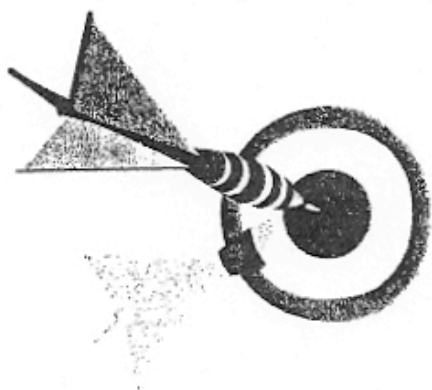


# Instructional Strategies That Work: A Tool Kit for Educators

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## #6: USING COOPERATIVE LEARNING



Based on the research and materials of  
Dr. Robert Marzano and Dr. Debra Pickering  
of the Mid-continent Research for Education and Learning (McREL) Institute  
and other sources as noted

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2002-2003

## TEACHING STRATEGY #6: COOPERATIVE LEARNING

Let's celebrate! The field of education is at a turning point; the "art" of teaching is rapidly becoming the "science" of teaching. This is a relatively new phenomenon as reported by Robert Marzano and Debra Pickering in the ASCD publication, *Classroom Instruction That Works: Research-Based Increasing Student Achievement*.

After examining decades of research findings to distill the results, Marzano's team at McRel has defined nine broad K-12 teaching strategies that have positive effects on student learning:

- Identifying similarities and differences
- Summarizing and note taking
- Reinforcing effort and providing recognition
- Homework and practice
- Nonlinguistic representations
- Cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypotheses
- Questions, cues, and advance organizers

The research has shown the instructional strategy of cooperative learning produces an effect size gain of .73 in student achievement when implemented effectively. Three generalizations from the research about cooperative learning can be used to guide the implementation of this strategy:

- ✓ Cooperative learning should be applied consistently and systematically, but not overused.
- ✓ Organizing groups based on ability levels should be done sparingly.
- ✓ Cooperative groups should be kept rather small in size.

The intent of this packet is to provide teachers with basic information about cooperative learning. It is a starting place and meant to provide background with which to begin implementing this teaching strategy. The packet is sequentially organized as a step-by-step look through the process of preparing students to be cooperative learners and planning cooperative learning lessons.

## Meta-Analysis of Research On Instruction

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	<b>ES</b>	<b>P Gain</b>	<b>N</b>	<b>SD</b>
<b>Identifying similarities and differences</b>	<b>1.61</b>	<b>45</b>	<b>31</b>	<b>.31</b>
<b>Summarising, note taking</b>	<b>1.00</b>	<b>34</b>	<b>179</b>	<b>.50</b>
<b>Reinforcing effort and providing recognition</b>	<b>.80</b>	<b>29</b>	<b>21</b>	<b>.35</b>
<b>Assigning homework and practice</b>	<b>.77</b>	<b>28</b>	<b>134</b>	<b>.36</b>
<b>Generating non-linguistic representations</b>	<b>.75</b>	<b>27</b>	<b>246</b>	<b>.40</b>
<b>Using cooperative learning</b>	<b>.73</b>	<b>27</b>	<b>122</b>	<b>.40</b>
<b>Setting objectives and providing feedback</b>	<b>.61</b>	<b>23</b>	<b>408</b>	<b>.28</b>
<b>Generating and testing hypotheses</b>	<b>.61</b>	<b>25</b>	<b>63</b>	<b>.79</b>
<b>Providing cues, questions, and advanced Organizers</b>	<b>.59</b>	<b>22</b>	<b>1,251</b>	<b>.26</b>

**ES** = average effect size.

**P Gain** = percentile gain (the maximum percentile gains possible for students currently at the 50<sup>th</sup> percentile).

**N** = number of effect sizes.

**SD** = standard deviation (the measure of the variability of scores around the mean).

When conducting a meta-analysis, a researcher translates the results of a given study into a unit of measurement referred to as an effect size. An effect size expresses in standard deviations the difference between the increased or decreased achievement of the experimental group with that of the control group. One of the more useful aspects of an effect size is that it can be easily translated into percentile gains. Being able to translate effect sizes into percentile gains can lead to dramatic interpretations of the possible benefits of a given instructional strategy.

Robert Marzano  
from *What Works In Classroom Instruction*, McRel, 2000

## Definition of Terms

- Academic controversy:** When one person's ideas, information, conclusions, and opinions are incompatible with those of another, and the two seek to reach an agreement.
- Cooperation:** Working together to accomplish shared goals and maximize own and other's success. Individuals perceiving that they can reach their goals if and only if the other group members also do so.
- Cooperative learning:** Students working together to accomplish shared learning goals and maximize their own and their groupmates' achievement.
- Fermenting skills:** Skills needed to engage in **academic controversies** to stimulate reconceptualization of the material being studied, cognitive conflict, the search for more information, and the communication of the rationale behind one's conclusions.
- Forming skills:** Management skills directed toward organizing the group and establishing minimum norms for appropriate behavior.
- Formulating skills:** Skills directed toward providing the mental processes needed to build deeper level understanding of the material being studied, to stimulate the use of higher quality reasoning strategies, and to maximize mastery and retention of the assigned material.
- Functioning skills:** Skills directed toward managing the group's efforts to complete their tasks and maintain effective working relationships among members.
- Formal cooperative group:** A learning group that may last for several minutes to several class sessions to complete a specific task or assignment (such as solving a set of problems, completing a unit, writing a theme or report, conducting an experiment, or reading and comprehending a story, play, chapter or book).
- Group:** Two or more individuals in face-to-face interaction, each aware of his or her membership in the group, each aware of the others who belong to the group, and each aware of their **positive interdependence** as they strive to achieve "mutual goals.
- Group processing:** Reflecting on a group session to (a) describe what member actions were helpful and unhelpful and (b) make decisions about what actions to continue or change.
- Individual accountability:** The measurement of whether or not each group member has achieved the group's goal. Assessing the quality and quantity of each member's contributions and giving the results to all group members.

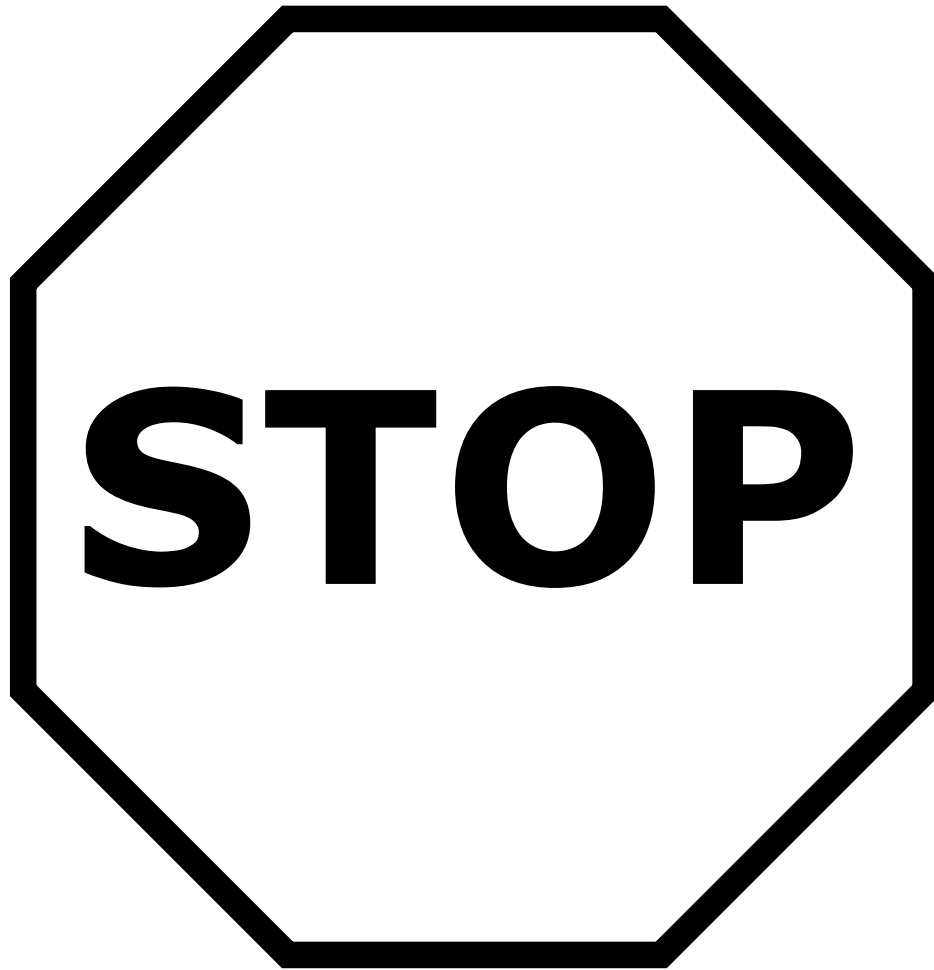
**Positive interdependence:** The perception that you are linked with others in a way so that you cannot succeed unless they do (and vice versa), that is, their work benefits you and your work benefits them.

**Positive resource interdependence:** When each member has only a portion of the information, resources, or materials necessary for the task to be completed, and members' resources have to be combined in order for the group to achieve its goal. Thus, the resources of each group member are needed if the task is to be completed.

*All terms taken from Johnson and Johnson (1998).*

### **Acknowledgements**

Our thanks to David W. Johnson and Robert T. Johnson for allowing us to incorporate so much of their wisdom in this document and to Connie Hirz, Cherry Creek School District S.T.A.R. Mentor, for making our cartoon concept come to life.



Don't end up like our cartoon teacher! Cooperative learning is one of the most effective teaching strategies, but only if you take the time to set the stage properly. You can't just tell your students to get into a group and do the assignment. You must address a number of "start-up" issues before you use cooperative learning in your classroom and then implement a series of activities which gradually introduce your students to increasingly complex aspects of cooperative learning. As a matter of fact, you should plan on four to six weeks of preparatory work by you and your students before they will be ready to function with minimal effectiveness in formal cooperative groups.

This packet will take you step by step through that work to ensure your students will be more capable of positive collaborative interaction and prepared to benefit from the effectiveness of cooperative learning.

Be aware that your initial attempts to use cooperative learning may not go well. Stick with it! The increased student learning and achievement will be worth it.

# **OVERVIEW OF STEPS FOR PREPARING STUDENTS TO WORK IN COOPERATIVE GROUPS**

## **FORMING SKILLS**

### **► LAYING THE GROUNDWORK**

- Establish basic classroom structure
- Provide an opportunity for students to learn classmates' names
- Define and establish a spirit of cooperation
- Teach students how to listen with respect

### **► BEGINNING COOPERATIVE GROUPS**

- Be aware of the teacher's basic responsibilities
- Introduce how to work in pairs
- Teach students how to do more sophisticated pair activities
- Using pairs, introduce the concept of roles
- Introduce and explain more roles used in cooperative groups
- Formulate and practice a plan for moving desks into triads
- Decide on and assign triad groups
- Teach students to work in triads
- Formulate and practice a plan for moving desks into foursomes
- Teach students to work in groups of four

## **FUNCTIONING SKILLS**

- teach higher order interpersonal social behaviors

## **FORMULATING SKILLS-**

- Teach more advanced conceptual structured

## **FERMENTING SKILLS**

- Teach skills necessary for dealing with academic controversies

## **A FINAL WORD**

# FORMING SKILLS

## › LAYING THE GROUNDWORK

### STEP 1: ESTABLISH BASIC CLASSROOM STRUCTURE.

#### What does it mean?

Basic effective classroom management is essential as you work forward preparing students to be cooperative group learners. This includes having specific procedures and routines which apply to any classroom in general, and certain forming skills.

**Forming skills** are an initial set of management skills used in organizing the groups and establishing minimum norms for appropriate behavior. Important forming skills are:

- Moving into and out of groups quietly
- Staying with the group and participating
- Using quiet voices
- Taking turns and sharing the work
- Using names when addressing other group members
- Looking at the speaker and listening with respect
- Keeping hands (and feet) to yourself
- Eliminating "put-downs"
- Knowing how to respond to your signal for their attention

#### What do you do?

Hopefully, your students are familiar with most of the forming skills. They are social behavioral expectations and norms used since they were in kindergarten. However, you can't assume that is the case! That is why forming skills and other required behaviors appear at appropriate times throughout the packet.

For example, knowing how to respond to your signal for attention is particularly important because cooperative learning often requires students to stop all activity and focus their attention on you. When you ask for their attention, ***all*** students should stop whatever they are doing and give you their ***undivided*** attention. You shouldn't speak until you have it. If you and your students haven't perfected an "attention-getter" routine, now is the time to do so!

### STEP 2: PROVIDE AN OPPORTUNITY FOR STUDENTS TO LEARN CLASSMATES' NAMES.

#### What does it mean?

Students cannot work together effectively if they cannot address each other by name.

#### What do you do?

Organize activities in which students must learn and remember other students' names. Have students make name tags and always use names when addressing, acknowledging, or referring to other students.



## **STEP 3: DEFINE AND ESTABLISH A SPIRIT OF COOPERATION.**

### **What does it mean?**

Cooperation is working together to accomplish shared goals. Cooperation exists when there is **positive interdependence**. (Students believe they will be successful only when other students are successful.)

### **What do you do?**

If you haven't done so already, take time to discuss exactly what "positive interdependence" means. What happens to the goal of success for everyone if students laugh at each other's mistakes, or refuse to work with certain students, or condone inappropriate behaviors by laughing or making comments?

Model a cooperative attitude at all times!

Encourage the students to think "We, not me!"

## **STEP 4: TEACH STUDENTS HOW TO LISTEN WITH RESPECT.**

### **What does it mean?**

Students must fully understand what it means to listen to someone else.

### **What do you do?**

Use the following selection to establish what is meant by listening to someone.

*Listening with respect means much more than an apparent interest in what is being said. It means focusing on the words, tonal quality, and body language all at the same time. It means being aware of your physical and mental responses so they do not get in the way of listening. It means actually being with the speaker while they are communicating.*

*It means listening to what you disagree with and dislike as well as what is being said that you agree with or like. It means stretching your-listening during those times that you disagree with what is communicated, without beginning to answer or debate in your mind to prepare a response.*

*Listening with respect means you are trying to understand the point of view, the needs, and the feelings of the speaker. You don't have to agree ... just try to understand. Understanding means you can express the speakers point of view to others and make decisions that take their interests into account.*

*When you understand people, or try to, you will earn their trust. You will not trust people who do not try to understand you. When people trust each other, they begin to learn from each other.*

Colorado Critical Friends

Model effective listening posture and body language. Have students practice listening, role-play listening, and practice paraphrasing what others have said. Display signs and posters emphasizing listening skills.

## ► **BEGINNING COOPERATIVE GROUPS**

### **STEP 5: BE AWARE OF THE TEACHER'S RESPONSIBILITIES**

#### **What does it mean?**

The beneficial educational outcomes of cooperative learning groups are a result of the interaction patterns and verbal exchanges that take place among students.

You must conscientiously observe and support both your students' academic performance and their collaborative efforts. They will not improve the manner in which they cooperate as group members or the quality of work they produce as groups without consistently receiving your thoughtful monitoring and intervention.

Additionally, in order to improve, students need time and procedures for analyzing how well their group is functioning and how well they are using collaborative skills. You must ensure each student receives feedback, analyzes data on group functioning, sets an improvement goal, and participates in a team celebration.

You must assess how well students complete their assigned academic task (quality and quantity of student learning) and give them feedback on how well they did.

Always provide closure to each lesson and the cooperative process. To reinforce student learning you may wish to have groups share answers or papers, summarize major points in the lesson, or review important facts.

#### **What do you do?**

Once the students begin working in groups, your role becomes even more crucial. You must continually circulate to see whether they understand the assignment and the material, give immediate feedback and reinforcement, and praise good use of cooperative skills.

If students are having trouble with the task, you can clarify, reteach, or elaborate on what they need to know.

If students are having trouble with group interactions, you can remind them of more effective procedures for working together or more effective behaviors for them to engage in. You can ask students to figure out how to work more effectively together. If students are learning or practicing a specific collaborative skill, record on an observation sheet how often you hear that skill. Then share your observations with the groups.

Have groups routinely debrief things they did well in working together today and one thing they will do better the next time. Then summarize as a whole class.

Clearly explain the learning objective(s) to the students. Relate the objective to past and future learning, define all relevant concepts, give clear and comprehensive instructions, explain the procedures, and check students' understanding of the assignment.

The more specific you are about the behaviors you want to see in the groups, the more likely students will, do them. Make it clear that you expect to see everyone contributing, helping, listening with care to others, encouraging others to participate, and asking for help and clarification. Younger students need to be reminded to stay with their group, take turns, share, ask group members questions, and use quiet voices:

Make clear your criteria for evaluating the groups' work. Student work should be evaluated on a criteria-referenced (standards) rather than a norm-referenced basis. Always provide scoring rubrics for final products.

Structure individual accountability. Each student must feel responsible for learning the material and helping the group. Some ways to ensure this feeling include frequent oral quizzing of group members picked at random, giving individual tests, having everyone in the group write (pick one paper at random to grade), or having students do work first to bring to the group. (*Johnson and Johnson, 1988*)

Structure positive interdependence. Students must feel that they need each other to complete the group's task. They need to feel that they "sink or swim together." Some ways to create this are by establishing **mutual goals** (students must learn the material and make certain group members learn the material), **joint rewards** (if all group members achieve above a certain percentage on the test, each will receive bonus points), **shared materials and information** (consider sending a "sink or swim together" message to students by giving only one paper to each group or give each member part of the material to learn and then teach the other group members their material. They have learned and practiced collaboration, this will "force" them to work together), and **assigned roles**. (*Johnson and Johnson, 1988*)

## STEP 6: INTRODUCE HOW TO WORK IN PAIRS

**What does it mean?** Teaching students how to work in cooperative groups begins by having them practice basic cooperative skills in pairs doing activities that emphasize process rather than content.

### What do you do?

1. Discuss the need for using quiet voices when students work together and how the noise level will be monitored. (A very effective technique for lower and middle grades is to have a two-faced card on the desk for each pair. One side has a positive symbol of some kind; the other, a negative one. As you circulate, turn the card over to indicate whether or not the pair is in compliance with noise level expectations. For older students, simply showing a thumbs up or down as you pass by will suffice.)
2. Discuss how they will decide who goes first. For example, it could be the taller one, the shorter one, or the one who has lived in the state longer.
3. Select, explain, and have the students complete the following pairing activity that does not require extensive moving of desks.

**Turn to Your Neighbor** - Three to five minutes. Ask students to turn to a neighbor and ask something about the lesson: to explain a concept you've just taught; to explain the assignment; to explain how to do what you've just taught; to summarize

the three most important points of the discussion, or whatever fits the lesson.  
(Johnson and Johnson, 1988)

4. Debrief the activity. What went well and why? What, if anything, should they do differently the next time?

## **STEP 7: TEACH STUDENTS HOW TO DO MORE SOPHISTICATED PAIR ACTIVITIES**

### **What does it mean?**

Once students demonstrate that they can work with a partner at a very basic level of pairing, it's time to move on to more sophisticated pairing activities.

### **What do you do?**

Continue using relatively simple learning tasks which emphasize process rather than content, but make those tasks a little more demanding.

1. Consider which students will work most effectively together and decide how students will be paired. Keep in mind that moving desks beyond a few adjustments is not advisable at this point. If you feel major re-arrangements are necessary, go to Step 7 and follow the same procedure as you would for setting up the room for triads only use pairs, instead.
2. Remind students of the earlier discussion about a cooperative spirit and establish the precedent that once the pairs (or other groupings) are announced, "no complaining is allowed or accepted." (BER).
3. Announce the pairs.
4. Announce how partners will choose who goes first.
5. Review previously practiced forming skills.
6. Explain the task to be done. (See suggestions below.)
7. Be sure that students have all necessary materials.
8. Have students move to their pairs.
9. Set a time limit and complete the task.
10. Debrief the activity. What went well and why? What, if anything, should they do differently the next time?

### **Tasks for Introductory Pair Work**

Here are some examples suggested by Johnson and Johnson (1988).

1. **Reading Pairs** - Students read material together and answer the questions.
2. **Reading Buddies** - In lower grades, have students read their stories to each other, getting help with words and discussing content with their partners. In upper

grades, have students tell about their books and read their favorite parts to each other.

3. **Homework Checkers** - Have students compare homework answers, discuss any they have not answered similarly, then correct their papers and add the reason they changed an answer. They make certain everyone's answers agree and then staple the papers together. You grade one paper from each group and give group members that grade.

## **STEP 8: USING PAIRS, INTRODUCE THE CONCEPT OF ROLES**

### **What does it mean?**

Students are more likely to work together if each one has a job which contributes to the task. This gives all students a sense of belonging and a feeling that their place in the group is important. It's differentiation!

You must explain, demonstrate, and have students role play proper ways to perform each job you might assign before asking them to take responsibility for that job in a group. This must include what the job looks like and sounds like. (Archibald and McDonald). You can't expect students to be proficient in a role they haven't practiced.

### **What do you do?**

Select a lesson where you want students to review previously learned material ,or drill on certain procedures. Use the following format based on **Drill Review Pairs**. (Johnson and Johnson, 1988)

1. Introduce the following roles:
  - Explainer (explains step-by-step how to solve the problem)
  - Accuracy Checker (verifies that the explanation is accurate, encourages, and provides coaching if needed).
2. Discuss and role play what those roles would sound like and look like. Make a T-chart to show that information.
3. Explain that the activity requires pairs to designate an A and a B person and determine how that will be done.
4. Explain **individual accountability** (*Johnson and Johnson, 1998*) which means you will randomly choose one member to explain how to solve a randomly selected problem).
5. Explain that this activity will require pairs to check with each other. Discuss what that will look like and sound like. Determine which pairs will be checking together.
6. Have students move to their pairs.
7. Give one copy of the materials to each pair. (This encourages **positive resource interdependence** so that students have to work together.
8. Explain the task.

9. Explain the procedure as follows:
  - a. Person A reads the problem and explains step-by-step the procedures and strategies required to solve it. Person B checks the accuracy of the solution and provides encouragement and coaching.
  - b. Person B solves the second problem, following the same procedure. Person A checks accuracy and provides encouragement and coaching.
  - c. When the pair completes the problems, members check their answers with another pair. If they do not agree, they resolve the problem until there is consensus about the answer.
10. Set a time limit and complete the task.
11. Have students return to their original desks.
12. Debrief the activity. What went well and why? What, if anything, should they do differently the next time?

## **STEP 9: INTRODUCE AND EXPLAIN MORE ROLES USED IN COOPERATIVE GROUPS**

### **What does it mean?**

Depending on the task at hand, students will need to assume several roles in addition to the ones they already have learned.

### **What do you do?**

Review the jobs of the Explainer and the Accuracy Checker.

Introduce, explain, and role play the following basic cooperative learning roles:

<b>JOB NAME</b>	<b>JOB DESCRIPTION</b>
Voice Monitor or Noise Monitor	Remind the group members to use appropriate (quiet or 12 inch) voices
Encourager, Facilitator or Participation Monitor	Encourage the group to stay on task and focused on the assignment
Writer, Recorder or Scribe	Take notes, record decisions, and/or complete final product to be turned in
Runner, Supplier or Traveler	Pick-up and/or deliver papers and materials for the group
Communicator or Speaker	Communicate with the teacher and/or other groups
Timer or Timekeeper	Monitor time and keep group on schedule
Leader	Determine how group work will be done, final decision-maker for group (has tie-breaking vote)
Checker(s) or Evaluator(s)	*Evaluate individual group members' behavior

\*This job should always be used with all groups as part of the group processing. It may be assigned to an individual responsible group member or to all group members. Provide the Evaluators(s) with a checklist. You may make and use copies of the checklist on the following page.

Keep in mind that job responsibilities may have to be combined because groups always be kept small.

Note: Older students may need greater responsibility and more complex roles. As students become more familiar with cooperative groups and work on more difficult assignments, roles requiring someone to ask for justification or rationale, to give additional or alternative answers or solutions, to summarize the group's thinking, or to help the group reach consensus may be required.

EVALUATOR'S CHECKLIST				
names of group members		on task behavior		
1.	_____	1.	+	neutral -
2.	_____	2.	+	neutral -
3.	_____	3.	+	neutral -
4.	_____	4.	+	neutral -
DATE _____		EVALUATOR'S NAME _____		

EVALUATOR'S CHECKLIST				
names of group members		on task behavior		
1.	_____	1.	+	neutral -
2.	_____	2.	+	neutral -
3.	_____	3.	+	neutral -
4.	_____	4.	+	neutral -
DATE _____		EVALUATOR'S NAME _____		





## **STEP 10: FORMULATE AND PRACTICE A PLAN FOR MOVING DESKS INTO TRIADS.**

### **What does it mean?**

Having students work in triads is the next step in developing their cooperative learning skills. However, you shouldn't use cooperative learning groups all the time. (*Marzano*)

### **What do you do?**

1. Develop a plan for moving the desks into triads with as little movement as possible. Be sure it takes advantage of all the space available.
2. Explain the plan by pointing to each desk and showing how and where it will move. Make sure students note where their individual desks must go, but emphasize that they may end up in someone else's desk, depending on the triad they are assigned to, when they actually start to work.
3. Emphasize that when the moving is done, the room must have a clear sense of order, that each triad must be neat and allow members to be "eye-to-eye" and "knee-to-knee," and that triads should be far enough apart so you (and students) can easily move among-them.
4. Explain that moving desks always should be done quickly, quietly, and safely.
5. Assign a demonstration group and have the rest of the students stand and watch as the demonstration group moves the desks into the pattern. Guide every movement as one group of desks is moved.
6. On a given consistent signal such as "Groups go!" or "1-2-3-move!" have the class move into the triad configuration. Assist groups as needed.
7. Check the arrangement to be sure it fits the parameters set earlier.
8. Have students move desks back to their original locations.
9. Practice this procedure a few times, encouraging them to use even less time, until students can do it easily and in less than a minute.

**SUGGESTION:** Once all students know how to move their own desk into a group, have them compete in a "Desk Olympics" to see which class can use the least amount of time or, if you follow the Preferred Activity Time suggested by Fred Jones in his *Tools for Teaching*, work out a way to tie the amount of time they use to the amount of time they get for PAT.

## **STEP 11: DECIDE AND ASSIGN TRIAD GROUPS**

### **What does it mean?**

Working in groups of three is the next step in developing students' cooperative learning skills. In order assign students to those groups, you must have a plan.

## **What do you do?**

When planning the triads, keep in mind that heterogeneous groups are the most powerful, so mix abilities, sexes, cultural backgrounds, and task orientations. (Johnson and Johnson, 1988) Also, you should be aware that having students select their own groups is **not** very successful. (Johnson and Johnson, 1993)

Use a variety of ways to assign students to groups; don't use the same method repeatedly. Here are some possibilities: (*Marzano and BERG*)

- Assign students to groups by common interests
- Assign students to groups by birthday months
- Assign students to groups by first letters of first names
- Assign students to groups by colors of shirts
- Assign students to groups by drawing names from a hat
- Assign students to groups by pets they have or want to have
- Assign students to groups by using a stratified random procedure:
  - Rank order class from highest to lowest (ability or grades)
  - Group 1 = highest, lowest, & middle two
  - Group 2 = 2nd highest, 2nd lowest, & remaining middle two
  - Continue with rest of students
  - Change group members if you have homogeneity of sex or culture or personality issues
- Assign students to groups by using numbering:
  - Divide students by size of group.
  - Example: 30 students..; 3 per group = 10 groups. Students number off by 10's and go with like numbers.

Whatever method you use to assign group members, reinforce the expectation that students cannot complain or argue about the assignments. It is never negotiable! It helps to explain that everyone will work with everyone else, eventually.

## **STEP 12: TEACH STUDENTS HOW TO WORK IN TRIADS.**

### **What does it mean?**

Just because students can work together successfully in pairs does not mean you can move to triads without further explanation or instruction.

### **What do you do?**

1. Have students implement the plan for moving desks into groups of three.
2. Once the desks are moved, establish where each triad will be located and have students practice moving to those seats and back to their original positions.
3. Decide on a task for students to complete in triads. Remember: At this point, the emphasis is still on the process, rather than the content. Do not assign unfamiliar work to be done!

Here are examples of formats described by Johnson and Johnson (1988) as being appropriate choices at this point.

### ***Test Reviewers***

- Arrange the class in triads.
- Have students prepare each other for a test. They get bonus points if every group member scores above a preset level.
- Review the expected behaviors (active listening, quiet voices, active participation by everyone, etc).
- As they work on their assigned task, you actively monitor and record their use of cooperative skills. You should intervene as needed to redirect behavior, provide support, and offer praise. After the lesson you must provide feedback on their use of all previously taught skills.

### ***Reading Comprehension Triads***

- Arrange the class in triads.
- Explain the task - Read the (poem, chapter, paragraph, story, handout, etc.) and answer the questions to practice and improve comprehension strategies.
- Explain the cooperative elements of the assignment.
  1. One set of answers from each group, everyone has to agree, everyone has to be able to explain each answer.
  2. If all members score 90% or better on the test that will follow, each member will receive five bonus points.
  3. To facilitate the groups' work, each member is assigned a role: Reader, Recorder, and Checker.
- Explain the Individual accountability.
  1. One member from each group will be randomly chosen to explain the group's answers.
  2. A test will be given on the assigned reading that each member takes individually.
  3. Each group member will be required to explain the group's answers to another group.
- Review the expected behaviors (active listening, quiet voices, active participation by everyone, etc).
- As they work on their assigned task, you actively monitor and record their use of cooperative skills. You should intervene as needed to redirect behavior, provide support, and offer praise. After the lesson you must provide feedback on their use of all previously taught skills.

### ***JIGSAW*** (An alternative to lecture and individual reading)

- Arrange the class in triads. (Later jigsaw will work with groups of four)
- Explain the task.
  1. With members of another group, learn and become an expert on a part of the lesson material.
  2. Plan how best to teach your material to other members of your own group.
- Explain the cooperative elements of the assignment.
  1. Each cooperative group member will get a portion (chunk) of the material to be learned. (The chunk must be  $\frac{1}{3}$  of the material for triads,  $\frac{1}{4}$  for groups of four) They will become expert on their chunk of material and reteach it to other members of their group.
  2. If all members score 90% or better on the test that will follow, each member will receive five bonus points.
- Explain the individual accountability.
  1. One member from each group will be responsible for teaching other group members a portion of the material.
  2. Each group member will take an individual test on the assigned reading.
- Explain the procedure.
  1. Each group member will meet with an assigned member of another group with the same material (preparation pairs). They will learn the material and become experts. They will decide how best to present the material to members of their own group. They must agree on the best presentation and practice it with each other. (You might have the students leave their preparation pair partner and meet with an assigned practice partner who has become an expert on the same material to rehearse their presentations.)
  2. Students return to their cooperative groups and teach their material to other group members. They in turn learn the material being taught by other members.
- Explain the expected behaviors (active listening, quiet voices, active participation by everyone, etc).
- As they work on their assigned task, you actively monitor and record their use of cooperative skills. You should intervene as needed to redirect behavior, provide support, and offer praise. After the lesson you must provide feedback on their use of all previously taught skills.

**Reading Groups.** Students read material together and answer the questions.

**Focus Triads:** Before a film, lecture, or reading, have students summarize together what they already know about the subject and come up with questions they have about it. Afterwards, the triads answer the questions, discuss new information, and formulate new questions.

## **STEP 13: FORMULATE AND PRACTICE A PLAN FOR MOVING DESKS INTO FOURSOMES.**

### **What does it mean?**

Students will most often work in groups of three or four. They need a formal plan for moving desks into the larger configuration.

### **What do you do?**

Follow the same procedure used in Step 9, only change the configuration to groups of four.

## **STEP 14: TEACH STUDENTS TO WORK IN GROUPS OF FOUR.**

### **What does it mean?**

Working in groups of four is the next step in developing students' cooperative learning skills.

### **What do you do?**

Follow the same procedure used in Steps 10 and 11. Select those activities which can be done in groups of four

**NOTE: from this point in the process of developing a classroom of cooperative learners, you will need more specialized management skills as you observe your students. The following steps are increasingly more complex and require consistent practice opportunities for your students and commitment from you.**

## **FUNCTIONING SKILLS**

### **STEP 15: TEACH HIGHER ORDER INTERPERSONAL SOCIAL BEHAVIORS**

#### **What does it mean?**

**Functioning skills** are higher order interpersonal social behaviors involved with managing the group's efforts to complete their academic tasks and maintain effective working relationships among members. Here are some important functioning skills from Johnson and Johnson (1988):

- Sharing ideas and opinions (and materials)
- Asking for facts and reasoning from other group members.
- Giving direction to the group when needed
  - Restating assignment purpose and objective
  - Setting or monitoring time limits
  - Offering suggestions for completing the assignment
- Encouraging everyone to participate
- Asking for help or clarification

- Expressing support and acceptance
- Offering to explain or clarify
- Paraphrasing
- Energizing the group to complete the assignment

### What do you do?

Choose a skill, define it, and share with your students why they need it. Teach them what it looks like and have them practice using it in their groups with increasingly complex tasks. When they become relatively proficient, choose another skill and repeat the process until your students are automatically using them all.

Teach these more complex skills one at a time over a period of days or weeks with enough practice and repetition so students begin using them naturally. Pick one collaborative skill students need to learn, point out the need for it, define it carefully, and have students practice the skill, and observe for and encourage the use of the skill until students are doing it automatically. Then teach a second skill, and so on.

**SUGGESTION:** Follow these steps when teaching social skills:

1. Establish the need for the skill:
  - A. Ask students to brainstorm and identify social skills they need to effectively work together. Choose those to emphasize and suggest others you want on their list.
  - B. Present the case to the students that they are better off knowing than not knowing the chosen skills.
  - C. Setup a role-play that provides a counter-example where the skill is obviously missing in a group. This is a fun and effective way to illustrate the need.
2. Ensure the students understand the skill and how to use it:
  - A. Define the skill in verbal and non-verbal behaviors so students know specifically what to do. Using a T-Chart is one way to explain a social skill. You list the skill and then ask the class, "What would this look like?" After they share some ideas, ask, "What would this skill sound like?"

Two examples:

<b>Encouraging Participation</b>	
Looks Like	Sounds Like
Smiles	What is your idea?
Eye contact	Awesome!
Thumbs up	Good idea!
Pat on back	That's interesting

<b>Checking for Understanding</b>	
Looks Like	Sounds Like
Eye contact	Explain that to me please.
Leaning forward	Can you show me?
Interested look	Tell us how to do it?
Open gesture	How do you find it?

- B. Demonstrate and model the skill in front of the class and explain it step-by-step until the students have a clear idea what the skill looks like and sounds like.

- C. Have students role play the skill by practicing in their groups.
  - D. Display T-Charts for students to refer to.
- 
- 3. Set up practice situations to ensure mastery.
    - A. One or two skills each week with review of previously taught skills until all skills are taught and learned.
    - B. Observe groups and record which members are using skills.
    - C. Intervene as needed to clarify and re-define or ask individuals to demonstrate a skill.
    - D. Coach individuals and groups to improve their use of a skill.
  - 4. Provide feedback so students know how frequently and how well they use the skills.
    - A. Coach individuals and groups to improve their use of a skill.
  - 5. Provide feedback so students know how frequently and how well they use the skills.

## FORMULATING SKILLS

### STEP 16: TEACH MORE ADVANCED CONCEPTUAL STRUCTURES

#### What does it mean?

**Formulating skills** are needed to provide the conceptual structures required to build deeper level understanding, stimulate the use of higher quality reasoning, and maximize learning. They include the following skills:

- Summarizing out loud
- Seeking accuracy by correcting a member's summary
- Seeking elaboration (relating ideas to earlier learned material)
- Helping the group remember (drawing mental pictures, etc)
- Checking for understanding
- Asking others to think (plan) out loud.

*(Johnson and Johnson, 1998)*

#### What do you do?

You should teach the formulating skills in the same manner you taught the functioning skills.

# FERMENTING SKILLS

## STEP 17: TEACH SKILLS NECESSARY FOR DEALING WITH ACADEMIC CONTROVERSIES

### What does it mean?

**Fermenting skills** are needed for students to engage in academic controversies which cause group members to "dig deeper" into the material being studied, to construct rationale fear their conclusions, to think more divergently about the issue, to find more information to support their positions, and to argue constructively about alternative solutions or decisions.

- Criticizing ideas without criticizing people.
  - Integrating ideas into a single position.
  - Asking for justification of conclusions or answers.
  - Extending answers by adding further information
  - Asking in-depth (probing) questions to deepen understanding
- (Johnson and Johnson, 1998)*

### What do you do?

You should teach the fermenting skills in the same manner you taught functioning and formulating. It is important that you translate these skills into language and images that your students can understand and identify with. For example, the fermenting skills could be simplified to skills such as adding an idea, asking for proof, or seeing the idea from another's point of view.

Each level of cooperative skill instruction should be adapted to your grade level and/or your students' readiness, background knowledge and demonstrated proficiency with the behavior being taught.

## A FINAL WORD

Please remember that cooperative learning is not just a matter of putting students in groups and telling them to do an assignment. It requires thought, careful planning, and much practice. However, if you faithfully follow all the steps in this packet, you will join all those teachers who have "created classroom environments where students care about each other and each other's learning." (Johnson and Johnson, 1988)

Please also keep in mind that this packet is just a beginning, a way to get you started correctly. We encourage you to consult the reference page for resources which will help you continue to grow and expand your knowledge about this valuable approach to learning.



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