Dr. Spencer Kagan's approach to

Cooperative Learning

Kagan Cooperative Learning makes cooperative learning ***Fun, Easy, and Successful!*** *This* ***SmartCard*** *describes Kagan's four PIES principles, six Key Concepts to successful implementation, Fundamental Formula, and lists Kagan Structures for Effective Instruction, Multiple Intelligences, and Domains of Usefulness.*

Easy as PIES

S is the acronym for the four basic principles of gan Cooperative Learning. Below are the critical uestions for each, and ideas to strengthen your ooperative learning lessons using the asic principles.

Positive Interdependence

- Create team goals
- Recognize team accomplishments
- Assign each teammate a role
- Divide the materials among teammates
- Divide the labor among teammates
- Have one student share the team's answer or project
- Design tasks that require cooperation

"Is a gain for one, a gain for another? Is help necessary?"

P

Individual Accountability

- Have students show and/or turn in their own answers
- Color-code individual contributions
- Assign and grade mini-topics
- Don't give group grades
- Have students paraphrase
- Randomly select students to share or demonstrate competence

I

Is individual public performance required?"

Equal Participation

"How equal is the participation?"

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- Use turn-taking structures
- Structure for participation by all
- Assign the role of Gatekeeper to ensure everyone is contributing
- Use think time so reflective students can share ideas
- Have individuals share for an equal amount of time
- Avoid "group work"

Simultaneous Interaction

S

"What percent are overtly active at once?"

- Use frequent team and pair work
- Have students share with a partner instead of calling on one student at a time
- Have teams present to each other instead of one at a time
- Use response boards, cards, or kinesthetic symbols so all students can show answers

Kagan's 6 Key Concepts to Successful Cooperat

1 Teams

How many students should be on each team? Teams of four are ideal. They are small enough for active participation for all teammates, and split evenly into pairs. If there is one too many students in the class, create one team of five. If there are two too many, steal a student from a team of four to create two teams of three. If there are three too many students, create one team of three.

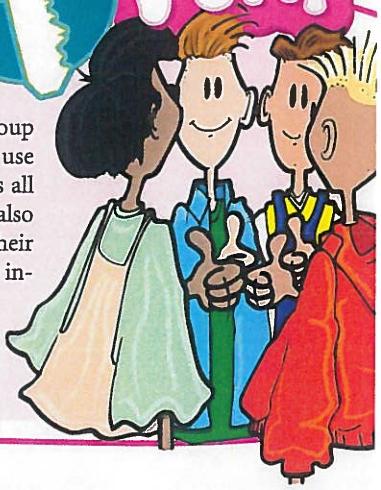
How do I form teams? Form heterogeneous teams (mixed sex, ethnicity, and ability) as your base teams. Heterogeneous teams maximize the probability of peer tutoring, and improve cross-race and cross-sex relations. Occasional, brief bre outs into homogeneous teams and rando teams allow variety, creating interest and e hancing learning.

How long should teams stay together? Fi to six weeks allows teammates to bond a to form a team identity. Form new tea even if teams are functioning well to all students to transfer their social and ac demic skills to new situations.

2 Will

My students don't want to work together. What should I do? You can't just seat students together and expect them to cooperate. You must establish the "will" to cooperate. Teambuilding and Classbuilding are the two most powerful tools to help you create and maintain this will. Teambuilding activities are fun, team-based activities that help teammates get acquainted, develop mutual support, and build a team identity. Classbuilding activities energize the whole class and promote a positive class atmosphere.

Should I assign group grades to motivate teams? Group grades are unfair and undermine motivation. Don't use them! Usually an engaging task and relevant content is all the motivation students need to work together. You can also recognize teams for how well they work together, or for their team projects. Be cautious of using extrinsic reward for intrinsically motivating tasks since students might learn to falsely attribute their motivation to the rewards.



3 Management

How do I arrange my classroom? If you have individual desks, cluster them together to form team desks. For primary students without desks, mark out team spaces on the carpet using masking tape. For labs or tables, have teammates sit closely together for cooperative work.

How do I handle the increased noise in the cooperative class? You need an effective quiet signal. Here's one of the simplest: Raise your hand. Have students do the same, signal teammates, and give you their full attention. Explain why you need a quiet signal. Use it consistently. Praise students for quieting down so quickly. Have students practice responding quickly to the quiet signal if it is taking too long to get students' attention. Also, you may assign a team Quiet Captain and have students practice quiet discussions.

What do I do if teams finish at different times? Have a sponge activity or a challenge problem waiting in the wings for teams that finish early.

My students have a hard time understanding wh I want them do as a team. Many team processes a more complex than independent work. If students aren't getting it, ask yourself: "Did I model it well?" Showing is much more effective than telling. Another tip, especially for younger students, is to break instruction into "bite-sized" pieces.

How do I handle students' questions? Use the "three before me" ru If a student has a question, he/she can turn to teammates. If tea mates are stumped, all hands go up for a team question.

How much time should students work in teams vs. work alone? Th is a matter of personal preference and teaching style. Research in cates there are academic, social, and psychological benefits of usi cooperative learning. Yet there is still a time and place for indepe dent work and even occasional competitive situations.

How do I deal with "difficult" students? Cooperative learning me many of students' basic needs: The need for social interaction. T need for attention. The need to belong. Teachers report discipli problems are dramatically reduced with a caring and cooperative cla room. However, cooperative learning introduces the challenge working with others. Students need social skills to work together we

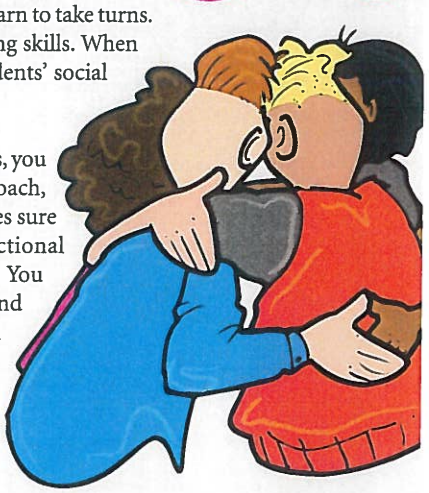
ve Learning

4 Skills

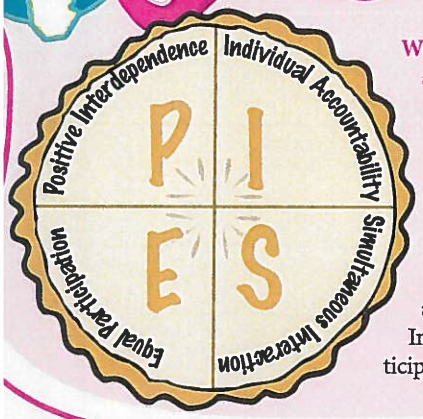
Why are social skills emphasized in cooperative learning? Social skills are not only necessary for cooperative learning to run smoothly, but also key skills for life and work. To work together, students need a host of teamwork skills including: listening carefully, waiting patiently, taking turns, reaching consensus, resolving conflicts, asking for and offering help. These are all skills that may not be developed through independent work. But what better way to foster these life skills than practicing them daily in the classroom? Educators have made the case that the social skills curriculum is as important as content knowledge, perhaps even more.

How can I help my students acquire social skills? Most structures have a social skills component embedded in the process of working together. In RoundRobin, students learn to take turns. In Paraphrase Passport, students practice active listening skills. When using structures, you nurture the development of students' social skills without any time off your curriculum.

What if my students need extra help? Beyond structures, you can assign students social roles such as: Encourager, Coach, Taskmaster (keeps everyone on task), Gatekeeper (makes sure everyone's participating). You can use gambits, functional phrases that help student know what to say and/or do. You can model appropriate and inappropriate behaviors and reinforce good behavior. And finally, you can plan with students how to work together before the task, and reflect on their group processes and social skills afterwards.



5 Basic Principles

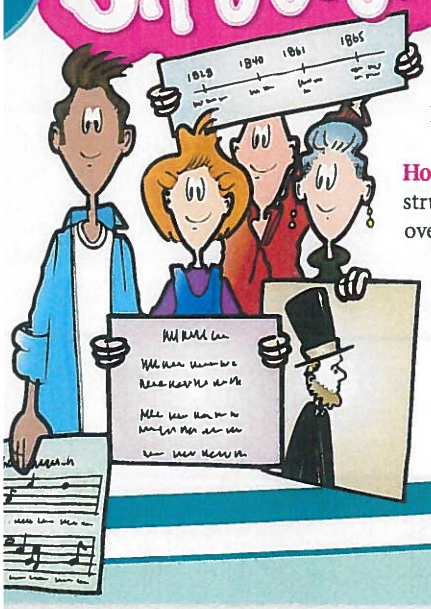


What's the difference between cooperative learning and group work? Group work is giving a group a task to do without structuring their interaction. One motivated student can do the task, while the others do nothing. Cooperative learning, on the other hand, involves structured interaction based on basic principles.

What are Kagan's basic principles? Four principles are central to Kagan Cooperative Learning: Positive Interdependence, Individual Accountability, Equal Participation, and Simultaneous Interaction (PIES). If PIES are in place, it is good cooperative learning; if not, it is group work. Established and effective Kagan Structures have PIES built-in.

If PIES are built into structures, why should I concern myself with the basic principles? You can successfully use structures without a working knowledge of PIES. However, having a solid understanding of the basic principles will help you design more effective cooperative learning lessons, activities, and projects.

Structures



What is a structure? A structure is a content-free, repeatable sequence of steps designed to structure the interaction of learners with each other, the curriculum, and/or the teacher. Numbered Heads Together, Showdown, RallyCoach, and Timed Pair Share are a few of the many Kagan structures.

How many structures are there? Kagan continues to develop structures and variations on structures. There are currently over 150 Kagan structures.

Why so many structures? Each structure is designed to achieve different educational objectives. Some are designed for teambuilding; others for classbuilding. Some help students master basic knowledge or skills; others help develop thinking skills. For example, Find My Rule develops inductive reasoning while Logic Line-Ups enhances deductive reasoning. Some structures are designed for very specific objectives; others are useful for a range of outcomes. Lesson planning is the art of selecting an appropriate structure for the teaching objective.

With so many structures, where do I start? Start small. Introduce a Timed Pair Share. Get comfortable using it at different points in your lesson (set, checking for understanding, closure). Use it with different content. When you and your students feel comfortable, introduce a new structure. Before you know it, you'll be fluent in a range of structures, making learning more fun and engaging than ever before!

Kagan's Fundamental Formula

Structure Timed Pair Share + **Content** "What would you like to learn" = **Activity** Set

Make learning come alive with Kagan Structures!

Structures are powerful instructional strategies effective for reaching many educational goals.

Effective Instruction

Set

Agree-Disagree Line-Ups • Agreement Circles • Carousel Preview • CenterPiece • Characteristic Line-Ups • Corners • Find My Rule • Folded Line Ups • Four S Brainstorming • Give One, Get One • Inside-Outside Circle • Jot Thoughts • Linkages • Look-Write-Discuss • Mix Pair Share • Partners • Popcorn • Primary Interview • RoundRobin • RoundTable • Sharing Secrets • Talking Chips • Team Interview • Three-Step Interview • Timed Pair Interview • Timed Pair Share

Input

CenterPiece • Circle the Sage • Debate • Give One, Get One • Primary Interview • Roam the Room • RoundRobin • RoundTable • Roving Reporter • Sages Share • Same Number Group Presentations • See One, Do One, Teach One • Slide Show • Stand-N-Share • Team Interview • Team Projects • Teams Line-Up • Telephone

Guided Practice

Before & After • Boss/Secretary • Carousel Mind Map • Choral Practice • Debate • Draw It! • Draw What I Write • Dueling Flipcharts • Fact or Fiction • Fan-N-Pick • Find Someone Who • Find the Fiction • Flashcard Game • Formations • Idea Spinner • Inside-Outside Circle • Jigsaw Problem Solving • Kinesthetic Symbols • Logic Line-Ups • Lyrical Lessons • Match Mine • Mix Freeze Group • Mix-N-Match • Mix Pair RallyCoach • Numbered Heads Together • Observe-Draw-RallyRobin • Observe-Write-RoundRobin • Paired Heads Together • Pairs Check • Pairs Compare • Pair Test Taking • Paraphrase Passport • Poems for Two Voices • RallyCoach • ReadingBoard Game • RoundRobin • RoundTable • Same-Different • See One, Do One, Teach One • Send-A-Problem • Showdown • Simultaneous RallyTable • Simultaneous RoundTable • Songs for Two Voices • Spin-N-Review • Spin-N-Think • Stir-the-Class • Team Chants • Team Charades • Team Pair Solo • Teammates Consult • Team Test Taking • Telephone • Traveling Heads Together • Turn Toss • Two Partner Edit • Who Am I?

Independent Practice

Kinesthetic Symbols • Linking • Observe-Draw-RallyRobin • Observe-Write-RoundRobin

Closure

Carousel Feedback • Carousel Review • CenterPiece • Four S Brainstorming • Give One, Get One • Inside-Outside Circle • Jot Thoughts • Journey Wall • Linkages • Mix Music Meet • Mix Pair Share • Popcorn • RoundRobin • RoundTable • Stand Up, Hand Up, Pair Up • Talking Chips • Team Interview • Team Statements • Three-Step Interview • Timed Pair Interview • Timed Pair Share

Multiple Intelligences

Verbal/Linguistic

• Debate • Draw A Gambit • Draw What I Write • Four S Brainstorming • Gambit Chips • Jot Thoughts • Paraphrase Passport • Rally Interview • RallyRobin • RoundRobin • Storytelling • Team Interview • Telephone • Think Pair Share • Three-Step Interview • Three Pair Share • VocabToons

Logical/Mathematical

• Blind Sequencing • Charting • Chunking • Estimate Line-Ups • Find My Rule • Find the Fiction • Jigsaw Problem Solving • Logic Line-Ups • Probability Line-Ups • Sequencing • Who Am I?

Visual/Spatial

• Blind Sequencing • Carousel Mind Map • Charting • Draw It! • Mind Mapping • Overlap Map • Picture Pegs • Reservoir Room • Slide Show • Visualization • Visualize Share • Window Panes

Musical/Rhythmical

• Background Music • Choral Practice • Echoing • Lyrical Lessons • Memory Jingles • Memory Rhymes • Poems for Two Voices • ReadingBoard Game • Songs for Two Voices • Team Chants

Bodily/Kinesthetic

• Agree-Disagree Line-Ups • Agreement Circles • Celebrity Circuit • Characteristic Line-Ups • Formations • Kinesthetic Symbols • Logic Line-Ups • Muscle Relaxation • Pantomime • Similarity Groups • Team Charades • Turn Toss

Naturalist

• Blind Sequencing • Categorizing • Find My Rule • Linkages • Look-Write-Discuss • Observe-Draw-RallyRobin • Roam the Room • Roving Reporter • Same-Different • Sequencing • Similarity Groups

Interpersonal

• All Around the Clock • Boss/Secretary • Carousel Discussion • Characteristic Line-Ups • Circle the Sage • Consensus Seeking • Corners • Debate • Fan-N-Pick • Find Someone Who • Give One, Get One • Inside-Outside Circle • Match Mine • Numbered Heads Together • Paraphrase Passport • Response Mode Discussion • RoundRobin • Sages Share • Same-Different • See One, Do One, Teach One • Share-N-Switch • Similarity Groups • Stir the Class • Talking Chips • Team Interview • Team Statements • Telephone • Three-Step Interview • Timed Pair Share

Intrapersonal

• Agree-Disagree Line-Ups • Agreement Circles • Corners • Guided Imagery • Journal Reflections • Metacognition • Proactive Prioritizing • Relaxation Breathing • Think Pair Share • Think Time

Kagan's Domains

Classbuilding

• Agree-Disagree Line-Ups • Agreement Circles • Characteristic Line-Ups • Corners • Find Someone Who • Formations • Give One, Get One • Inside-Outside Circle • Linkages • Mix Freeze Group • Mix Music Meet • Mix-N-Match • Mix Pair Share • Mix Pair RallyCoach • Similarity Groups • Split & Slide Line-Ups • Stand Up, Hand Up, Pair Up • Stir-the-Class • Take Off, Touch Down • Trading Cards • Who Am I?

Teambuilding

• Blind Sequencing • Fan-N-Pick • Find the Fiction • RoundRobin • RoundTable • Same-Different • Simultaneous RoundTable • Team Chants • Three-Step Interview

Mastery

• Blind Sequencing • Boss/Secretary • Carousel Review • CenterPiece • Fan-N-Pick • Find Someone Who • Flashcard Game • Inside-Outside Circle • Mix Freeze Group • Mix Music Meet • Mix Pair RallyCoach • Numbered Heads Together • Pairs Check • Poems for Two Voices • RallyCoach • RallyRobin • RallyTable • RoundRobin • RoundTable • Sages Share • See One, Do One, Teach One • Send A Problem • Showdown • Simultaneous RoundTable • Songs for Two Voices • Spin-N-Review • Team Charades • Team Pair Solo • Telephone • Turn Toss

Thinking Skills

• Agree-Disagree Line-Ups • Agreement Circles • Blind Sequencing • CenterPiece • Circle the Sage • Corners • Fan-N-Pick • Find My Rule • Find the Fiction • Idea Spinner • Inside-Outside Circle • Jigsaw Problem Solving • Jot Thoughts • Logic Line-Ups • Mix-N-Match • Numbered Heads Together • Pairs Compare • Probability Line-Ups • RallyRobin • RallyTable • RoundRobin • RoundTable • Same-Different • Same Number Group Presentations • Same Number Focus Groups • Sequencing • Simultaneous RoundTable • Spin-N-Think • Stand Up, Hand Up, Pair Up • Team Statements • Think Pair Share

Communication Skills

• Agree-Disagree Line-Ups • Agreement Circles • Circle the Sage • Fan-N-Pick • Inside-Outside Circle • Jigsaw • Match Mine • Paraphrase Passport • Partners • Response Mode Discussion • Same-Different • Sharing Secrets • Spin-N-Think • Talking Chips • Think Pair Share

Information Sharing

• Carousel Feedback • Circle the Sage • Give One, Get One • Inside-Outside Circle • Jigsaw • Mix-N-Match • Mix Pair Share • One Stray • Partners • Roam the Room • RoundRobin • Same Number Group Presentations • Share-N-Switch • Sharing Secrets • Think Pair Share • Three Stray • Two Stray