

Chapter 1 Lesson Plan

Technology Fundamentals

Chapter Resources		
Textbook Activity	Teacher CD	Online Learning Center
Design with Math and Science Select an invention of the past that demonstrates a principle of science or math and build a model of it.	Lesson Plan Flash® Presentation ExamView® Chapter Test	Chapter Activities Chapter Quizzes

FOCUS

Chapter 1 introduces the concept of technology and its role in society. The seven resources of technological systems and the impacts of technology are also covered.

Objectives

- Explain why studying technology is beneficial.
- Give examples of ways in which technology evolves.
- Describe technology systems.
- Describe impacts of various technologies.
- Explore ways in which ethics influence technology.

Tying to Previous Knowledge

On a blank bulletin board, write only the title “What Is Technology?” Have students bring in pictures that show technology in use. Divide the board into separate sections for each type of technology—communication, power & energy, manufacturing, construction, transportation, and bio-related technology—and post appropriate photos or drawings in each section.

TEACH

1. **Brainstorming.** Group the students in a tight circle. Explain that you are going to brainstorm together and that there are no “right” or “wrong” answers, that all answers are valid. Establish ground rules that no one may make fun of anyone for any answers so that everyone will feel at ease. Ask the question: “What is technology?” and go around the circle until all students have answered (or passed). Using the same method but starting with a different student first, ask: “What effect does technology have on your life?”
2. **Evolution of technology.** Distribute a handout illustrating several contemporary tools or machines. Leave a space for the students to write in what technological artifact preceded the one pictured.

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Technology Fundamentals (continued)

- 3. Impacts of technology.** Distribute a handout illustrating various technologies, inventions, or machines. Have a discussion concerning the various impacts that each of the items had on society, the environment, the economy, or politics at the time.
- 4. Communicating.** Some people say that one ought not to “reinvent the wheel.” What is the meaning this statement is trying to convey?

ASSESS

Have students complete Chapter Test 1. Chapter tests are found in the *ExamView*® Assessment Suite on this Teacher Resource CD-ROM.

Reteach

1. Have students prepare a time line of any particular technology. Lead a discussion about how the technology developed over time. Is development still ongoing? If not, why did the technology drop from use?
2. Ask: Can anyone think of impacts from a technology that were originally considered good (or neutral) but later were considered negative? (Or vice versa.)

Enrich

1. Select a few technologies (as few as two) and ask students to voice an opinion of which had the most far-reaching effects.
2. Select a current technology that seems to show promise of rapidly evolving in the near future, such as telecommunications. Ask the students to forecast what they think will occur in the next decade or so.

REFLECT

There are many examples of how ethics may affect technology (its development or application; witness stem cell research). Can anyone think of how technology may modify one's ethics?