

## Questioning

*Good questions lead to good thinking—and good thinking leads to learning.*

### **Good questions should:**

- Be developed logically and sequentially
- Be adapted to students' abilities
- Cause students to think—not merely recite
- Encourage students to ask questions

### **Good questions will:**

- Help keep students on-task and focused
- Help determine skill and knowledge levels
- Promote higher level thinking
- Encourage broader student participation

### **A Basic Rule . . . Ask, Pause, Call**

*Too often, good questions fail to be valuable because:*

- Teachers don't allow enough time for the questions to be answered. Teachers frequently ask a question and then go ahead and answer it themselves—students quickly learn that they do not have to think or respond.
- Teachers fail to direct their questions to specific students. They give a question to the entire class that often makes it scary or "uncool" for any one student to volunteer to answer.

Using the *Ask, Pause, Call* method will increase the effectiveness of your questions.

**ASK**     A well thought out question to the class

**PAUSE**     Long enough for students to think about a response

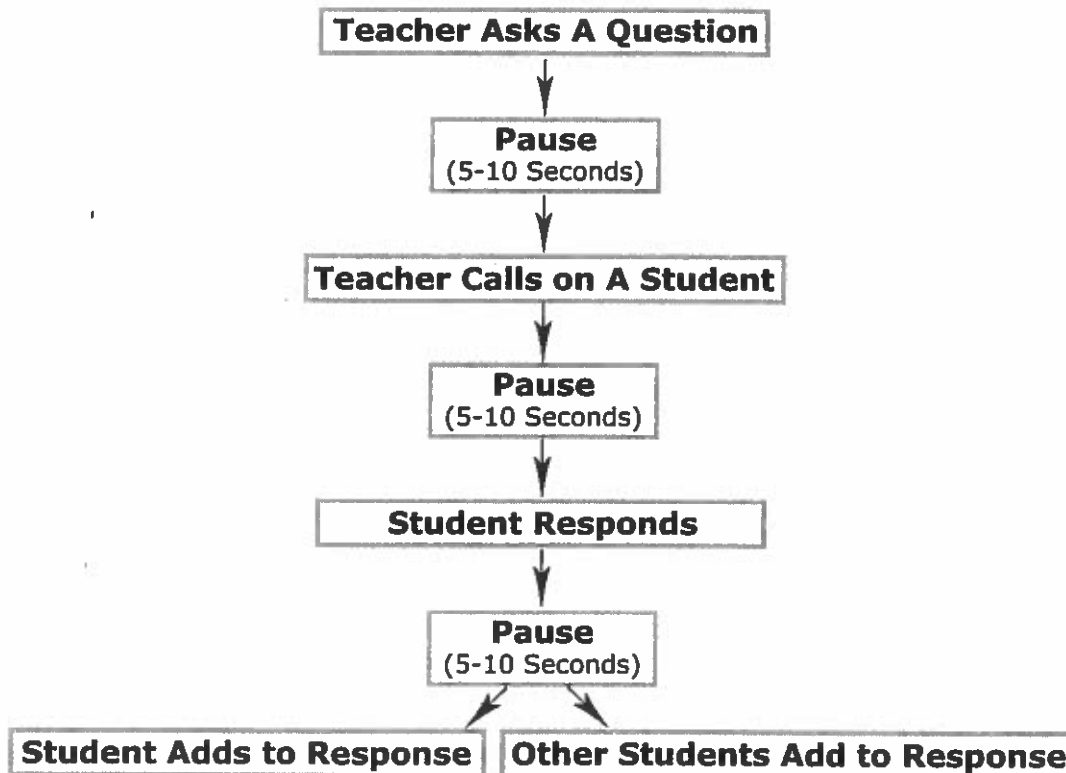
**CALL**     On a specific student to respond to the question

## Pauses Cause Them to Think

The 1st pause gives the entire class time to formulate an answer

The 2nd pause provides the student time to verbalize a response

The 3rd pause encourages the student and/or class to really “get into” the question

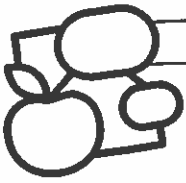


### Do

- ✓ Be positive. Focus on what they DO know.
- ✓ Wait until the class is listening before asking a question.
- ✓ Ask questions in a clear direct manner.
- ✓ Expect an answer.

### Don't

- ✗ Try to rush an answer (or simply answer it yourself).
- ✗ Use discouraging language (wrong, not true, incorrect, etc.).
- ✗ Call on the same students (give others a chance).
- ✗ Automatically repeat questions (teach them to listen the first time).



## Questions to Promote Higher Level Thinking\*

Effective questions keep students thinking and involved in the learning process. Questions range from simple knowledge to complex evaluation in the following order: knowledge, comprehension, application, analysis, synthesis, and evaluation. Each level involves a higher level of thinking and thus a greater degree of student involvement with the subject matter.

Higher level thinking questions can be used to help stimulate class discussions and give greater meaning to information or ideas students are studying. All students, despite their level, can respond to higher level thinking questions. By asking the right type of questions, you can help students progress from merely recalling facts and figures, to successfully applying and evaluating new information in a variety of situations.

### Knowledge Level Questions

Knowledge level questions ask students to recognize, recall, and state facts, terms, basic concepts, and answers.

#### *Sample Knowledge Level Questions*

- Name the characters in the story.
- What is the capital of Wyoming?
- Define the word *condensation*.
- List the numbers between 23 and 45.

### Comprehension Level Questions

Comprehension is the ability to understand concepts at a basic level. The student knows the meaning of the information, but does not relate or apply it to other situations.

#### *Sample Comprehension Level Questions*

- List three examples of plants.
- Describe the setting of the story.
- Classify the characters in the story as good guys or bad guys.
- Compare a cup of milk with a cup of water.

*\* Adapted from Bloom's Taxonomy, Dr. Benjamin Bloom.*

### **Application Level Questions**

Application is the ability to use learned knowledge in particular and concrete situations. The student can apply rules, principles, and concepts in new and appropriate contexts.

#### *Sample Application Level Questions*

- Why is the sun important to life on Earth?
- Using what you have learned, how would you solve the following problem?
- How would schools be different without electricity?
- How much money would you have if you saved a dollar a day for seven years?

### **Analysis Level Questions**

Analysis is the ability to breakdown a concept into its component parts.

#### *Sample Analysis Level Questions*

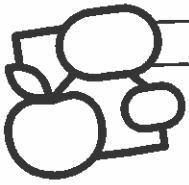
- Why did the boy in the story give away his gold coin?
- Draw the parts of a flower.
- Explain the differences between a raindrop and a snowflake?
- Which characters in the film were necessary for the plot?

### **Synthesis Level Questions**

Synthesis is the ability to put together elements or parts to form a whole. The student arranges and combines pieces to form a pattern, structure, or idea that was not clearly evident before.

#### *Sample Synthesis Level Questions*

- How could you change the characters' personalities to make them more likable?
- Design a new invention for . . .
- Organize the books you have read this year into three categories.
- Prepare a shopping list for Thanksgiving dinner.



### **Evaluation Level Questions**

Evaluation is the ability to judge the value of materials, methods, or ideas. This level of thinking requires the highest level of intellectual functioning. It requires students to not only understand the material but to also make a judgment based on this understanding.

#### *Sample Evaluation Level Questions*

- Should students be allowed to bring cell phones to school?
- Would you recommend this book/film to a friend? Why?
- How would the discovery of life on another planet affect the U.S. Space Program?
- Does the protection of an endangered species justify the loss of job opportunities?

## Verbs Often Used to Promote Higher Level Thinking

Level of Thinking	Typical Verbs Used		Examples of Teacher Questions
<b>Knowledge</b>	define repeat label name	draw record identify list	<b>Name</b> the author of the book.
<b>Comprehension</b>	classify contrast explain give examples	compare translate summarize	<b>Compare</b> the weather today with the weather yesterday.
<b>Application</b>	apply complete illustrate solve predict	calculate demonstrate practice use show	<b>Complete</b> the sentence using a vocabulary word from the lesson.
<b>Analysis</b>	analyze discuss explain inspect	classify divide infer	<b>Explain</b> why it is important to have classroom rules.
<b>Synthesis</b>	arrange construct design generalize plan categorize	combine create develop organize predict rearrange	<b>Predict</b> what would happen if a law was passed that made commercials on television illegal.
<b>Evaluation</b>	assess estimate judge rate test justify	critique evaluate rank recommend value	What requirements for employing a new teacher would you <b>recommend</b> to the principal?