

# Promoting Higher-Order Thinking Skills with Engagement and Motivation



## Higher-Order Thinking Instructional Strategies



**TLC Educational Solutions Strategy-Based Professional Development** on-site workshops are specifically designed to provide the skills needed for educators to teach and interact with today's students, "to stay on the cutting edge of their profession". Educators are challenged to maintain a classroom climate that has students clearly on task, actively engaged in the lesson, and thinking at a higher cognitive level. With the support of our **TLC Educational Solutions Training Resource Manuals**, which each workshop participant receives, step by step strategies are provided and can be incorporated into lessons the very next day. Whether at an on-site workshop or invitational seminar, we provide teachers and administrators with strategies designed to actively engage students in higher-order thinking. Students who learn how to think about their thinking are more capable of working at a higher cognitive level and applying their learning to new situations. This is a pathway for becoming a Lifelong Learner.

## Workshop Sessions

### Building Metacognition “Reflective Learning”

In this session, the approach for building metacognition (simply put... “thinking about your thinking”) is shared. This approach provides students with a toolbox of strategies that allows them to think about the way they learned something, such as how they solved a problem, and apply it to other types of problems. Because these strategies do not come naturally to a lot of students this session demonstrates how to explicitly teach them.

### Developing Higher-Order Instructional Approaches

This session focuses on Learning Experiences that require higher-order thinking and give students the capacity to process information at a higher level of cognition. Thinking Maps are introduced to provide a learning that parallels processing of information in the brain. Cognitive Demand classification is provided to help teachers identify activities through which students learn and can apply that learning in new situations.

### Thinking with Strategic Questioning

Teachers and students can use Strategic Questioning strategies to increase higher order thinking, problem solving, and creativity. These strategies allow students to gain confidence in both answering and asking questions that shift from the “What” to the “How...”, “Why...”, and “What other...” to name a few. Questioning strategies help students make sense of concepts and apply what they have learned.

### Supporting Student Learning/Scaffolding Instructional Strategies

Scaffolding instructional strategies involves giving students support at the beginning of a lesson or when learning something new and then gradually turning over responsibility to the students to operate on their own. An increase in student ownership of their learning is the ultimate goal.

## *Building Metacognition \*Reflective Learning\**

- Understanding cognition and metacognition
- Teaching students about metacognition
- Applying Think-Aloud and Problem-Solving strategies
- Modeling metacognitive strategies



## *Developing Higher-Order Instructional Approaches*

- Teaching Higher-Order Thinking Processes
- Transitioning from Lower-Order Thinking -**LOTS** to Higher-Order Thinking -**HOTS**
- Utilizing Thinking Maps to support brain-functional learning
- Applying Bloom's Taxonomy, Webb's Depth of Knowledge and Costa's Levels of Rigor
- Raising instructional levels with Hess's Cognitive Rigor Matrix

## *Thinking with Strategic Questioning*



- Developing questioning skills in students
- Building skill in higher-order teacher questioning
- Creating Costa and Bloom HOTS questions
- Engaging students with higher-order questions
- Transitioning "Wait Time" to "Think Time"

## *Supporting Student Learning/Scaffolding Instructional Strategies*

- Applying the Gradual Release of Responsibility Model to scaffolding
- Utilizing verbal, instructional, and procedural scaffolding in the classroom
- Developing Scaffolding Instructional Techniques
- Transitioning from teacher generated instruction to student-centered learning
- Providing Vertical Learning strategies and Discussion Techniques