

**Grades 6-8 Scientific Inquiry, Literacy, Numeracy and Bioethics**

*How is scientific knowledge created and communicated?*

**Content Standards**

**Expected Performances**

**SCIENTIFIC INQUIRY**

- ◆ Scientific inquiry is a thoughtful and coordinated attempt to search out, describe, explain and predict natural phenomena.
- ◆ Scientific inquiry progresses through a continuous process of questioning, data collection, analysis and interpretation.

**SCIENTIFIC LITERACY**

- ◆ Scientific literacy includes speaking, listening, presenting, interpreting, reading and writing about science.

1. Formulate questions that can be answered through scientific investigation.
2. Design and conduct and conduct appropriate types of scientific investigations to answer different questions.
3. Identify independent and dependent variables, and those variables that are kept constant, when designing an experiment.
4. Use appropriate tools and techniques to make observations and gather data.
5. Draw conclusions and identify sources of error.
6. Provide explanations to investigated problems or questions
  
7. Read, interpret and examine the credibility of scientific claims in different sources of information.
8. Communicate about science in different formats, using relevant science vocabulary, supporting evidence, and clear logic.

### **SCIENTIFIC NUMERACY**

- ◆ Scientific numeracy includes the ability to use mathematical operations and procedures to calculate, analyze and present scientific data and ideas.

### **BIOETHICS**

- ◆ Humans have responsibility for the Earth, its resources, and its inhabitants.

9. Use mathematical operations to analyze and interpret data.

10. Identify and present relationships between variables in appropriate graphs.

11. Recognize that living things, including human beings, are interrelated and interdependent.

12. Understand that human beings can sometimes disturb the environment in ways that harm other creatures.

13. Behave responsibly toward animals and plants in their care.