

Standard 7—Interdisciplinary Problem Solving

Elementary

Connections

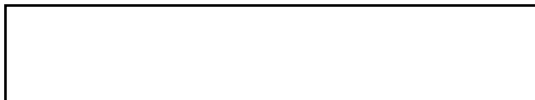
Strategies

1. The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

Students:

- **analyze science/technology/society problems and issues that affect their home, school, or community, and carry out a remedial course of action.**
- **make informed consumer decisions by applying knowledge about the attributes of particular products and making cost/benefit tradeoffs to arrive at an optimal choice.**
- **design solutions to problems involving a familiar and real context, investigate related science concepts to inform the solution, and use mathematics to model, quantify, measure, and compute.**
- **observe phenomena and evaluate them scientifically and mathematically by conducting a fair test of the effect of variables and using mathematical knowledge and technological tools to collect, analyze, and present data and conclusions.**

This is evident, for example, in the following examples:



Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

Skills and Strategies for Interdisciplinary Problem Solving

Working Effectively: *Contributing to the work of a brainstorming group, laboratory partnership, cooperative learning group, or project team; planning procedures; identifying and managing responsibilities of team members; and staying on task, whether working alone or as part of a group.*

Gathering and Processing Information: *Accessing information from printed media, electronic databases, and community resources and using the information to develop a definition of the problem and to research possible solutions.*

Generating and Analyzing Ideas: *Developing ideas for proposed solutions, investigating ideas, collecting data, and showing relationships and patterns in the data.*

Common Themes: *Observing examples of common unifying themes, applying them to the problem, and using them to better understand the dimensions of the problem.*

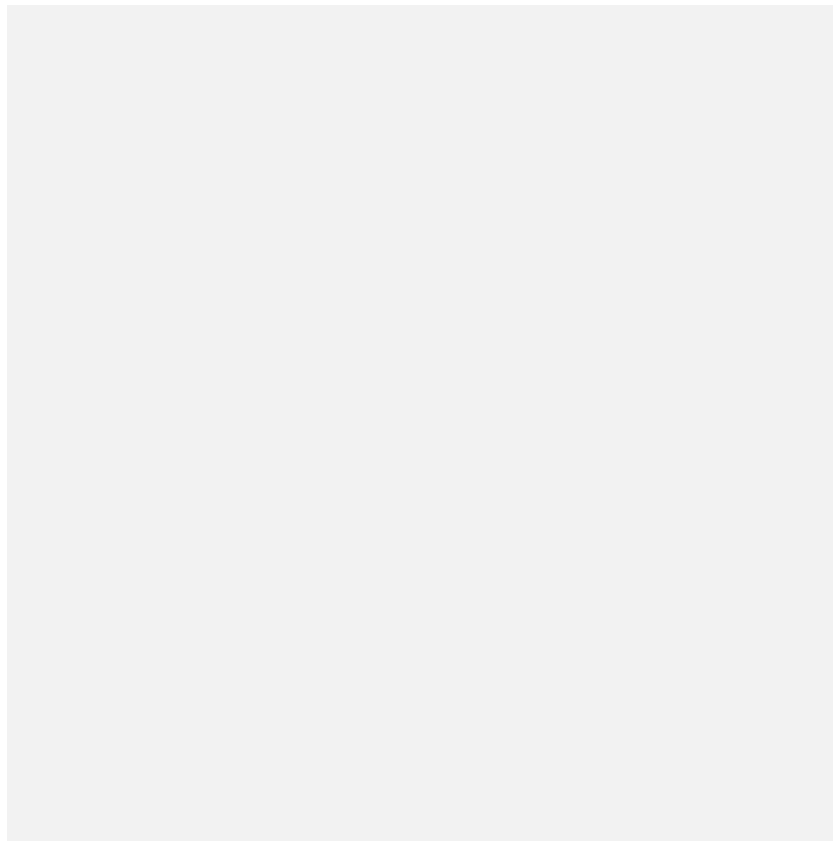
Realizing Ideas: *Constructing components or models, arriving at a solution, and evaluating the result.*

Presenting Results: *Using a variety of media to present the solution and to communicate the results.*

Sample Problem/Activity

How much of Earth's water is readily available for human consumption?

Student Worksheet



Standard 7N Interdisciplinary Problem Solving

Commencement

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