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# INTRODUCTION

## A Word About Motivating Thinking by all Students

One of the most difficult challenges faced by teachers is how to motivate all children in the classroom to think and learn. Given 20 to 25 different learning styles, abilities, interests, attention spans and more, the task seems impossible.

In the activities that follow, all pre-tested in a variety of classrooms, you will find reliable, reusable tools that have one central purpose: helping you encourage all learners to think more skilfully, to co-operate and to achieve, without burning yourself out. In each session two important components are incorporated:

1. A sound activity design that includes:
  - a clear learning objective
  - a visual set
  - demonstrations
  - clear instructions for guided practice, review and transfer
  - test suggestions
2. Allowances for a variety of learning styles and abilities.
  - A. Each activity is built on a **specific visual organizer** that will enable students to see their thinking.
  - B. Each activity uses **co-operative learning strategies** and peer assistance structures to help students share and support each other.
  - C. Each activity helps students **think about their thinking** (metacognition), move from the concrete to the abstract, and apply what they have learned to situations out of the classroom.
  - D. Each activity is a **high-involver**. It calls for each student to play with ideas, to explore and enquire in a climate that demands “no put-downs”. To make this climate work, you play an important role. Here are ways you can help ensure active involvement by all students.

- **Set guidelines.** The DOVE guidelines are paramount.
  - D** = DEFER JUDGMENT! Do not use put-downs or make positive or negative judgments about others' ideas.
  - O** = OPT FOR OFF-BEAT! As a thinker, be different. Try different ways, seek a new combination.
  - V** = VAST NUMBERS ARE NEEDED! Go for quantity. From quantity comes quality.
  - E** = EXPAND! Piggyback or hitchhike on others' ideas.
- You make the co-operative group assignments. **Make different groups each time.** Mix, mix, mix. Break down cliques. Mix high and low achievers into groups of two or three.
- **Encourage everyone to contribute and share.** Don't let anyone dominate a group.
- **Encourage co-operation.** It will help groups if each student has a role: recorder/checker, timekeeper/encourager, etc.

The *checker's* job:

Have I written down everyone's ideas?  
 Does everyone understand?  
 Can everyone explain the answers?

The *encourager's* job:

"Good idea," "Let's go for it!" "Great job."  
 Smile, give others thumbs up.

The *timekeeper's* job:

"We have twenty minutes, are we doing what was asked? Has everyone contributed before we write our final list?"

- **Structure united groups.** Use only one worksheet per group. Have the *checker* pre-test all members so that everyone can explain the group's chart. If your groups have high social skills, you can reward the product and the process.
- **If one or two don't want to work with a group, give them the option to do the task alone.** Experience shows that it won't be long before they want "in" with the group.

## A Word About Co-operative Learning

Roger and David Johnson's research tells us there are five critical factors that make smoothly functioning co-operative groups. By combining the Johnsons' research with other findings and by adding another dimension, complex thinking, we have the following model in which the acronym BUILD (Marcus and McDonald, 1990) highlights the variables that produce the power in co-operative groups.

**B** = Build in higher-order thinking so students are challenged to think deeply and transfer subject matter.

**U** = Unite the class so students form bonds or trust which enable teamwork.

**I** = Individual learning: Each student is responsible for practising all skills and knowledge. The groups are a means to facilitate mastery before the teacher checks each individual through quizzes, tests, essays or other assessment strategies.

**L** = Look back and discuss *what* and *how* students learned. Students learn how to "process" or "evaluate" their thinking, feelings and social skills. This emphasis on self-evaluation shifts the responsibility for learning from the teacher to student.

**D** = Develop students' social skills. The teacher provides explicit examples of the social skills which help students acquire co-operative skills and use those skills during co-operative work.

## A Word About Evaluating

If you want to measure students' thinking, look at the products made by each group. For co-operation look for what the students do and say that shows co-operation. Where you can, avoid formal grading with the lessons. Grades are a fast way to stifle thinking in the classroom.

## **A Word About Transfer**

These activities are constructed to give you and your students high-involvement strategies for thinking together about what is being learned. In the initial activity you should check for understanding. Help the students refine their thinking by using these visual tools.

Both you and your students will benefit in future activities if the tools are used over and over during the year. How many of the visual tools you introduce is up to you. Whichever you introduce, expect to use them over and over and over. You can concentrate on helping students use the tools once they are practised in their basic content. When students are skilled in the visual technique, give them tests and quizzes on content. You will see improved performances, increased involvement and more motivation.

Use the tools with easy topics, then bridge the skill into content. Check for understanding about content and method. Remember, the goal is to develop independent, self-directed learners who use the visual tools appropriately. This will require many practices throughout the year.