Developing Higher-Order Thinking

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Higher-order thinking skills are required of students as they transfer or apply knowledge to newly encountered situations and problems. Students who learn to think critically can make informed decisions, reach reasonable solutions, analyze and evaluate evidence, and much more.

Because the standards expect that students are prepared to be critical thinkers and problem solvers, educators must plan engaging lessons that emphasize higher-order thinking so that students naturally and seamlessly apply these skills. A few strategies are suggested for developing these thinking skills.

- ***What-If Thinking*** can lead to deeper thinking. Discuss what if an event happened differently or had never occurred, then that would cause other changes. Allowing students to speculate about what they had previously learned helps them construct logical alternatives. As students research and answer what-if questions, they will choose one thing that would change and explore the resulting consequences that might exist in today's world. Incorporating what-if activities into topics across various content areas creates an awareness needed for innovative thinking and future success.

- ***Question Asking*** is a skill that is often over looked. Teaching the difference in literal and interpretive questions helps students learn to ask questions that probe deeper. Lead students to see that literal questions are those with answers readily available. The answers are right there, such as in the text, whereas interpretive questions are those they must think about. As students practice designing and asking interpretive questions, they will gain the skill and see the value as it relates to their lives. After students know the difference between the two types of questions, ask: "Is it is important to ask interpretive questions. Why?" Numerous and varied activities using read-alouds, video clips, art, and quotations associated with the content taught can provide the basis for interpretive and literal questions. This activity can jumpstart a search for other strategies that teach students how to develop thoughtful question-asking skills.

- ***Reflection*** can help students process their learning and develop thinking skills. Use questions that guide students to review and self-assess: What caused difficulty? What was confusing? What do you still not understand? What did you do that helped you develop meaning? / Invite students to journal how to apply the learning to their lives. / Provide prompts for summarizing: What are two key ideas you learned and why are they important? Use words and pictures to represent what you learned.