b>
Operations and Algebraic Thinking .....	14
The Real and Complex Number Systems.....	15
Geometry.....	16
Statistics and Probability.....	17
<b>Reading K-2 .....</b>	<b>18</b>
Literature and Informational.....	19
Vocabulary Use and Functions.....	20
Foundational Skills .....	21
Language and Writing.....	22
<b>Reading .....</b>	<b>23</b>
Literary Text: Key Ideas and Details.....	24
Literary Text: Language, Craft, Structure.....	25
Informational Text: Key Ideas and Details .....	26
Informational Text: Language, Craft, Structure .....	27
Vocabulary: Acquisition and Use.....	28
<b>Language Usage .....</b>	<b>29</b>
Writing: Write, Revise Texts for Purpose and Audience .....	30
Language: Understand, Edit for Grammar, Usage.....	31
Language: Understand, Edit for Mechanics .....	32
<b>Science .....</b>	<b>33</b>
Life Sciences .....	34
Physical Sciences .....	35
Earth and Space Sciences.....	36



**225**



## Understanding RIT Scores and the Reference Charts

MAP Growth tests produce scores that make it possible to monitor student growth from year to year along developmental scales. The charts that follow show examples of the kinds of work students do at various points along the MAP Growth RIT scale, assuming they have been exposed to content.

**200**



### Question Difficulty and the RIT Scale

These charts demonstrate the relationship between question difficulty and our RIT scale:

- For any MAP Growth score, students will answer questions at or near that score correctly about half the time.
- Questions with lower RIT will be answered correctly more frequently.
- Questions of higher RIT will be answered correctly less frequently. More difficult questions will probably require new learning on the part of the student.

**190**



### PLEASE NOTE

Each subject area has a unique alignment to the RIT scale. As a result, scores between subjects are not equivalent.

**175**



Test items in this booklet are sample items, and many have not been calibrated or field tested. For purposes of this document, RIT scale alignment is an approximation.

## Operations and Algebraic Thinking

Students represent and solve problems involving addition, subtraction, multiplication, and division. They understand and apply properties of operations, and they understand the relationship between operations.

### PLEASE NOTE

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The example items present the visual of the item and we include text in the examples to show what the student hears when the text is absent from the screen.

## 141–150

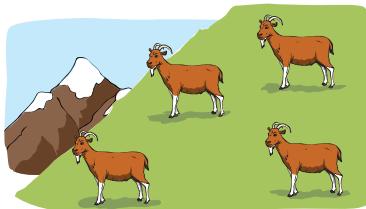


### Listen to the word problem.

There are four goats on the hillside. Three goats leave the hillside.

**Putting an X on a goat means it has left the hillside.**

**Move Xs to the goats to show how many have left the hillside.**



X

## 171–180



### Listen to the word problem.

Bella had 78 shells in her collection. She gave 43 shells away to her friends.

**How many shells are left in Bella's collection?**

**You can move base ten blocks to help you solve the problem.**

\_\_\_\_\_ shells

30	35	43	48	
78	112	121		

## below 131



**Look at the trucks.**

**Two trucks and one more truck is how many trucks altogether?**



1 2 3 4 5

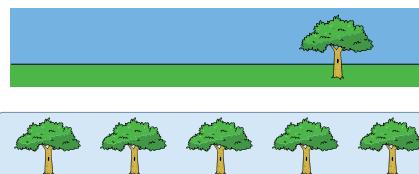
## 131–140



**Listen to the story problem.**

There is one tree in the yard. Two more get planted in the yard.

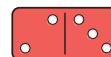
**Move the trees to the yard to show how many there are altogether.**



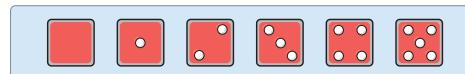
## 151–160



**The domino shows one way to make 5.**



**Move dots to the empty domino to show a different way to make 5.**



## 161–170



**Look at the problem.**

**Move the correct number to the blank line to make the sentence true.**

**You can use the buttons to help you find the answer to the problem.**

$$4 + \underline{\quad} = 6$$

0 1 2 3 4 5 6 7 8 9

## 171–180



### Listen to the word problem.

The Lions had 47 points at halftime. At the end of the game they had 89 points.

**How many points did the Lions score after halftime?**

\_\_\_\_\_ points

0 1 2 3 4 5 6 7 8 9

## above 191



**Look at the problem.**

**What is the answer?**

$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

0 1 2 3 4 5 6 7 8 9

**Number and Operations**

Students understand place value, the counting sequence, and counting strategies. They compose and decompose numbers into hundreds, tens, and ones. Students use place value understanding to compare numbers, perform multidigit arithmetic, and develop understanding of fractions.

**PLEASE NOTE**

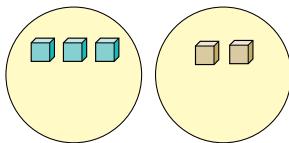
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**141–150**

*Look at the two groups.*

*Move cubes to the circles to make the groups equal.*

**171–180**

*Look at the number.*

*What is 100 more than 347?*

347



0 1 2 3 4 5 6 7 8 9

**below 131**

*Look at the picture.*

*How many superheroes are there?*



- 1    2    3    4

**151–160**

*Look at the numbers.*

*Which number is 1 more than 13?*

- 4    14    15    17    20

**181–190**

*Look at the numbers.*

*Put the correct symbol in each of the problems to make them true.*

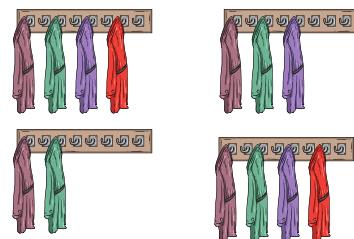
532        591    358        358    823        453

<      >      =

**131–140**

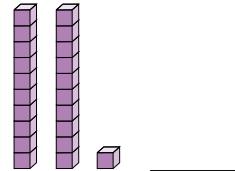
*Look at the coatracks.*

*Choose the coatrack that has the fewest coats.*

**161–170**

*Look at the picture.*

*What number do the blocks show?*



1    21    20    201

**above 191**

*Listen to the words that describe a number:  
6 hundreds and 5 ones.*

*Write the number that is described.*

6 hundreds and 5 ones

0 1 2 3 4 5 6 7 8 9

**Measurement and Data**

Students solve problems involving measurement and estimation of lengths, time, liquid volumes, and masses of objects. They use geometric measurement to understand area and perimeter. Students organize, represent, and interpret data in various graphical representations.

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**141–150**

**Look at the sticker chart.**

**Which student has the most star stickers?**

**171–180**

**Look at the clock.**

**What time is shown on the clock?**



\_\_\_\_\_  
3:45    9:15    8:20    4:40

**below 131**

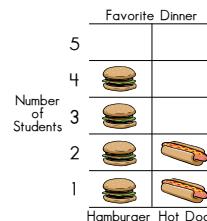
**Look at the picture.**

**Which student is the shortest?**

**151–160**

**Look at the graph.**

**How many students chose hot dog as their favorite dinner?**



\_\_\_\_\_  
1    2    3    4    5    6

**181–190**

**Listen to the story.**

Julia bought a robot toy for 79 cents. She paid for it with one dollar.



**Show the change that Julia should receive.**

**131–140**

**Look at the group of objects. The objects in the group belong together.**



**Which object belongs with the group?**

**161–170**

**Look at the picture of the bus.**

**Measure the length of the bus using blocks.**

**How many blocks long is the bus?**



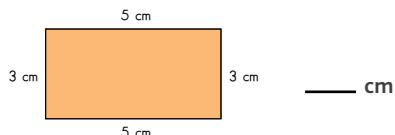
\_\_\_\_\_ blocks

0    1    2    3    4    5    6    7    8    9

**above 191**

**Look at the rectangle.**

**What is the perimeter of the rectangle?**



10    11    12    13    14  
15    16    17    18    19    20

**Geometry**

Students reason with shapes and their attributes. They identify and describe shapes having specified attributes. Students partition shapes into equal shares to gain an understanding of fractional parts of a whole.

**PLEASE NOTE**

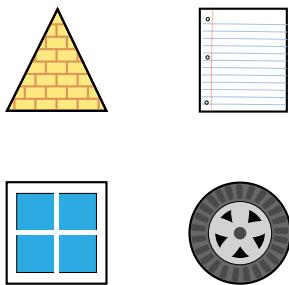
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**141–150**

**Look at the pictures.**

**Which picture is shaped like a circle?**

**171–180**

**Look at the shapes.**

**Choose ALL of the shapes that are divided into equal shares.**

**below 131**

**Look at the shapes.**

**Which shape has only 3 sides?**

**151–160**

**Look at the shapes.**

**Move ALL the shapes with four corners to the mat.**

**181–190**

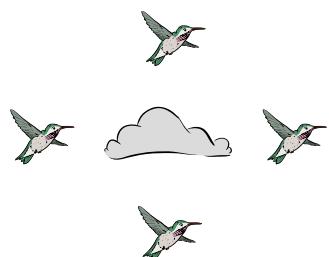
**Look at the objects.**

**Choose ALL the objects that have six faces.**

**131–140**

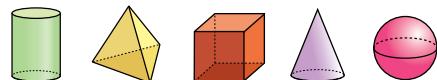
**Look at the picture.**

**Which bird is over the cloud?**

**161–170**

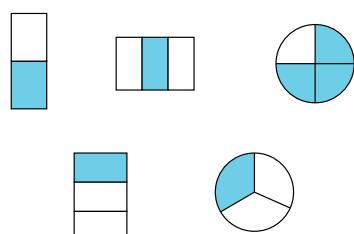
**Look at the objects.**

**Choose the pyramid.**

**above 191**

**Look at the shapes.**

**Choose ALL the shapes that show one-third shaded.**





**225**



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## Operations and Algebraic Thinking

Students represent and solve problems involving the four operations, understand and apply properties of operations, generate and analyze patterns, and write and interpret numerical expressions.

## below 161

Solve:

$$6 + 2 = \square$$

- A. 4
- B. 7
- C. 8**
- D. 9

## 161–170

Which number makes the number sentence true?

$$\square + 7 = 13$$

- A. 3
- B. 6**
- C. 14
- D. 20

## 171–180

Choose all the sets that show an odd number of basketballs.

- A. 
- B. 
- C. 
- D. 
- E. 

## 181–190

Use the picture to answer the question.



Sonja and Kai share the toys equally.  
How many toys will they each have?

- A. 1
- B. 2
- C. 4**
- D. 8

## 191–200

Which number sentence means 3 times as many as 12?

- A.  $12 \div 3 = 4$
- B.  $3 \times 12 = 36$**
- C.  $3 + 12 = 15$
- D.  $3 \times 4 = 12$

## 201–210

Jorge wants to buy enough hot dog buns for 50 hot dogs. The buns come in packages of 8. He uses this number sentence to find the number of packages he will need.

$$50 \div 8 = 6 \text{ r}2$$

What is the **LEAST** number of packages needed?

- A. 6
- B. 7**
- C. 8
- D. 9

## 211–220

Which set contains **all** the factors of 20?

- A. {2, 4, 5, 10}
- B. {5, 10, 15, 20}
- C. {1, 2, 4, 5, 8, 15}
- D. {1, 2, 4, 5, 10, 20}**

## 221–230

Solve the expression.

$$6 \times (9 - 4) + (6 + 4) \div 2$$

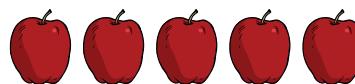
- A. 20
- B. 30
- C. 35**
- D. 38
- E. 58

**Number and Operations**

Students understand the place value system by counting, representing, comparing, and performing operations with multidigit whole numbers, fractions, and decimals.

**below 161**

Use the picture to answer the question.



How many apples are there?

- A. 4
- B. 5
- C. 6
- D. 7

**161–170**

What number is 10 less than 46?

Move digits to the boxes to show your answer.


0    1    2    3    4    5    6    7    8    9

**171–180**

Find the difference.

$$\begin{array}{r} 99 \\ - 56 \\ \hline \end{array}$$

- A. 33
- B. 34
- C. 43
- D. 44

**181–190**

Find the product.

$$\begin{array}{r} 60 \\ \times 5 \\ \hline \end{array}$$

- A. 30
- B. 35
- C. 300
- D. 305

**191–200**

Solve:

$$\frac{5}{7} - \frac{3}{7} =$$

- A.  $\frac{2}{7}$
- B.  $\frac{8}{7}$
- C. 2
- D. 7

**201–210**

Use the numeral to complete the table.

612,398

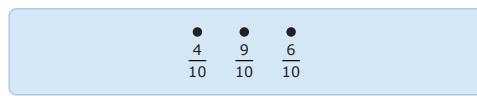
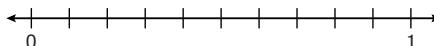
Move digits to the correct place value in the boxes.

Place Value	Number
tens	<input type="text"/>
hundreds	<input type="text"/>
ten thousands	<input type="text"/>
hundred thousands	<input type="text"/>

1    2    3    6    8    9

**211–220**

Move the fractions to the correct location on the number line.

**221–230**

Move numbers to the boxes to show fractions that are equal to  $\frac{1}{3}$ .

$$\frac{1}{3} = \frac{\square}{\square} = \frac{\square}{\square}$$

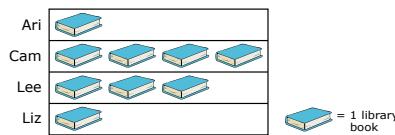
2    3    4    5    6    7    8    9    10    11    12

## Measurement and Data

Students solve measurement problems involving length, mass, liquid volume, time, money, area, perimeter, volume, and angles. Students generate, represent, and interpret data, and they solve problems using charts, graphs, and line plots.

## below 161

Use the graph to answer the question.



Who has the most library books?

- A. Ari
- B. Cam
- C. Lee
- D. Liz

## 161–170

Use the picture to answer the question.

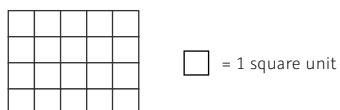


How long is the pencil?

- A. 4 cm
- B. 5 cm
- C. 6 cm
- D. 7 cm
- E. 8 cm

## 171–180

Use the figure to answer the question.



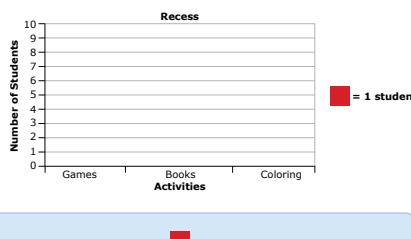
What is the area of the figure?

- A. 5 square units
- B. 9 square units
- C. 18 square units
- D. 20 square units

## 181–190

During recess, 2 students played games, 3 students read books, and 2 students colored art pages.

Move the square to make a bar graph of the data.



## 191–200

Use the rectangle to answer the question.



What is the perimeter?

- A. 8 inches
- B. 12 inches
- C. 20 inches
- D. 24 inches

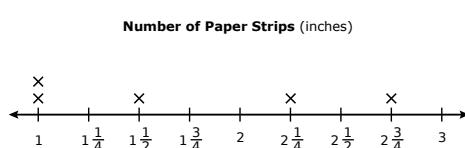
## 201–210

A flight lasted 5 hours. Choose all the measurements that are equal to 5 hours.

- A. 15,000 seconds
- B. 18,000 seconds
- C. 30,000 seconds
- D. 250 minutes
- E. 300 minutes

## 211–220

The line plot shows the lengths of paper strips that Jai needs for an art project.

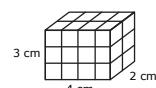


What is the total length of paper that Jai will use?

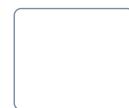
- A.  $5\frac{3}{4}$  inches
- B.  $6\frac{3}{4}$  inches
- C.  $7\frac{1}{2}$  inches
- D.  $8\frac{1}{2}$  inches

## 221–230

Use the figure to answer the question.



Choose all the expressions that can be used to find the volume of the rectangular prism.



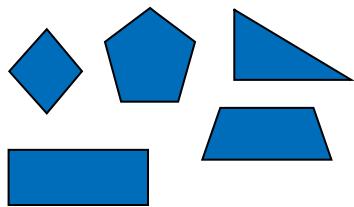
$$12 + 12 \quad 12 + 12 + 8 \quad 8 + 8 + 8 \quad 8 + 8 + 8 + 8$$

**Geometry**

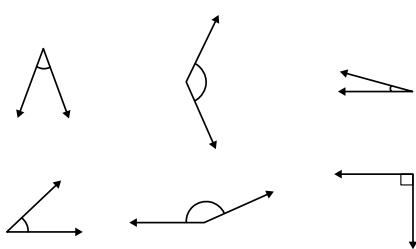
Students understand and reason with geometric concepts by identifying, describing, creating, and classifying lines, angles, and two- and three-dimensional figures. Students solve problems by graphing points on the coordinate plane.

**171–180**

**Choose all the quadrilaterals.**

**201–210**

**Choose all the figures that show obtuse angles.**

**181–190**

**Use the set of shapes to complete the task.**



**Choose all the terms that describe the set of shapes.**

- A. squares
- B. rectangles
- C. trapezoids
- ✓D. parallelograms
- ✓E. quadrilaterals

**211–220**

**Which statement about rectangles is true?**

- A. All rectangles are squares.
- B. All rectangles are trapezoids.
- C. All rectangles are rhombuses.
- ✓D. All rectangles are parallelograms.

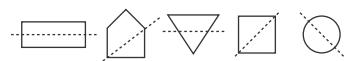
**161–170**

**Which shape is a triangle?**

- |    |  |     |  |
|----|--|-----|--|
| A. |  | ✓D. |  |
| B. |  | E.  |  |
| C. |  |     |  |

**191–200**

**Some figures are shown.**



**Choose all the figures that show a line of symmetry.**

**221–230**

**Move the shapes to the correct part of the chart.**

At Least One Line of Symmetry	At Least One Line of Symmetry AND At Least One Acute Angle	At Least One Acute Angle





**225**



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Students apply and extend previous understandings of arithmetic to algebraic expressions, equations, and inequalities. Students model relationships between quantities using functions and compare, interpret, and build functions in different representations.

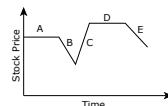
201–210

**Simplify:**

$$5 + (2 + 3^2) - 1$$

- A. 12  
**✓B.** 15  
 C. 17  
 D. 29

211–220

**The graph shows the change in price of a stock over time.****Identify the time intervals for which the stock price increased, decreased, or remained constant.****Move the intervals to the appropriate column in the table.**

Stock Price Increased	Stock Price Decreased	Stock Price Remained Constant

A      B      C      D      E

221–230

**Solve:**

$$\frac{x}{4} - 31 = 108$$

- A.  $x = 232$   
**✓B.**  $x = 401$   
 C.  $x = 463$   
**✓D.**  $x = 556$

231–240

241–250

above 250

Move numbers into the boxes to represent 64 using an exponent.

$$\boxed{\phantom{0}} \boxed{\phantom{0}} = 64$$

2    3    4    16    32    60

Use the system of equations to answer the question.

$$\begin{aligned} 2x + 2y &= 6 \\ y &= x - 5 \end{aligned}$$

What is the solution to the system of equations?

- A. (1, 2)  
 B. (1, -4)  
 C. (2, 1)  
**✓D.** (4, -1)

The length of a certain moon's orbit is approximately  $1.5 \times 10^{11}$  meters. The diameter of a certain star is approximately  $1.5 \times 10^9$  meters.

How many times greater is the distance of the moon's orbit compared to the diameter of the star? Enter the answer in the box.

times greater

**The Real and Complex Number Systems**

Students apply and extend previous understandings of operations to real and complex number systems by solving problems involving ratios, rates, proportions, rational numbers, irrational numbers, complex numbers, and the coordinate plane.

**201–210**

**The sign shows the cost of a bag of apples at Hank's Fruit Stand.**



**What is the unit price?**

- A. \$0.85 per apple
- B. \$0.90 per apple
- C. \$1.10 per apple
- D. \$1.18 per apple

**211–220**

**Which number line shows how to find the sum of  $-8 + (-2)$ ?**

- A.
- B.
- C.
- D.

**231–240**

**Simone makes pies. She uses  $3\frac{1}{2}$  pounds of bananas to make 12 servings of banana pie.**

**How many pounds of bananas does Simone need to make 48 servings of banana pie?**

- A. 4
- B. 6
- C. 10
- D. 14

**241–250**

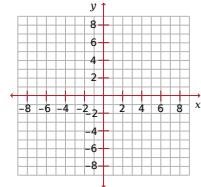
**Move the numbers to the boxes to order them from least to greatest value.**

least  ,  ,  ,  ,   greatest

$12\frac{1}{3}$       18.5       $\sqrt{51}$       51.2       $\sqrt{225}$

**221–230**

**Move the point to the coordinates  $(-5, 6)$ .**

**above 250**

**Which is equivalent to  $2 + 3\sqrt{-12}$ ?**

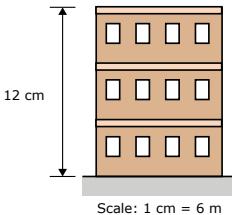
- A.  $8i\sqrt{3}$
- B.  $-i\sqrt{12}$
- C.  $-4i\sqrt{12}$
- D.  $2 + 6i\sqrt{3}$
- E.  $2 - 3i\sqrt{12}$

## Geometry

Students solve problems involving area, circumference, surface area, volume, and angle measure. Students understand congruence and similarity in terms of transformations and apply theorems involving properties of circles and right triangles.

201–210

**Use the scale drawing of the building to answer the question.**

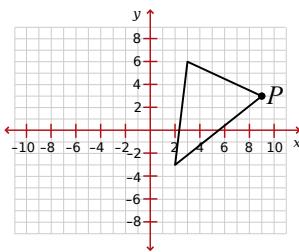


**What is the actual height of the building?**

- A. 2 m
- B. 6 m
- C. 72 m**
- D. 144 m

211–220

**Use the graph to answer the question.**



The triangle is reflected across the  $y$ -axis and then reflected across the  $x$ -axis.  $P'$  is the image of  $P$  after both reflections.

**What are the coordinates of  $P'$ ?**

- |                     |             |
|---------------------|-------------|
| A. (-9, -9)         | C. (-7, -9) |
| <b>✓B. (-9, -3)</b> | D. (-7, -3) |

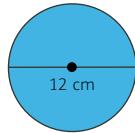
221–230

**Which net can be folded along the dotted lines to make a closed cube?**

- ✓A.**
- D.
- B.
- E.
- C.

231–240

The area,  $A$ , of the circle can be found using the formula  $A = \pi r^2$ , where  $r$  is the radius.

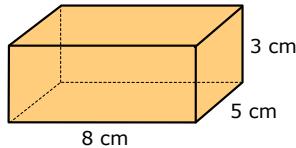


**What is the approximate area of the circle?**  
Use 3.14 for  $\pi$ .

- A. 18.8  $\text{cm}^2$
- B. 37.7  $\text{cm}^2$
- C. 113.0  $\text{cm}^2$**
- D. 452.2  $\text{cm}^2$

241–250

**Use the diagram to answer the question.**



**What is the surface area of this rectangular solid?**

- A. 79  $\text{cm}^2$
- B. 110  $\text{cm}^2$
- C. 120  $\text{cm}^2$
- D. 128  $\text{cm}^2$
- ✓E. 158  $\text{cm}^2$**

above 250

**Choose all the transformations that carry the regular hexagon onto itself.**

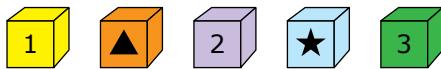
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| Reflection over line $k$          | Reflection over line $n$          |
| Rotation 60° clockwise about $P$  | Rotation 90° clockwise about $P$  |
| Reflection over line $r$          | Reflection over line $s$          |
| Rotation 120° clockwise about $P$ | Rotation 270° clockwise about $P$ |

## Statistics and Probability

Students summarize, represent, and interpret data, including measures of center and variability, and investigate patterns of association in bivariate data. Students understand and evaluate random processes and compute probabilities of events in a uniform probability model.

201–210

Ivan places these five blocks into a bag.



Ivan picks one block without looking.

What is the probability that the block Ivan picks has a number on it?

- |                  |                   |
|------------------|-------------------|
| A. $\frac{1}{5}$ | ✓D. $\frac{3}{5}$ |
| B. $\frac{1}{3}$ | E. $\frac{2}{3}$  |
| C. $\frac{2}{5}$ |                   |

211–220

This list shows the number of points Julia scored in each of her last seven basketball games.

10, 14, 16, 12, 14, 14, 11

What is the mean number of points Julia scored?

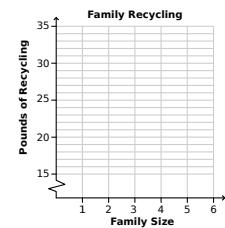
- A. 10
- ✓B. 13
- C. 14
- D. 16

221–230

The table shows family size and recycling information for several different families.

Move the points onto the graph to make a scatter plot of the data.

Family Size	Pounds of Recycling
3	19
4	22
2	22
5	32
3	28
3	18
5	34



231–240

Use the box plot to answer the question.

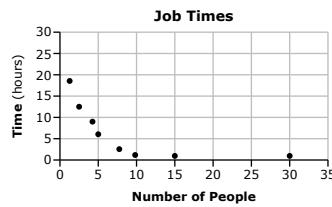


What is the median of the data?

- A. 20
- D. 35
- ✓B. 30
- E. 45
- C. 32.5

241–250

The scatter plot shows data about the number of people who are working on a job and the amount of time needed to complete the job.

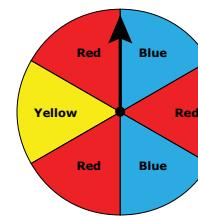


What type of relationship is shown between the number of people and time?

- A. positive and linear
- B. negative and linear
- C. positive and nonlinear
- ✓D. negative and nonlinear

above 250

A student spins the spinner 50 times and records the results in the table.



Red	Blue	Yellow
28	12	10

Move symbols into the boxes to correctly complete the inequalities comparing the experimental probability and theoretical probability for each color.

- Experimental  $P$  (Red)  Theoretical  $P$  (Red)
- Experimental  $P$  (Blue)  Theoretical  $P$  (Blue)
- Experimental  $P$  (Yellow)  Theoretical  $P$  (Yellow)

<                    =                    >



**225**



## Understanding RIT Scores and the Reference Charts

MAP Growth tests produce scores that make it possible to monitor student growth from year to year along developmental scales. The charts that follow show examples of the kinds of work students do at various points along the MAP Growth RIT scale, assuming they have been exposed to content.

**200**



### Question Difficulty and the RIT Scale

These charts demonstrate the relationship between question difficulty and our RIT scale:

- For any MAP Growth score, students will answer questions at or near that score correctly about half the time.
- Questions with lower RIT will be answered correctly more frequently.
- Questions of higher RIT will be answered correctly less frequently. More difficult questions will probably require new learning on the part of the student.

**190**



### PLEASE NOTE

Each subject area has a unique alignment to the RIT scale. As a result, scores between subjects are not equivalent.

**150**



Test items in this booklet are sample items, and many have not been calibrated or field tested. For purposes of this document, RIT scale alignment is an approximation.

**Literature and Informational**

Students understand what they read or hear read aloud. They make inferences, cite textual evidence, and determine central ideas, main topics, or themes. They identify and use various text features and determine or clarify the meaning of unknown words in context.

**PLEASE NOTE**

MAP Growth K–2 items have audio and sometimes little or no text on the screen.

The example items present the visual of the item and we include text in the examples to show what the student hears when the text is absent from the screen.

**141–150**

**Look at the picture.**



**Why does the bus stop in this picture?**

It is raining.  
A bike is passing.  
A train is passing.  
The people want to ride.

**171–180**

**Read the passage.**

**Choose ALL the sentences that are facts.**

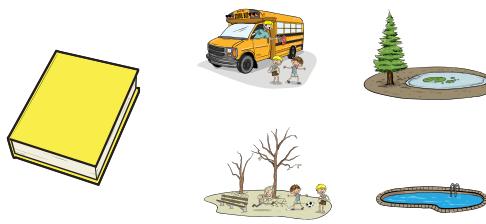
<input type="checkbox"/>	Skating is the best sport for kids.
<input type="checkbox"/>	Hockey is a team sport on skates.
<input type="checkbox"/>	In speed skating, racers try to finish first.
<input type="checkbox"/>	Figure skating is the most fun.

**below 131**

(This is a listening comprehension item.  
The passage is not presented here.)

**Listen to the story.**

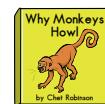
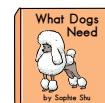
**Which picture shows where the story takes place?**

**131–140**

**Look at the pictures.**

Maureen wants to learn more about taking care of dogs.

**Which book should Maureen read?**

**151–160**

(This is a listening comprehension item.  
The passage is not presented here.)

**Listen to the story.**

**What does Jayna do before she eats breakfast?**

**161–170**

**Read the table of contents.**

**Which page has information about dogs?**

Wolves .....	6
Foxes .....	10
Dogs .....	14
Bears .....	20
Cats .....	25

**181–190**

(Passage is not read aloud).

**Read the passage.**

Mr. Lee made lunch for his sons each day. Each son liked some foods best. The oldest son liked nuts and fruit. The middle son liked fruit and string cheese. The youngest son liked soup, fruit, and juice.



**Which food did every son like?**

juice

fruit

soup

nuts

**above 191**

**Read the passage.**

Birds go places other animals cannot. Robins build their nests high up in trees. There is a good reason for this. It is safer that way. Robins stay in their nests to protect their babies. But sometimes they must leave the safety of the nest. Robin parents need to find food like worms and berries. Leaving the baby robins would be dangerous if the nests were on the ground. Other animals could get to the baby birds. But since the nests are in trees, few animals can reach them. Baby robins are safer in trees than on the ground.

**What is the main idea of the passage?**

Birds go places other animals cannot.  
Robins stay in their nests to protect their babies.  
Baby robins are safer in trees than on the ground.  
Robin parents need to find food like worms and berries.

# READING K–2 | VOCABULARY USE AND FUNCTIONS

## Vocabulary Use and Functions

Students determine the meaning of unknown and multiple-meaning words and phrases by using context clues and analyzing word parts. They understand figurative language and word relationships. Students use glossaries and beginning dictionaries to clarify word meanings.

### PLEASE NOTE

MAP Growth K–2 items have audio and sometimes little or no text on the screen.

The example items present the visual of the item and we include text in the examples to show what the student hears when the text is absent from the screen.

## 141–150



**Look at the pictures.**

**Choose the picture of something that melts.**



(Audio plays names of pictures when selected: dog, ice, chair, boots.)

## 171–180



**Listen to the passage.**

Max looked out the window on the bus ride. For just a moment, he got a glimpse of the new toy store. Very soon, the bus had passed it, and the store was out of sight again.

**What does the word glimpse mean in the passage?**

a new toy  
a bus stop

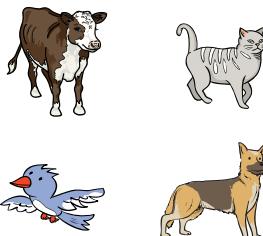
a quick look  
a daydream

## below 131



**Look at the pictures.**

**Choose the picture of the bird.**



## 151–160



**Look at the list of fruit.**

**Move ALL the words that are fruits to the paper to complete the list.**

Fruits	
<input type="checkbox"/>	cherry
<input type="checkbox"/>	grape
<input type="checkbox"/>	pineapple
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

apple      horse      banana      truck

## 131–140



**Look at the pictures.**

**Choose the picture of the bathtub.**



## 161–170



**Listen to the sentence.**

The boy jumped down the stairs.

**Which word has an ending that means something happened in the past?**



## 181–190



**Listen to the sentence.**

Jamal had a good time at his friend's party.

**Which word shows that Jamal had more than just a good time at the party?**

quiet	awful
excellent	boring

## above 191



**Which pair of words means the same thing?**

get – offer	define – need
require – get	need – require

# READING K–2 | FOUNDATIONAL SKILLS

## Foundational Skills

Students understand the organization and basic features of print. They know and apply grade-level phonics and word analysis skills in decoding words. Students demonstrate understanding of spoken words, syllables, and sounds. They isolate, manipulate, and blend individual sounds to form words.

### PLEASE NOTE

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## 141–150



(Audio only; text not on screen.)

Listen to the word: comb.



Which picture has the same beginning sound as "comb"?



(Audio plays names of pictures when selected: bug, cat, light, pan.)

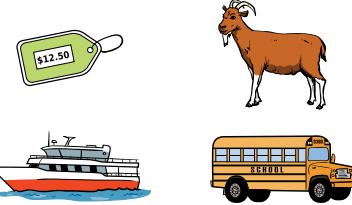
## below 131



(Audio only; text not on screen.)

Listen to the names of the pictures: tag, goat, boat, bus.

Choose the pictures that rhyme.



(Audio plays names of pictures when selected.)

## 131–140



(Audio only; the given letter N is the only text on screen.)

Look at the letter N.

Choose the picture that begins with the letter N.

Nn



(Audio plays names of pictures when selected: kite, dog, pie, net.)

## 151–160



Look at the sentence.

Which word has a capital letter?



The tree is tall and green.

## 171–180



(Audio only; the answer options are the only text on screen.)

Listen to the word: coin.

Choose the word "coin."



cuin     coin     coan     cown

## 181–190



(Audio only; the answer options are the only text on screen.)

What does preview mean?

- |               |                |
|---------------|----------------|
| not to view   | to view poorly |
| to view again | to view before |

## above 191



(Audio only; the answer options are the only text on screen.)

Listen to the word: surprise.

Move the slash to divide the word into its syllables.

surprise

/

# READING K–2 | LANGUAGE AND WRITING

## Language and Writing

Students understand conventions of standard English capitalization, punctuation, and spelling. They know conventions of standard English grammar and usage. Students develop persuasive, informative, and narrative writing by planning, revising, editing, rewriting, and adding details.

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## 141–150

 (Audio only; dictated sentences not on screen.)

**Listen to the sentence:** The boys are wet.

**Move the words to the line to write the sentence.**



are    boys    The    wet

## 171–180



(Audio only; text showing correct spelling is not on screen.)

**Read the sentence that has a circled mistake.**

**The word “many” is not spelled correctly. Use the letters to spell the word “many” correctly.**



a    e    g    i    m    n    u    w    y

## below 131



**Look at the picture.**

**Put the apple on the table.**



(Student can move apple on, under, above, or to either side.)

## 131–140



**Look at the picture.**



**Where is the dog?**

behind the girl  
next to the girl

below the girl  
on the girl

## 151–160



**Look at the picture.**

**Use ALL the words to write a sentence about the picture.**



a    gets    He    book

## 161–170



**Look at the sentence that has a mistake.**

**Which word should begin with a capital letter?**



The class pet mouse is named marilyn.

## 181–190



**Read the draft that Aziz wrote.**

I think my dog Rascal is nice. His fur is nice. When he licks my face, it is nice. When we play fetch, it is nice. He cuddles with me, and that is nice. Rascal is a nice pet.

**What is the best way that Aziz can make the draft better?**

- He can make the story shorter.
- He can use the word “nice” more.
- He can make the sentences shorter.
- He can use other words for the word “nice.”

## above 191



**Read the sentences.**

**Put the sentences in the best order to make a paragraph.**

o		

When they finally got home, they made an apple pie. Gabe was busy on Sunday afternoon. First, his mom took him to the park. At the grocery store, Gabe chose apples. After the park, they went to the grocery store.



**225**



## Understanding RIT Scores and the Reference Charts

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**190**



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**150**



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# READING | LITERARY TEXT: KEY IDEAS AND DETAILS

## Literary Text: Key Ideas and Details

Students read and comprehend literary texts, make inferences and predictions, and draw conclusions. They determine key ideas, analyze the development of themes and ideas, and summarize.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

### below 161

#### Read the story.

Mother was ready. She had streamers and balloons. She baked a cake. She invited Sandy's friends. She asked them not to tell Sandy. Sandy would come home from school. Her friends would shout when she turned on the lights!

#### What is Sandy's mother planning?

1. Sandy's first day at school
2. a picnic in the backyard
- ✓ 3. Sandy's surprise party
4. a trip to the bakery

### 161–170

#### Read the passage.

I can't wait for winter vacation to start! Every day feels like a holiday! I love to have snowball fights with my friends and make snowmen in the yard. (*Passage continues.*)

#### Which word best describes how the author feels about winter vacation?

1. calm
- ✓ 2. excited
3. nervous
4. tired

### 171–180

#### Read the paragraph.

Gordon loves to visit his aunt and uncle in Vermont. He goes up every summer to visit them. They live on a houseboat on the lake. (*Passage continues.*)

#### What does Gordon like to do best?

1. swim in the lake
2. fish for perch and trout
3. read books on the boat deck
- ✓ 4. steer the boat around the lake

### 181–190

#### Read the passage.

The wind whipped the tops of the trees so they looked like they were dancing. Clouds raced across the sky. Leaves and bits of paper swirled around. (*Passage continues.*)

#### Which sentence best tells what the story is about?

- ✓ 1. There is a big rainstorm coming.
2. They are having fun in the snow.
3. There is a double rainbow in the sky.
4. They are cleaning up after a big storm.

### 191–200

#### Read the passage.

Molly stared out the bus window with blank eyes. Next to her, a woman pulled herself up. She got off at the next stop. Molly looked over and saw that the woman had left something on the seat. (*Passage continues.*)

#### What was Molly's first reaction when she picked up the wallet?

1. to look at the pictures
2. to call after the woman
3. to stare out the bus window
- ✓ 4. to turn it in to the bus driver

### 201–210

#### Read the passage.

Celina's eye glanced around in disgust. Everywhere she looked there was trash. A crushed aluminum soda can discarded over here. An empty crumpled-up chip bag tossed over there. It made her red with rage. Celina finally took a deep breath and slowly trudged into the grocery store.

"Hey, Celina, what's wrong?" the owner of the store, Mrs. Jones, asked. (*Passage continues.*)

#### Which is the most likely theme of this passage?

1. Kids are usually very smart.
2. It is better to follow than lead.
3. People litter without knowing it.
- ✓ 4. Everyone can make a difference.

### 211–220

#### Read the passage.

He lived on the bank of a mighty river, broad and deep, which was always silently rolling on to a vast undiscovered ocean. It had rolled on, ever since the world began. It had changed its course sometimes, and turned into new channels, leaving its old ways dry and barren. (*Passage continues.*)

(from "Nobody's Story" by Charles Dickens)

#### What is a central idea of this passage?

1. It is hard to swim against the tide.
2. The river supports life on its banks.
3. Earth will continue to circle around the Sun.
- ✓ 4. The flow of the river to the ocean is unchanging.

### 221–230

#### Read the passage.

Bernadou clung to his home with a dogged devotion. He would not go from it to fight unless compelled, but for it he would have fought like a lion. (*Passage continues.*)

(from "A Leaf in the Storm" by Marie Louise de la Rameé)

#### Based on the passage, which statement about Bernadou is most likely true?

1. Bernadou had traveled to the capital of his country many times.
2. Bernadou was a drifter, never spending much time in any one place.
- ✓ 3. Bernadou would fight with loyalty and fierceness for any good cause.
4. Bernadou felt a strong connection to his hometown, but not his country.

### above 230

#### Read the passage.

Elizabeth Bennet had been obliged, by the scarcity of gentlemen, to sit down for two dances; and during part of that time, Mr. Darcy had been standing near. (*Passage continues.*)

(from *Pride and Prejudice* by Jane Austen)

#### How is Elizabeth Bennet influenced by the dialogue between Mr. Darcy and Mr. Bingley?

1. Because Elizabeth overhears Mr. Darcy's insulting comments, she insists on sitting alone rather than dance with him.
2. Elizabeth discovers that Mr. Darcy's refusal to dance is due to his shy nature and forgives his behavior.
- ✓ 3. Despite believing that Mr. Darcy is impolite and self-important, Elizabeth maintains an upbeat attitude.
4. Elizabeth develops a new, playful sense of humor around Mr. Darcy to draw him out of his foul mood.

# READING | LITERARY TEXT: LANGUAGE, CRAFT, STRUCTURE

## Literary Text: Language, Craft, Structure

Students analyze the structure of literary texts and evaluate the author's craft and purpose. They interpret figurative language and analyze literary devices.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

### below 161

#### Read the story.

Maria ate a big bowl of cereal. After breakfast, Maria put her book in her backpack. (*Passage continues.*)

#### What does Maria do first?

1. She puts on her coat.
- ✓ 2. She eats her breakfast.
3. She walks to the bus stop.
4. She puts her book in her backpack.

### 161–170

#### Read the poem.

##### The Movie

The movie theater  
is cool and dark.  
I can't wait  
for the movie to start. (*Poem continues.*)

#### Which word tells how the theater sounds?

1. cool
2. dark
- ✓ 3. loud
4. soft

### 171–180

#### Read the passage.

Dave and Mike had a great time sledding. They pulled their sleds up the big hill and went down face first. (*Passage continues.*)

#### What do Mike and Dave do right after playing outside?

1. They race down the hill.
2. They fall asleep on the couch.
- ✓ 3. They have grilled cheese and soup.
4. They pull their sleds up the big hill.

### 181–190

#### Read the passage.

Scott opened his eyes and looked at the clock. He pulled the blankets over his head to keep the sun out. He yawned and closed his eyes. He just wanted to go back to sleep.

#### What does the author's description tell the reader about Scott?

1. He is lazy.
- ✓ 2. He is tired.
3. He is scared.
4. He is hungry.

### 191–200

#### Read the passage.

Laura's teacher asked to see the science project. "But Mrs. Thompson, I forgot it was due today!" Laura said. Then Laura asked if she could call her mom. "Mom, can you bring my science project to school? It's due today!" She listened to her mother for a moment. (*Passage continues.*)

#### How do readers learn about Laura?

1. from what Laura looks like
2. from what other characters say
- ✓ 3. from what Laura says to others
4. from descriptions of Laura's feelings

### 201–210

#### Read the passage.

The clouds lifted, and the pilot sighted the tower of The City Airport. He had already radioed ahead that he was arriving. (*Passage continues.*)

#### What is the best title for this passage?

1. A Pilot's Life
- ✓ 2. A Safe Landing
3. The City Airport
4. One Cloudy Night

### 211–220

#### Read the passage.

Many years ago, a young man named Takoda decided to go on foot to Dark Mountain, a three-day journey from his village. Two days into his journey, he paused for nourishment in a narrow valley. (*Passage continues.*)

#### How does the setting contribute to Takoda's main problem in the story?

1. He is unable to see clearly through dust from the valley floor.
2. He is unable to find shelter from threatening weather on the valley floor.
3. The valley does not provide him with the nourishment he needs for his journey.
- ✓ 4. The valley does not provide him with an easy way to avoid the buffalo stampede.

### 221–230

#### Read the poem.

It sifts from leaden sieves,  
It powders all the wood,  
It fills with alabaster wool  
The wrinkles of the road. (*Poem continues.*)  
(from "The Snow" by Emily Dickinson)

#### How does the use of alliteration in line 13 build meaning in the poem?

1. It highlights the eeriness of the snow's frosty appearance.
2. It emphasizes the images of destruction caused by the snow.
- ✓ 3. It accentuates the completeness of the snow's coverage, layer by layer.
4. It contrasts the quietness of the fallen snow with the sounds of harvest.

### above 230

#### Read the poem.

Hope is the thing with feathers  
That perches in the soul,  
And sings the tune without the words,  
And never stops at all. (*Poem continues.*)  
(from "Hope" by Emily Dickinson)

#### Which statement best expresses the meaning of the extended metaphor that compares hope to a bird throughout the poem?

- ✓ 1. Hope is a constant presence and gives people comfort.
2. Hope flies away like a bird during storms and difficult times.
3. Hope is demanding, like a bird that constantly needs to be cared for.
4. Hope tries to sing songs that are uplifting but forgets the words to them.

# READING | INFORMATIONAL TEXT: KEY IDEAS AND DETAILS

## Informational Text: Key Ideas and Details

Students read and comprehend informational texts, making inferences and predictions, drawing conclusions, and citing textual support. They determine the central idea, analyze the development of arguments, and summarize.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

### below 161

#### Read the passage.

Many kinds of dogs live in the world. Some have been around for a long time.  
*(Passage continues.)*

#### What do Mudis like?

1. other dogs
2. sleeping all day
3. living in the city
- ✓ 4.** having work to do

### 161–170

#### Read the directions.

Making mud pies is fun. Find some nice sticky mud. Shape it into little pies. Set the pies in the warm sun to dry.

#### What type of day is needed to make mud pies?

- ✓ 1.** a sunny day
2. a rainy day
3. a snowy day
4. a cloudy day

### 171–180

#### Read the paragraph.

A hen lays about one egg a day. A chick takes three weeks to be born from an egg.  
*(Passage continues.)*

#### When do chicks start peeping?

1. after one week
2. after two weeks
- ✓ 3.** after three weeks
4. after four weeks

### 181–190

#### Read the passages.

##### Passage 1

Cotton is a type of plant. The cotton plant grows from seeds. Then the plants grow flowers. After the flowers fall off, green pods—or bolls—are left. The bolls dry out in the sun. They burst open. White fluffy cotton pops out.

##### Passage 2

Cotton is a soft cloth that comes from a plant. White bolls of cotton are washed and stretched into long strings. The strings are twisted together to make a thread. *(Passage continues.)*

#### What are both passages about?

1. clothes
- ✓ 2.** cotton
3. flowers
4. plants

### 191–200

#### Read the paragraph.

Weasels are hunters. They prey on mice, rats, insects, and birds. They will attack larger animals such as rabbits and chickens, too.  
*(Passage continues.)*

#### What does the weasel do when it gets more food than it needs?

1. It eats until it is sick.
- ✓ 2.** It stores the food for later.
3. It lets the food go to waste.
4. It shares the food with others.

### 201–210

#### Read the paragraph.

Platinum is a silver-white metal that is even more valuable than gold. It will not corrode or tarnish as many metals do when exposed to air. It can be used as a catalyst\* in processes that change harmful pollutants into nonpollutants. *(Passage continues.)*

\*catalyst: a substance that can speed up or bring about a chemical reaction without being affected itself

#### According to the passage, why is platinum valued by jewelers?

1. It is rarer than gold.
- ✓ 2.** It is good for gem settings.
3. It can be used as a catalyst.
4. It is produced in many countries.

### 211–220

#### Read the passage.

##### Benjamin Franklin: More than a Writer

Many people today use bifocals, eyeglasses that aid people's vision for objects both near and far away. Some people use cast-iron wood-burning stoves to heat their homes. *(Passage continues.)*

#### Which aspect of the passage best supports the idea that Franklin was a creative visionary?

1. the danger associated with Franklin's famous kite-flying experiment
2. the mention of Franklin's role in writing the Declaration of Independence
- ✓ 3.** the example of the wide range of inventions that Franklin developed
4. the similarities between today's bifocals and the bifocals that Franklin invented

### 221–230

#### Read the passage.

We observe today not a victory of party but a celebration of freedom—symbolizing an end as well as a beginning—signifying renewal as well as change. For I have sworn before you and Almighty God the same solemn oath our forbears prescribed nearly a century and three-quarters ago. *(Passage continues.)*

(from "Inaugural Address" by John F. Kennedy)

#### Which statement best expresses the main idea of the passage?

1. Well-equipped armies will fight to defend freedom.
2. Global alliances are the key to freedom for all people.
- ✓ 3.** The responsibilities of freedom rest with the individual.
4. The past generations have secured freedom for the future.

### above 230

#### Read the passage.

The efficiency of a book is like that of a man, in one important respect: its attitude toward its subject is the first source of its power. A book may be full of good ideas well expressed, but if its writer views his subject from the wrong angle even his excellent advice may prove to be ineffective. *(Passage continues.)*

(from *The Art of Public Speaking* by J. Berg Esenwein and Dale Carnegie)

#### Which conclusion about becoming an effective speaker can be drawn from the passage?

1. Effective speaking is the result of study followed by earnest practice.
2. Effective speaking requires training in and adherence to a specific set of rules.
- ✓ 3.** Effective speaking requires self-discipline and personal conviction about the topic.
4. Effective speaking is the result of practicing the speeches and styles of noted speakers.

# READING | INFORMATIONAL TEXT: LANGUAGE, CRAFT, STRUCTURE

## Informational Text: Language, Craft, Structure

Students analyze the structure of informational texts, evaluating texts for bias and for the quality of claims and evidence. They evaluate the author's craft, determining the author's point of view and purpose.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

### below 161

**Read the chart.**

Favorite Sports			
Baseball	Basketball	Soccer	Swimming
Neha Max Jessica	Samuel	Javier Sarah Brandon Codey	Addison Julia

**Which sport do the most children like?**

- ✓ 1. soccer
- 2. baseball
- 3. basketball
- 4. swimming

### 161–170

**Read the chart.**

Music	Piano	Drum	Bass	Guitar
Jazz	x	x	x	
Pop	x	x		x
Rock		x	x	x
Country	x	x	x	x

**Which two types of music have the most instruments in common?**

- 1. jazz and pop
- 2. pop and rock
- 3. country and jazz
- ✓ 4. country and rock

### 171–180

**Read the passage.**

The best place to go on vacation is Florida. There are beautiful beaches, large hotels, good restaurants, and interesting shops.  
*(Passage continues.)*

**What is the author's opinion of Florida?**

- 1. Florida has no variety.
- 2. The weather is too hot.
- ✓ 3. Florida is a great place to visit.
- 4. Only boaters will enjoy Florida.

### 181–190

**Read the passage.**

[1] One of the most famous bad guys in history was Robin Hood. [2] People think he lived in England and hid in the forest with his friends. *(Passage continues.)*

**Which sentence reveals the author's opinion of Robin Hood?**

- 1. sentence 2
- 2. sentence 3
- 3. sentence 4
- ✓ 4. sentence 5

### 191–200

**Read the passage.**

There are many differences between the ancient Olympics and the games of today. In ancient times, the games were held only during the summer, but today the games are held during summer and winter. *(Passage continues.)*

**Which organizational structure is used in this passage?**

- 1. cause and effect
- 2. sequence of events
- 3. order of importance
- ✓ 4. compare and contrast

### 201–210

**Read the passages.**

**Review 1**

Happy Birthday, Maudie is a delightful movie. The characters are believable, and the plot is a tender love story. *(Passage continues.)*

**Review 2**

Don't bother to see Happy Birthday, Maudie. It's a sappy movie about a girl who lets everyone push her around. *(Passage continues.)*

**Based on the descriptions in the two reviews, on which topic are the two reviewers most likely to agree?**

- 1. the quality of the plot
- ✓ 2. the details of the setting
- 3. the overall quality of the movie
- 4. the main character's personality

### 211–220

**Read the passage.**

#### A Unique Creature: The Thorny Devil

The thorny devil is a very interesting and unusual creature. From its name, one might guess that it is large and scary.  
*(Passage continues.)*

**Which explanation is the most likely reason the author includes a chapter heading in this passage?**

- 1. to explain background information about the subject
- ✓ 2. to provide an idea of what the selection will be about
- 3. to present information about key vocabulary terms
- 4. to supply reasons why this is an interesting subject

### 221–230

**Read the report excerpt.**

Over the last century, the amount of precipitation has increased significantly across eastern parts of North America.  
*(Passage continues.)*

(from "Adaptation Options for Climate-Sensitive Ecosystems and Resources" by the U.S. Environmental Protection Agency)

**Which feature of this text most assures the validity of the information?**

- 1. the vocabulary
- 2. the author's tone
- ✓ 3. the use of citations
- 4. the use of percents

### above 230

**Read the text written by a company that organizes scientific research into a database.**

Our Mission: Our database of more than 3,000 articles of documented investigations is an easy-to-use tool for scientific research. Users may look for a general topic or narrow their search through the use of three topic code parameters. *(Passage continues.)*

Topic Code Parameters	Description
Social Context	Who conducted the research? Where was it conducted?
Method	How was the research conducted? What procedures were used?
Findings	What was observed? What results were achieved?

**How does the chart complement the text?**

- 1. It summarizes the text.
- ✓ 2. It provides detail not in the text.
- 3. It serves to contrast information in the text.
- 4. It provides a transition between the two parts of the text.

# READING | VOCABULARY: ACQUISITION AND USE

## Vocabulary: Acquisition and Use

Students recognize and understand word relationships and structures. They use context clues and reference materials to decipher word meaning and nuance.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

### below 161

#### Read the words.

ball  
doll  
puzzle  
top

#### To which group do these words belong?

1. animals
2. colors
3. places
- ✓ 4. toys**

### 161–170

#### Use the sentences and the glossary to answer the question.

Dinah and her sister went to the **market**. They saw many kinds of **produce**. Dinah wanted peas. Her sister wanted strawberries.

#### Glossary

**market** a place to sell food  
**produce** fruits and vegetables

#### What is another kind of produce?

- |                    |          |
|--------------------|----------|
| <b>✓ 1.</b> apples | 3. money |
| 2. cookies         | 4. trees |

### 171–180

#### Read the sentences.

Jackie couldn't believe how much fun she had on the field trip. She kept replaying the day's events in her mind on the bus ride back to school.

#### In the word replaying, what does the prefix re- mean?

1. after
- ✓ 2. again**
3. not
4. two

### 181–190

#### Read the paragraph and dictionary entries.

Mrs. Franz had just given her students a piece of clay the size of her hand. She told them to create something. (*Passage continues.*)

#### Dictionary

**scuba** (skoo-buh) *n.* equipment used to breathe underwater

**scullery** (skuhl-er-ee) *n.* a small room near the kitchen

**sculpture** (skuhlp-chur) *n.* an object created by carving or molding

**scum** (skuhm) *n.* a covering on the surface of a liquid

#### Based on the information in the paragraph, what is the meaning of the word sculpture?

1. slimy film
- ✓ 3. piece of art**
2. large pantry
4. swimming gear

### 191–200

#### Read the sentences.

Lightning \_\_\_\_\_ the trunk of the lilac tree.  
I was \_\_\_\_\_ by the beauty of the sunset.

#### Which word can be used in both sentences?

1. bent
2. flashed
- ✓ 3. struck**
4. surprised

### 201–210

#### Which set of words all have the same root word?

1. extra, relax, index
2. contain, restrain, plain
3. here, everywhere, there
- ✓ 4. knowledge, unknown, knowing**

### 211–220

#### Read the sentence.

Although the storm outside was ferocious, Nate left the comfort of the cabin and trudged toward home.

#### Which word best matches the connotative meaning of ferocious as it is used in the sentence?

1. barbaric
2. inhuman
- ✓ 3. intense**
4. untamed

### 221–230

#### Read the sentence and dictionary entry.

The lives saved when the volcano exploded vindicated the expensive early warning system.

#### Dictionary

**vindicate** (vin-di-keyt) *v.*

1. to free from an accusation
2. to justify based on evidence
3. to defend against opposition
4. to claim for oneself or for someone else

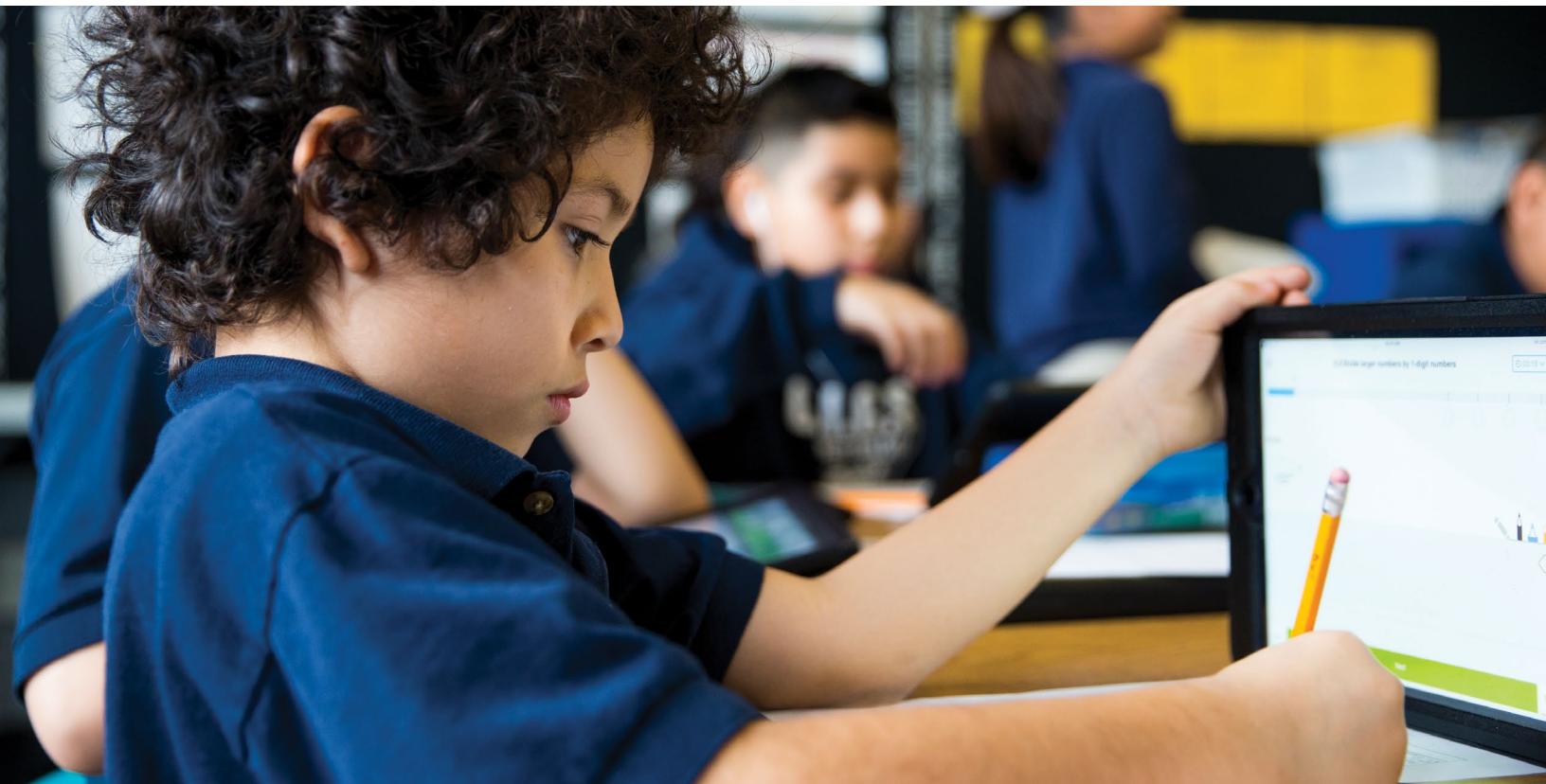
#### Which definition of vindicate is used in the sentence?

- |                          |                 |
|--------------------------|-----------------|
| 1. definition 1          | 3. definition 3 |
| <b>✓ 2. definition 2</b> | 4. definition 4 |

### above 230

#### Based on an understanding of Latin roots, what is the meaning of ambidextrous?

1. walks quickly
2. before the flood
3. lives on land and in water
- ✓ 4. can use both hands equally well**



225



## Understanding RIT Scores and the Reference Charts

MAP Growth tests produce scores that make it possible to monitor student growth from year to year along developmental scales. The charts that follow show examples of the kinds of work students do at various points along the MAP Growth RIT scale, assuming they have been exposed to content.

200



190

### Question Difficulty and the RIT Scale

These charts demonstrate the relationship between question difficulty and our RIT scale:

- For any MAP Growth score, students will answer questions at or near that score correctly about half the time.
- Questions with lower RIT will be answered correctly more frequently.
- Questions of higher RIT will be answered correctly less frequently. More difficult questions will probably require new learning on the part of the student.

### PLEASE NOTE

Each subject area has a unique alignment to the RIT scale. As a result, scores between subjects are not equivalent.

175



Test items in this booklet are sample items, and many have not been calibrated or field tested. For purposes of this document, RIT scale alignment is an approximation.

**Writing: Write, Revise Texts for Purpose and Audience**

Students use various research and writing skills to plan, develop, and revise writing for purpose and audience.

**PLEASE NOTE** Some passages have been truncated due to space considerations.

**below 161**

**Read the funny story Mason is writing.**

**Choose the word that will best help create a funny story, and move it into the blank.**

One morning Anna could not find her hat. She felt very \_\_\_\_\_ when she discovered that her hat was on her head the whole time! Even Jasper the dog seemed to giggle.

busy fine happy ✓ silly

**161–170**

**Move a word into the blank to show in what order things happened.**

First, Tina put the box on the table. \_\_\_\_\_, she took off the box's lid. Finally, she took a pair of shoes out of the box.

After Once Someday ✓ Then

**171–180**

**Read Sarah's draft.**

Taking care of a pet fish is easy. Fish need a special bowl full of clean water. They need a filter to help keep the water clean. \_\_\_\_\_. Fish need to be fed a little bit each day.

**Which sentence should be added to the blank to explain more about taking care of a pet fish?**

1. Sharks are very large fish.
- ✓ 2. Change the water once a week.
3. Some fish live deep in the ocean.
4. Goldfish are my favorite kind of fish.

**181–190**

**Read the paragraph.**

I always look forward to winter for one reason: hot chocolate. Hot chocolate is my favorite. It warms me up when I am really cold.

**Which sentence could be added to describe what hot chocolate tastes like?**

- ✓ 1. It is sweet and warm and so chocolaty.
- 2. Hot chocolate comes in different flavors.
- 3. I have hot chocolate every day in winter.
- 4. Hot chocolate is drunk by people of all ages.

**191–200**

**Celine is writing a story about a trip to the train station. Her teacher said to use words that describe the sounds at the train station.**

**Which sentence should Celine add to her story?**

- ✓ 1. An engine thundered down the track and clattered to a stop.
2. Two children waited on a bench and played with their toys.
3. A man rushed through the station carrying a big suitcase.
4. The conductor lifted a suitcase up the steps of the train.

**201–210**

**Derrick is writing a science report about the moons of Jupiter.**

**Which source of information will be most useful to Derrick?**

1. a chart that shows the orbits of all the planets
2. a science-fiction movie about life on one of Jupiter's moons
- ✓ 3. a book that names and describes the moons of each planet
4. a magazine article that explains the origins of the universe

**211–220**

**Reynaldo is planning to write a research report about important rivers in the world.**

**Which question will best help Reynaldo research and write his report?**

1. What is your favorite river?
2. Where is the world's longest river?
3. How many times has the Nile River flooded?
- ✓ 4. How are the Nile and Amazon Rivers different?

**221–230**

**Read the information.**

*Tanya is writing about the shift from U.S. isolationism to the nation's declaration of war in 1917. She plans to reference this excerpt from an address given by President Woodrow Wilson.*

*from Second Inaugural Address*

We have been deeply wronged upon the seas, but we have not wished to wrong or injure... (*Passage continues*)

**Why is the address useful for Tanya's assignment?**

- ✓ 1. It explains Wilson's motivation for involving the country in a war.
2. It provides evidence that Wilson has the support of his audience.
3. It acknowledges the point of view of those who favor isolationism.
4. It describes the possible impact of war on the country's industrial growth.

**above 230**

**Read Debra's memo.**

Thank you for participating in the Sundahl Engineering internship program. As the intern supervisor, I am requesting that all interns complete an experience report. (*Passage continues*)

**Which concluding sentence should Debra add to indicate the action she expects interns to take?**

1. All reports will be read by management, who will then meet with intern supervisors on June 15 to implement student suggestions.
2. Sundahl Engineering wants to provide the best experience for student interns, as our goal is to offer skills and to recruit future employees.
3. We understand that students have many internship opportunities, so know that management thanks you for choosing Sundahl Engineering.
- ✓ 4. To allow time for management to read all the student intern reports and to provide suggestions to staff, please submit your report by June 1.

## Language: Understand, Edit for Grammar, Usage

Students understand the conventions of grammar and usage.

## below 161

**Read the sentence.**

The dog \_\_\_\_\_ in the house.

**Which word belongs in the blank?**

1. am
- ✓ 2. is**
3. are
4. were

## 161–170

**Read the sentence.**

I went with my mom to buy a \_\_\_\_\_ of bananas.

**Which word best completes the sentence?**

- ✓ 1. bunch**
2. group
3. pile
4. set

## 171–180

**Read the paragraph, and choose the correct word in each pair of words.**

The ice cream truck comes to our apartments every Friday. My mom says buying ice cream from the ice cream truck was one of her favorite parts of [ child / ✓childhood ]. We run outside when we hear the truck playing its song. Mom buys an ice cream sandwich, and we split it in half. Then we sit in the sunshine to eat our ice cream sandwich. It fills us both with [ happier / ✓happiness ] to share an ice cream.

## 181–190

**Read the sentence.**

My mom wakes me up \_\_\_\_\_ on weekdays than on the weekend.

**Which word correctly completes the sentence?**

1. early
- ✓ 2. earlier**
3. more early
4. most early

## 191–200

**Which sentence uses adjectives in the correct order?**

1. A wool dusty coat is hanging in the closet.
- ✓ 2. A tiny yellow butterfly is landing on the flower.**
3. A wooden small ship is sailing toward the island.
4. A brown young horse is trotting around the field.

## 201–210

**Read the sentence fragment.**

Each penguin in the pool.

**Which change makes the fragment a complete sentence?**

1. Each penguin in the deep pool.
- ✓ 2. Each penguin in the pool swam.**
3. Each and every penguin in the pool.
4. Each little penguin in the deep pool.

## 211–220

**Read the sentence.**

Suzanne and Marissa \_\_\_\_\_ an entire afternoon at the amusement park.

**Which verb phrase uses active voice to complete the sentence?**

- ✓ 1. had the chance to spend**
2. are being invited to spend
3. have been chosen to spend
4. were given an invitation to spend

## 221–230

**Read the draft of Talia's paragraph.**

The tallest mountain in the world is Mount Everest. Its elevation is 29,035 feet. It was summited in 1953 for the first time.

**Talia wants to combine these statements into one sentence.****Which sentence best combines these statements?**

1. The tallest mountain, at 29,035 feet, in the world is Mount Everest and it was first summited in 1953.
2. The tallest mountain in the world, Mount Everest (29,035 feet peak elevation), was first successfully summited in 1953.
- ✓ 3. Mount Everest, the tallest mountain in the world with an elevation of 29,035 feet, was summited in 1953 for the first time.**
4. First successfully summited in 1953, the tallest mountain, Mount Everest, in the world has a peak elevation of 29,035 feet.

## above 230

**Which sentence shows clear pronoun-antecedent agreement?**

1. We unpacked our books from the boxes and then returned them to the office.
2. As soon as the monkeys left their cages, the janitors cleaned them.
3. Samantha put her jacket in the locker room and then forgot where it was located.
- ✓ 4. For English class, the students had to memorize a monologue by their favorite playwright.**

## Language: Understand, Edit for Mechanics

Students understand the conventions of punctuation, capitalization, and spelling.

## below 161

## 161–170

## 171–180

**Which sentence is punctuated correctly?**

1. Do flowers bloom in the spring!
- ✓ 2.** Do flowers bloom in the spring?
3. Do flowers bloom in the spring,
4. Do flowers bloom in the spring.

**Read the sentence, and then choose the word that should begin with a capital letter.**

My **art teacher** gave the **note** to **mrs.** Keegan.

**Read the sentence.**

Maple **leaves** begin to turn **color** in **september** when the **weather** is cooler.

**Which word in the sentence should be capitalized?**

1. leaves
2. color
- ✓ 3.** september
4. weather

## 181–190

## 191–200

## 201–210

**What is the correct spelling for more than one cherry?**

- ✓ 1.** cherries
2. cherryes
3. cherrys
4. cherryses

**Which sentence correctly uses quotation marks?**

1. "What did you say? I asked."
2. "My sister said, I need a bedtime story."
- ✓ 3.** Mom said, "Brush your teeth before bed."
4. "Mom," I asked, can I have a glass of water?"

**Move the comma into the sentence to correctly punctuate the dialogue.**

Lily studied for her science test all evening.  
"I think I will do well on my test today"  
Lily told her mother the next morning.

## 211–220

## 221–230

## above 230

**Which sentence is punctuated correctly?**

1. Pilar watch out for the bees in the garden.
2. It seems to us, Mr. Jones that the trip should be canceled.
3. What are you going to do after practice tonight Tom?
- ✓ 4.** If you ask me, Lorraine, this bus schedule is outdated.

**Read the sentence.**

The band director tries to accommode requests from the band members who want to practice in the band room after school.

**How should accommode be spelled?**

- ✓ 1.** accommodate
2. accomodate
3. acommadate
4. acomodate

**Proofread Carla's paragraph.**

I live in an area known as the great southwest—in Taos, New Mexico. Taos is a town well known for its art, history, and recreation. Located just north of the Santa Fe National Forest, Taos offers visitors the chance to ski during the winter months. There are also several museums whose goal it is to preserve artwork from the northern part of New Mexico. There are even more options for exploration nearby; Taos is only 40 miles northeast of Santa Fe, the capital of New Mexico.

**Which underlined word should be capitalized?**

- ✓ 1.** southwest
2. north
3. northern
4. northeast



**225**



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**200**



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**190**



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**175**



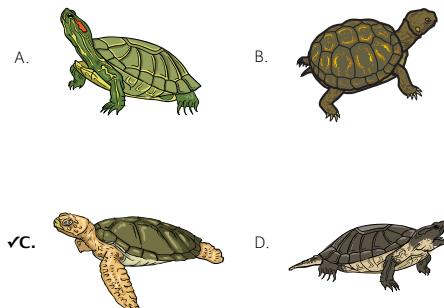
Test items in this booklet are sample items, and many have not been calibrated or field tested. For purposes of this document, RIT scale alignment is an approximation.

## Life Sciences

Students demonstrate understanding of the ideas about the structure and processes of organisms, how matter and energy move through ecosystems, how heredity affects organisms, and how biological evolution affects the unity and diversity of life. Students also demonstrate their understanding of science and engineering practices and of crosscutting concepts.

below 181

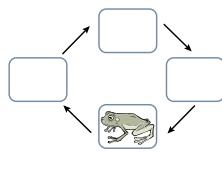
Which turtle would have the best chance for survival in an ocean environment?



191–200

A student observes frogs in and near a pond for a year. He discovers a pattern in the way they change during their lives.

Which changes did the student most likely observe during the year?



201–210

A science class wants to cross 2 pea plants. One plant is tall and one is short. Tallness (T) is dominant over shortness (t).

Students make a Punnett square to predict the outcome of the cross.

T	t	
t	Tt	tt
t	Tt	tt

What is the chance that an offspring of this cross will be short?

- A. 0 : 4
- B. 1 : 4
- C. 2 : 4**
- D. 3 : 4
- E. 4 : 4

221–230

Students collect this information about zebra mussels to better understand how they affect other populations.

Zebra mussels are small filter-feeding animals similar to clams. They are native to Russia. They were accidentally introduced into the Great Lakes of the United States. Since then, their population has increased and spread into the Mississippi River.

What is a major concern that biologists have about the increase and spread of the zebra mussel population?

- A. Mussels feed on fish that humans consume.
- B. Mussels release too much oxygen into the water.
- C. Mussels produce too much food through photosynthesis.
- D. Mussels feed on tiny organisms that are food for other species.**

231–240

Some tissues that make up the circulatory system are composed of muscle cells.

Why is muscle tissue necessary for the circulatory system to perform its functions?

- A. Muscle tissue provides strength and support for body movements.
- B. Muscle tissue regulates the movement of blood through the body.**
- C. Muscle tissue allows communication between the brain and spinal cord.
- D. Muscle tissue produces the white and red blood cells that are needed for circulation.

181–190

A group of chipmunks live in a student's backyard. The student observes the chipmunks in the yard all summer but does not see them during the winter.

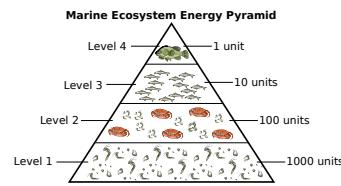


Why does the student see the chipmunks only in the summer?

- A. The chipmunks' fur turns white in the winter.
- B. The chipmunks hide from predators in the winter.
- C. The chipmunks are active only at night in the winter.
- D. The chipmunks have to hibernate to survive in the winter.**

211–220

This ecological pyramid represents the relative amount of available energy at each trophic level in the marine ecosystem.



How does the law of conservation of energy apply to this ecosystem?

- A. More energy from Level 4 will eventually be passed back to the organisms in Level 4 than in Level 1.
- B. There is a greater amount of energy available to the organisms in Level 4 than in Level 1.
- C. Some energy from each level is released as heat, but the total amount of energy remains the same.**
- D. Producers in the lower level obtain energy from the Sun, and other organisms obtain energy by eating producers.

above 240

How does differentiation at the cellular level affect an organism as a whole?

- A. Body cells repeatedly divide to allow an organism to get larger in size.
- B. Cells divide and replace old or damaged cells to maintain the systems of an organism.
- C. Germ cells divide into female or male sex cells to transfer genetic information to other organisms.
- D. Stem cells form different types of cells to allow the development of all systems in a growing organism.**

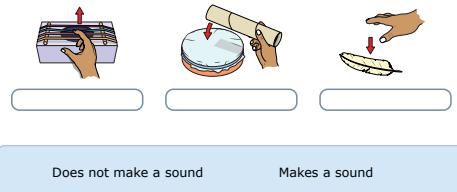
below 181

**Physical Sciences**

Students demonstrate understanding of the ideas about the interactions of matter, the relationship between force and motion, how energy converts and transfers, and the nature and use of waves. Students also demonstrate their understanding of science and engineering practices and of crosscutting concepts.

**Students are investigating to see how sound can be produced. The pictures show the actions they will test.**

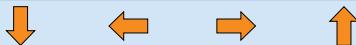
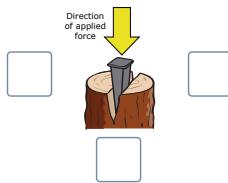
**What will the students most likely find out about the actions? Move a result to each picture.**



191–200

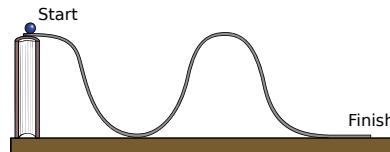
The diagram shows a wedge being used to split a log.

**Describe how the wedge changes the direction of the applied force by moving the arrows into the boxes. Not all boxes or arrows need to be used.**



201–210

Students designed and built this marble roller coaster. The only constraints are that the marble must start at rest from a height of 20 cm. Their design failed; the marble did not get over the hill before the finish.



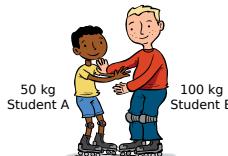
**How should the students redesign their roller coaster?**

- The start should be closer to the hill so the marble rolls down a steeper slope and gathers more kinetic energy.
- The start should be farther from the hill so the marble can build up more kinetic energy as it approaches the hill.
- The start should be lower than the top of the hill so the marble has less potential energy and more kinetic energy.
- The start should be higher than the top of the hill so the marble has more potential energy to be converted to kinetic energy.

221–230

Two students are skating. They wonder what happens when one student pushes off the other.

The picture shows Student A pushing off Student B.

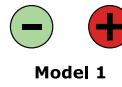


**Which description best describes what happens next to each student? (Assume no loss of energy due to friction between the skates and the floor.)**

- ✓A. Both students will move backward. Student A will move twice as fast as Student B.
- B. Both students will move backwards with the same speed because the force is applied to both.
- C. Student A will move backward. Student B will remain stationary because he has the most mass.
- D. Student B will move backward. Student A will remain stationary because he provided the force.

231–240

Students make this model of two electrically charged balloons.



**Which model shows balloons with more stored electrical energy than in Model 1?**

- A.
- C.
- ✓B.
- D.

181–190

Emilio is preparing lemonade. He first mixes 100 g of lemon juice with 400 g of water. He then adds 200 g of sugar.

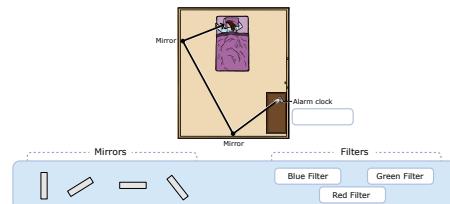
**How much does the lemonade weigh?**

- A. 200 g  
B. 400 g  
C. 500 g  
✓D. 700 g

211–220

A physics student has an alarm clock that flashes a beam of white light when the alarm sounds. The student wants a green light from the alarm clock to flash directly into her eyes to help her wake up.

- Position the mirrors so the light will shine directly into the student's eyes. Move the two mirrors with the appropriate angles into the diagram.
- Choose the filter that will change the color of the light. Move the appropriate filter to the box.



above 240

Students want to describe how water undergoes a chemical change with an equation.

**Which equation represents a chemical change?**

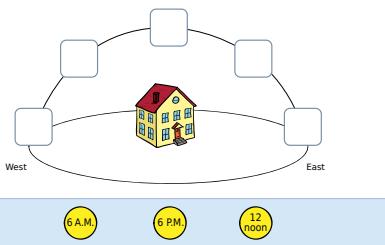
- A.  $\text{H}_2\text{O}(l) + \text{Heat} \rightarrow \text{H}_2\text{O}(g)$   
✓B.  $\text{H}_2\text{O}(l) + \text{Electricity} \rightarrow \text{H}_2(g) + \frac{1}{2}\text{O}_2(g)$   
C.  $\text{H}_2\text{O}(l) + \text{C}_6\text{H}_{12}\text{O}_6 \rightarrow \text{H}_2\text{O}(l) + \text{C}_6\text{H}_{12}\text{O}_6(aq)$   
D.  $\text{H}_2\text{O}(l) + \text{NaCl}(s) \rightarrow \text{H}_2\text{O}(l) + \text{Na}^+(aq) + \text{Cl}^-(aq)$

## Earth and Space Sciences

Students demonstrate understanding of the ideas about the history of Earth in terms of the Universe, the Solar System, and the fossil record; Earth's systems including the cycling of matter, plate tectonics, weather, and climate; and how Earth is affected by human activity. Students also demonstrate their understanding of science and engineering practices and of crosscutting concepts.

## 191–200

Show the position of the Sun in the sky at 6 A.M., 12 noon, and 6 P.M. in March by dragging the three Suns to the correct boxes.



## 221–230

Tornadoes tend to form in areas with unstable air masses.

Which sentence best explains the relationship between air masses and tornadoes?

- A. Tornadoes form in areas with cool air masses because cool air is more dense than warm air.
- B. Tornadoes remove moisture from air masses, causing warm, humid air masses to change into cool, dry air masses.
- C. The interaction between stable and unstable air masses results in an increase of warm, humid air masses where tornadoes often form.
- ✓D.** The interaction between cool, dry air masses and warm, humid air masses causes instability in the atmosphere that can result in tornadoes.

## below 181

A student wonders if all continents have rivers, oceans, and mountains. She numbers locations on this map of South America.

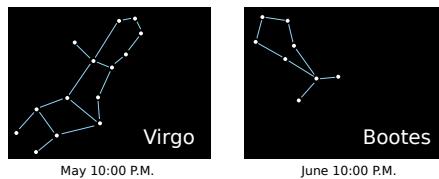


She wants to add labels to the map. Which label should she put at Location 4?

- A. Continent
- B. Lake
- ✓C.** Mountains
- D. Ocean
- E. River

## 201–210

In May, a student observes the constellation Virgo in one area of the sky. One month later, the student observes the constellation Bootes in the same area of the sky.

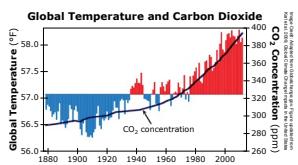


Why does the student observe the constellation Virgo in May and then Bootes in June?

- A. Stars fade in and out.
- B. Earth rotates on its axis.
- C. Stars revolve around the Sun.
- ✓D.** Earth revolves around the Sun.

## 231–240

The graph shows changes in the atmosphere.



How will the trends in temperature and carbon dioxide in the graph most likely impact other Earth systems?

- A. The change in global temperatures will cause an increase in the size of the polar ice caps.
- B. The change in global temperatures will cause an increase in the size of the hole in the ozone layer.
- ✓C.** The change in the amount of carbon dioxide in the atmosphere will cause the ocean to be more acidic.
- D. The change in the amount of carbon dioxide in the atmosphere will cause an increase in the respiration by animals.

## 181–190

Wind blows sand into a woman's garden.



The woman will put new plants between the garden and the beach to keep sand out of the garden.

Which plants would best block the wind and sand?

- A. Vegetables she can eat
- B. Thick bushes
- ✓C.** Plants with strong deep roots
- D. Tall trees with high branches

## 211–220

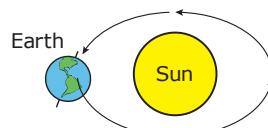
Students want to develop a plan for their school yard that will help the ecosystem.

Which plan will help the ecosystem?

- ✓A.** Plant native plants to reduce water runoff.
- B. Remove ants and earthworms from the yard.
- C. Use more fertilizer in the school garden to grow more food.
- D. Leave food out for animals such as raccoons, deer, and coyotes.

## above 240

Students are making a model of the Sun and Earth to explain the causes of natural, long-term variation in climate.



Which two changes are most important to show in the model to explain the variation in climate?

- A. changes in the direction of the rotation of Earth
- ✓B.** changes to the shape of the annual orbit of Earth
- C. changes in the gravitational pull of the Sun and Earth
- ✓D.** changes to the angle of the axis of Earth relative to the Sun
- E. changes to the angle of the plane of the orbit of Earth around the Sun



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<sup>1</sup>Photo credit: Jacob W. Frank, National Park Service

<sup>2</sup>Source credit: Globalchange.gov. Figure updated from Karl et al. 2009, Global Climate Change Impacts in the United States