Ten Tips for Creating Complex Learning Tasks

1. Ensure all students are fully aware of the learning goals and objectives. For students to work within a complex task, they need to thoroughly understand the expectations and outcomes of the learning task.

2. Make all resources and materials readily available to students, or ensure that they can gather the resources and materials themselves.

3. Prepare activities that are authentic (real-world) and involve ambiguous and somewhat abstract problems.

4. Develop tasks that allow for trial and error so students will eventually automatize the skills. Automatization occurs when students repeatedly practice using strategies successfully.

5. Use "reverse problem finding" to help students develop problem-finding and divergent thinking skills. Reverse problem finding is a brainstorming process that first explores what causes a problem rather than beginning with how to solve it.

6. Ensure that tasks will use both affective (emotional) and content knowledge strategies and skills. This is called the "whole task method" of learning. Within a holistic scenario, students must consider not only how to create a solution, but also how the solution may affect people, the environment, animals, and so on.

7. Design tasks that encourage students to develop unique products or reinterpret old ideas or sophisticated methods of designs that involve creative thought.

8. Urge students to seek advice from experts in the field or to gather multiple perspectives on the problem before them.

9. Design, teach, and practice classroom protocol for an efficiently run classroom. Avoid letting interruptions take you off task, and prepare the students for interruptions that are inevitable (such as fire drills, office announcements, and latecomers/early departures). Teach students how to quickly refocus on the task after the interruption.

10. Set up problems that require students to cross disciplines as they solve the problem. For example, when researching the effect of inexpensive sewer systems on slums in the developing world, students will use the principles of civil and environmental engineering, economics, chemistry, biology, and anthropology.