

National Science Education Standards

CHAPTER SUMMARY

Students are challenged to develop a learning tool that can be used to understand what information the periodic table provides. They will accomplish this task by developing some type of game that all students can use. As they proceed through the activities they will develop an understanding of the basic physical properties of the elements and their atomic structure and why they are arranged as they are on the periodic table. The concepts that they will learn are identified in the National Science Education Standards listed below.

CONTENT STANDARDS

Unifying Concepts and Processes

- System, order, and organization.
- Evidence, models, and explanation.
- Change, constancy, and measurement.

Science as Inquiry

- Identify questions and concepts that guide scientific investigation.
- Use technology and mathematics to improve investigations and communications.
- Formulate and revise scientific explanations and models using logic and evidence.
- Recognize and analyze alternative explanations and models.
- Communicate and defend a scientific argument.
- Understandings about scientific inquiry.

Physical Science

- Structure of atoms.
- Structure and properties of matter.
- Chemical reactions.

Science and Technology

- Abilities of technological design.
- Understandings about science and technology.

History and Nature of Science

- Science as a human endeavor.
- Nature of scientific knowledge.
- Historical perspectives.