Chapter 21 Lesson Plan

Transportation Fundamentals

Chapter Resources		
Textbook Activity	**Teacher CD**	**Online Learning Center**
Make a Transportation Documentary Create a documentary video about the impacts of a transportation system in your community.	Lesson Plan Flash® Presentation *ExamView*® Chapter Test	Chapter Activities Chapter Quizzes

FOCUS

Chapter 21 discusses the field of transportation, how transportation is used, and its positive and negative impacts.

Objectives

- Describe a basic transportation system.
- Explain how GPS works.
- Describe time and place utility.
- List several positive and negative impacts of transportation systems.

Tying to Previous Knowledge

Inquire of the students how they got to school that day. Ask them how they get around when they leave home on the weekends. How would their lives be different if there were no motorized transport available?

TEACH

1. **Visual Display.** This chapter introduces transportation systems. Make a bulletin board display that is a montage of transportation pictures. To prepare, post the title "Transportation" across the top of the bulletin board. Once you begin discussing Chapter 21, have each student bring in at least one small picture that represents transportation to him or her. (Consider allowing the students to tack their pictures on the board themselves.)

2. **Time line.** With student participation, create a large time line to display on the wall. The time line should illustrate the vast changes related to the speed of human transportation systems. For each type of transportation (walking, horse-drawn wagon, etc.), indicate the average speed. The timeline can start as far back as you deem appropriate.

3. **Systems model.** Review the basic systems model (discussed in Chapter 3) with the students. Ask for examples of input, process, output, and feedback that relate to the transportation system.

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Transportation Fundamentals (continued)

4. **Discussion.** Discuss with students the degree to which all other systems of technology depend upon transportation systems. Lead the students in a discussion that helps them see the worldwide scope of transportation systems.

ASSESS

Have students complete Chapter Test 21. Chapter tests are found in the *ExamView*® Assessment Suite on this Teacher Resource CD-ROM.

Reteach

1. This chapter provides an excellent vehicle for discussions about the tradeoffs involved in any technological system. People's reliance on gas-engine automobiles as individual transportation vehicles has contributed to air pollution and gridlock problems facing many of our large cities. Ask students to compare the use of the bicycle as a personal transportation vehicle to the use of an automobile. Discuss the advantages and disadvantages of each.

2. Instead of using the transportation system as the start of a class exercise, try starting with a farmer growing crops. What is the farmer to do when the crops are harvested? Or start with manufacturing. What happens after the manufacturer produces the product? What is the next logical step? It is easy to see how so many routines in life require a transportation system.

Enrich

1. Have students imagine themselves riding in a car or sailing on a ship. What must they know to get to their geographical goal? Navigation is one of the most important factors in a transportation system. If we do not know where we are relative to where we want to go, efficient transport is almost impossible. Illustrate why GPS is so useful to navigation.

2. What happens when a vehicle breaks down? Can transport continue unimpeded? Highly unlikely. Every transportation system requires support facilities to keep it running smoothly. (Maintenance is only one aspect of that support.)

REFLECT

Ask the class to imagine the earliest need for transportation. Did this need always exist? It is probable that people needed to transport themselves, goods, and property for thousands of years. What has changed is not the need but rather the technology available to fulfill that need.