

The Learning Cycle Model-Lesson Format

Question: What is the question being explored?

Topic: (What are you teaching? Electricity, Magnetism, Forces and Motion, Density, etc.)

Illinois Learning Standards/National Science Education Standards: (List Illinois Standards first -use standards from all three state goals 11, 12, and 13- then the National Science Education Standards, use the information in your packet. Write out the entire standard, not just the numbers.)

Grade level: (This can be a range, e.g. K-1, K-2, 1-3, etc.)

Concepts: (The knowledge that will be constructed from completing this lesson. What is the concept you want your students to learn from this activity?)

Process Skills: (Your lesson probably addresses many process skills. Identify the primary process skills used in this lesson.)

Materials needed: (List materials and quantity needed to implement the lesson.)

Resources: (There are thousands of resources available to use to find hands-on inquiry based lessons. You do not need to reinvent the wheel. Go to the experts in the field. What resources did you use to help you develop your lessons? You can use books, internet sites, your textbooks, handouts, science conference, veteran teachers, etc. Include a bibliography or the title and URL addresses for the web sites.)

Safety Precautions: (Adult supervision, careful of spills, wears safety glasses, etc. Don't leave anything out!)

Procedures

Follow the 5E Model for each lesson or cycle—be sure to include *detailed* guidelines.

I. **Engagement:** (Focusing Activity-Set Purpose)

How will you gain their attention and interest? Describe how to introduce the lesson so that students will be motivated to participate in the lesson. Pose a question, read an excerpt from a book or newspaper, show a video clip, brainstorm, etc. Stimulate the students' curiosity.

II. **Exploration:** (Adapt an existing activity or create an activity that allows students to discover the intended concept, goal for the lesson, materials, process skills to be used, procedure.)

Describe the primary activity of the lesson. Explain how students will actively explore their topic, environment, and/or manipulate materials provided.

II. **Explanation/Concept Development:** (*Getting the idea*-conceptual understanding. Did they learn what you want them to know?)

What is the main idea? How will the main idea be constructed? Include a list of carefully constructed questions to assess student knowledge. Be sure to begin at the observational level to establish a base then lead students to incorporate higher level thinking skills (p.237) The students must be able to explain the concept to you, not you to them.

III. Expansion of the Idea: (Applying the Idea)

Adapt an existing activity or create an activity that allows students to discover the intended concept, goal for the lesson, materials, process skills to be used, procedure.)How will the idea be expanded—applied? Describe how students will be able to apply concepts in a *new* situation.

IV. Evaluation: (Assessment)

How will the students show what they have learned? You will be assessing your students continuously throughout the lesson. In addition this lesson evaluation should be a *new* method or situation that allows the students to apply what they have learned. You can ask a question, present a scenario, do a demonstration, present a graph or chart to be interpreted, read and respond to a new situation, write an essay, etc. If you are going to assess how well the students worked in a group, then you need to create a rubric/checklist with the criteria you are going to use. If you are going to assess the lab sheets, then you have to list the exact criteria you are looking for. Again you may want to create a rubric/checklist.