



LESSON 3

Indiana in Motion: You Can Get There from Here

LESSON DESCRIPTION

This lesson explores Indiana's physical connections to the world through transportation systems, including road, rail, air, and water.

OBJECTIVES

As a result of this lesson, students will be able to:

1. Identify Indiana's highway, waterway, and rail routes and trace their national and international connections;
2. Locate key air and port facilities and explain their relationships to other modes of transportation;
3. Use a map to identify Indiana communities and explain how they are connected to the world by transportation and communication systems;
4. Research the systems which are used to transport products, people, and ideas from Indiana to the world;
5. Hypothesize about ways that Indiana's transportation infrastructure brings Indiana closer to other parts of the world and other parts of the world closer to Indiana;
6. Identify examples of public goods in their own community.

KEY IDEAS

Infrastructure. Systems which support development, including transportation, communication, education, utilities, etc.

Mode of transportation. Type of transportation technology, such as rail, aviation, highway, or maritime.

Intermodal transportation. Movement of persons or goods involving more than one type of transportation.

Hub. A transfer point between two or more modes of transportation.

Export markets. Markets for Indiana goods in other countries.

Public good. A good that the market is either unable or unwilling to provide. Public goods are usually provided by the government. National defense and roads are two examples.

TIME REQUIRED

One or two class periods.

MATERIALS

- **Handouts 1, 2, 3, 4, and 5**
- Overhead projector
- Transparencies of **Handouts 1-4**
- Outline maps: Indiana, the United States, the World (pages 37-38)
- Indiana road maps
- U.S. atlas
- Marker pens in blue, red, and other colors
- Gold stars or other stickers
- **Handout 6: Did You Know? Card: Ports of Indiana**

PROCEDURES

1. Ask students if they have ever heard the expression "You can't get there from here." Do they think that this saying is true, as far as their own community or the state of Indiana is concerned? Provide each student with a copy of **Handout 1: Indiana Roadways** (scale for map is 2.5" = 100 miles; 1.5" = 100 km; 63mm = 100 miles; 39.5mm = 100 km). On an Indiana road map, have students identify interstate highways passing through Indiana and trace them in red marker pen. Other major routes should be traced in blue ink. Have students use the map to locate Indiana cities and their own community.
2. Discuss the terms *infrastructure* and *mode of transportation*. Ask students to describe the types of infrastructure and mode of transportation that they have highlighted on their maps so far. How do they think that these systems support different types of development in their community?
3. Have students use **Handouts 2, 3, and 4** (scale for maps is 2.5" = 100 miles; 1.5" = 100 km; 63mm = 100 miles; 39.5mm = 100 km) to identify additional modes of transportation, including rail, air, and maritime, and indicate these modes on their maps with different colors. Explain that these are examples of public goods provided by government because they are too expensive or not worth the risk for people to provide on their own.
4. Layer transparencies of **Handouts 1-4** on top of one another to demonstrate the complexity of Indiana's *intermodal transportation* system. Have students identify major hubs (see **Handout 5**), where transfers from one mode of transportation to another can take place, and use stars to designate these places on their maps. How do these places relate to natural geographic features in Indiana? Which hubs and modes of transportation serve the students' own community? How do these modes of transportation connect Indiana to other states and other parts of the world?
5. Using an atlas and an outline map of the United States, have students trace four modes of transportation from Indiana to U.S. cities that have major ports or other international transportation facilities (e.g., Chicago, St. Louis, New York, Los Angeles, New Orleans, Dallas, Houston, Atlanta). Discuss with

students the factors to be considered in choosing modes of transportation for different types of goods. (Some factors might be cost, speed, volume to be transported, security, and location of destination.)

6. Hold a roundtable discussion on the importance of Indiana's physical connections to the world. Ask students to consider the implications of being in closer contact with the rest of the world. What kinds of changes can increased international contacts bring to Indiana? What changes might be taken to other countries?

CLOSURE

Ask students to consider the expression "You can't get there from here" once again. Does this seem to hold true for Indiana? Have students suggest new ideas for an expression or motto that describes Indiana's transportation system and its international connections. Student maps and mottos can be displayed on a bulletin board or around the room.

ASSESSMENT

Have students develop an export plan for a local or nearby product. On a world map, have them trace the paths and describe the modes of transportation they would use to move that product to Indiana's major export destinations, including Canada, Japan, the United Kingdom, Mexico, and Germany. As an alternative, have students imagine that they plan to travel to each of these countries on business and develop travel plans using different modes of transportation.

EXTENSIONS/CONNECTIONS

1. Have students write to local businesses to ask where the products they produce are exported (see Theme III, Lesson 2) or where the products they sell come from and the modes of transportation used.
2. Interview a local business person to learn how a local product is transported to other states or countries.
3. Research Indiana's ports (see: Did You Know?: Ports of Indiana). If possible, plan a field trip to one of the ports to learn about the economic activities it supports.
4. Another way to think about Indiana's connections to the world is through the Internet. Go to the Cyberspace Atlas at <http://www.cybergeography.org/atlas> and see how Cyber-geographers visualize our virtual ties to the rest of the world.

RESOURCES

- Official website of Indiana's public port system, including Burus Harbor International Port, Southwind Maritime Center, and Clark Maritime Center: <http://www.portsofindiana.com>

HANDOUT 1

INDIANA HIGHWAY NETWORK



Source: *Intermodal Management System*, Indiana Department of Transportation, 1997.

HANDOUT 2

INDIANA RAILROADS



Source: *Intermodal Management System*, Indiana Department of Transportation, 197.

HANDOUT 3

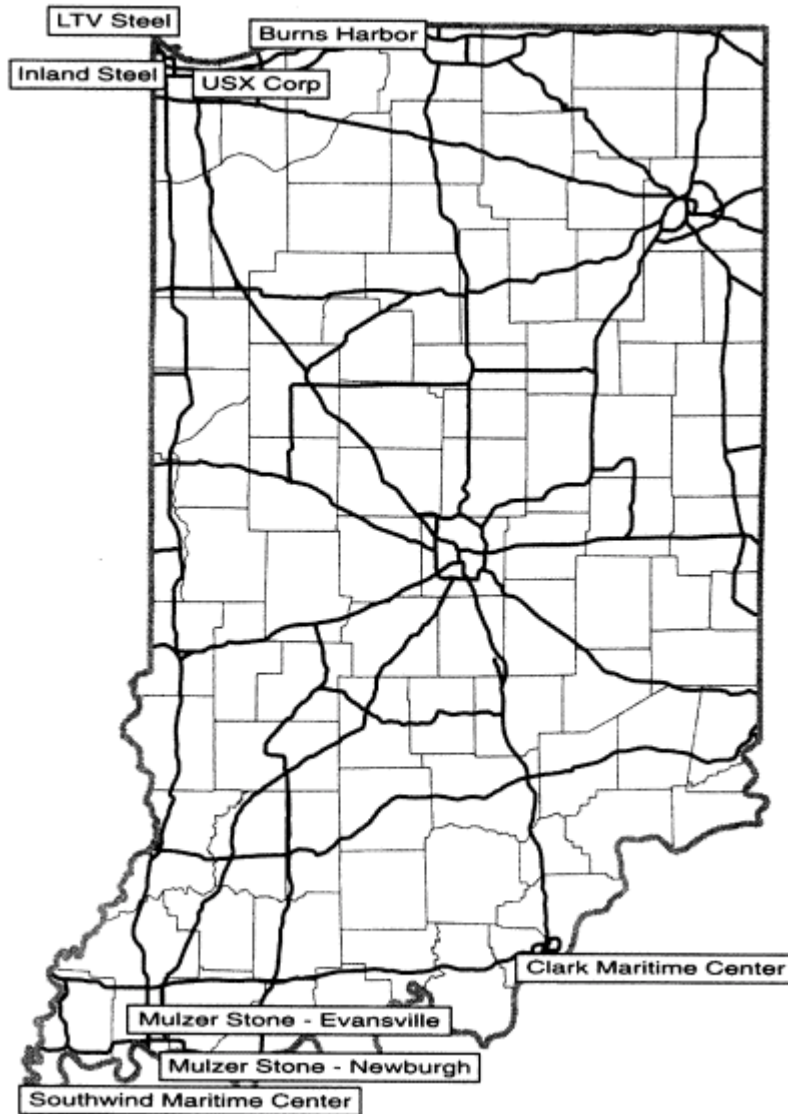
MAJOR AIRPORTS



Source: *Intermodal Management System*, Indiana Department of Transportation, 1997.

HANDOUT 4

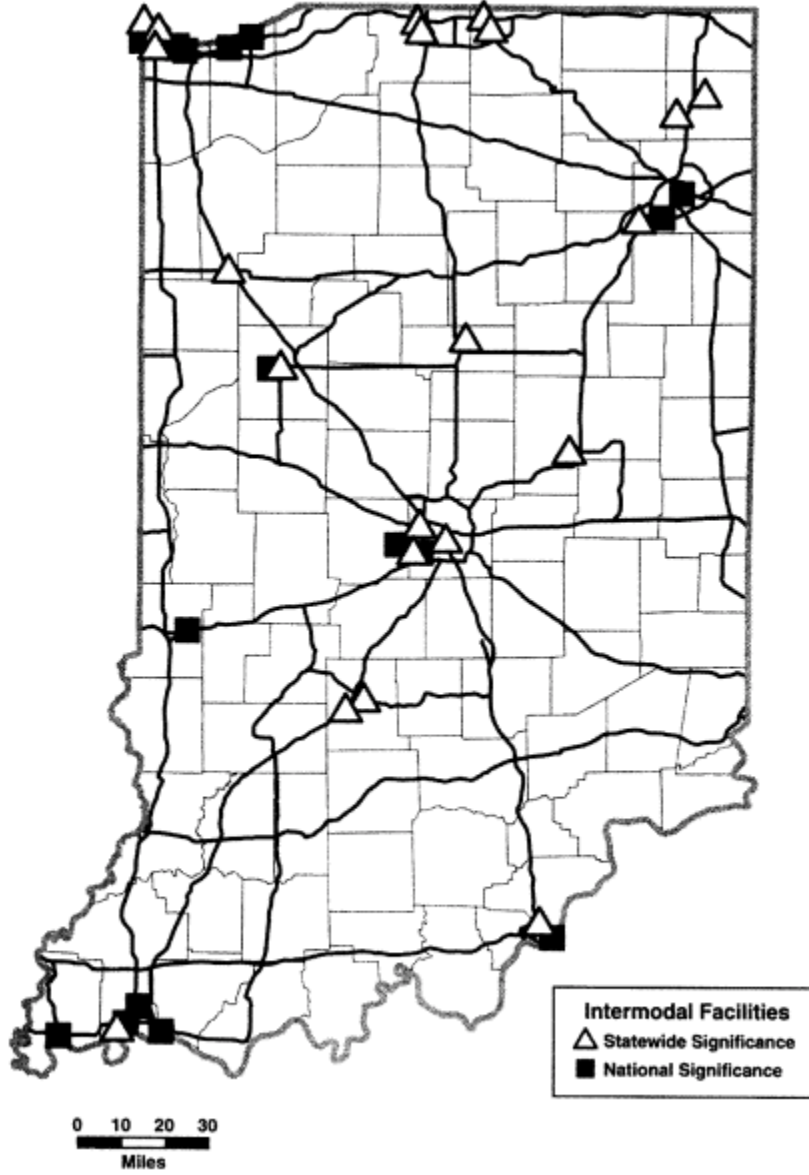
PORT FACILITIES



Source: *Intermodal Management System*, Indiana Department of Transportation, 1997.

HANDOUTS

INDIANA INTERMODAL FACILITIES



Source: *Intermodal Management System*: Indiana Department of Transportation, 1997

HANDOUT 6

DID YOU KNOW?

PORTS OF INDIANA

Indiana's waterways and ports play critical roles in moving goods to domestic and world markets. No oceans lap our boundaries, but Indiana is blessed with ample waterborne trade. The Ohio River flows along our southern boundary, and Lake Michigan washes our state's northwestern shore. Hoosier farmers and manufacturers are able to use the state's waterways to ship agricultural commodities and manufactured goods south on the Ohio and Mississippi rivers to New Orleans on the Gulf of Mexico and east via the Great Lakes/St. Lawrence Seaway to Europe and the world. Today, Indiana's International Port and the two public ports on the Ohio River are thriving centers of maritime commerce. More than \$2 billion in private investment has helped create 5,700 family-wage jobs in Indiana. Indiana's public ports are a tribute to the vision of an earlier generation of Indiana government and business executives.

Three major ports, moving many different types of materials, are operated by the state of Indiana:

- The International Port at Burns Harbor, Portage: grain and all types of steel;
- The Southwind Maritime Center, Mount Vernon: coal, grain, logs, and soybeans;
- The Clark Maritime Center, Jeffersonville: steel rods, steel coils, scrap, steel, paper, hardboard, corn soybeans, wheat, oats, salt fertilizer, sand, aggregate, machinery, concrete, logs, pig iron, gypsum, and glass.

Other ports are operated by specific industries, including LTV Steel, Inland Steel, USX Corporation, and Mulzer Stone.

A port serves but one purpose, the transfer of freight from one mode of transportation to another. In order to be cost effective, that transfer must be fast and efficient. In Indiana, products usually reach our ports by rail or highway for transfer to ships. Water routes offer an extremely efficient way to move a large volume of material. This is particularly cost effective for bulk commodities that do not require speed of shipment. The ports of Indiana do not necessarily send the commodities directly to a foreign port. Often the materials are sent to ports along the Great Lakes/St. Lawrence Seaway, or along the Ohio, or the Mississippi River for further manufacturing. Eventually, the finished product is shipped to other ports all over the world.

For further information on Indiana ports: <http://www.portsofindiana.com>

APPENDIX

FINDING GLOBAL CONNECTIONS IN YOUR BACKYARD: HOW TO LOCATE AND APPROACH LOCAL COMPANIES WITH INTERNATIONAL CONNECTIONS

Indiana exports reached an all-time high of \$13.47 billion in 1999. Those exports came from companies located all over the state of Indiana. These firms manufacture a variety of products: bath rugs, blood analyzers, cold-rolled steel, and Ping-Pong tables. Their size varies from 10 employees to over 7,000. Foreign investment is also important to the state. There are close to 200 Japanese-owned companies in Indiana employing nearly 35,000 Hoosiers.

LOCATING COMPANIES

The chances are very good that there is a company in your community that exports, imports, or is foreign owned. There are a variety of ways to locate these companies.

- First, begin by asking your students where their parents work and whether their parents' companies currently export or import. The parents do not need to be in management positions. They could be involved in purchasing, engineering, or packaging.
- The business section of your local paper might carry stories about area companies that export. Your paper's business editor or business reporter might be able to tell you who is active in international trade in your community.
- Your community's chamber of commerce or local economic development organization is also a source of information. These organizations are very familiar with local businesses and may be able to refer you to a company involved in international commerce.
- World Trade Clubs (WTCs) are regional organizations of local businesses involved with international trade. There are currently five World Trade Clubs in Indiana. See page 141 in the Resources section for a complete list.
- The Indiana Department of Commerce (IDOC), International Trade Division is the export- promotion arm of the Indiana State Government. IDOC trade specialists work with small and medium-sized companies to enhance their export abilities. IDOC has foreign offices in Europe, Asia, Africa and Latin America. The International Trade Division is a good source of export statistics for Indiana. Contact: IDOC, One North Capitol, Suite 700, Indianapolis, IN 46204; tel: 317.233.3762; <http://www.state.in.us/doc/>
- The U.S. Department of Commerce International Trade Administration (USDOC-ITA) offers a variety of services through the U.S. Foreign and Commercial Service at U.S. embassies worldwide, Indianapolis Export Assistance Center works with companies in Indiana interested in exporting to global markets.
Contact: USDOC-ITA, Pinewood One, Suite 106, 11405 N. Pennsylvania St., Carmel, IN 46032; tel: 317.582.2300; <http://www.ita.doc.gov>
- There are a couple of useful Indiana-focused trade directories. One of these is the *Indiana International Trade Directory*, compiled by the Indiana Department of Commerce (IDOC) and published by *Indiana Business Magazine*. Updated annually, this directory lists companies, by product line, that are active in international trade. It is a very useful tool if you want to identify Indiana companies

that export to a particular area of the world. To obtain a copy of the directory, contact the International Trade Division of IDOC, tel. 317.233.2672; e-mail parmstrong@commerce.state.in.us

- Another useful trade directory, although not specifically international, is the 2000 *Harris Industrial Directory for Indiana*. This directory, which is available at most public libraries, lists Indiana manufacturers by city or town. It does not indicate whether or not the company is international, but it will list basic contact and product information.
- The PSI/Cinergy Map of Indiana Companies with Foreign Investment lists by geographic locations nearly all foreign-invested companies in Indiana. A copy is included with this set of lesson plans.
- If you still have a question or are uncertain of where to go, call the Indiana University International Resource Center at 812.856.5523.
- If possible, see if one of the organizations above can recommend a company and a contact person at that company. It is always easier to make contact with a company if you have a specific individual to reach.

CONTACTING COMPANIES

Here are some guidelines for contacting companies you would like to know more about.

Telephone Call

Identify who you are and why you are calling. "Hello, my name is Harry Hoosier. I am a student at Middletown Middle School. Our class is researching local companies that export to Asia. Is there someone there I could talk to about this?"

When doing a telephone interview, please remember these tips:

- Prepare a list of questions in advance.
- Have paper and pencil ready to take notes.
- Do not take up too much of the person's time-10 to 15 minutes maximum.
- In some cases, it is best to call and make an appointment for a phone interview at a time that is convenient for the person you are calling.

Letter

If you or your students are contacting multiple companies in your area, you may want to write to them first, before you call. Please use a standard business letter format (see example below).

October 1, 2000

Mr. Harry Hoosier, President

Acme, Inc.

111 Indiana Drive Middletown,

IN 44444

Dear Mr. Hoosier:

Our Economics class at Middletown High School is researching businesses in this community that export products to Asia. We would like to gather more information about your company and its international markets.

Could you please let me know who would be the best person in your organization to contact and the time of day when it would be most convenient to call? A response by letter, telephone, or email would be most helpful.

Thank you for your assistance.

Sincerely

Bobby Boilermaker
Student
Middletown High School

Meeting

After an initial telephone call, your students may want to visit the company to become more familiar with their products and operations. Hosting an entire class for a company visit or factory tour requires much time and effort from a company. Your students may gain much more from having a business person come to visit your school. You may also want to assign two or three students to visit a company and report back to the class. If a visit is arranged, please remember these tips:

- Obtain permission first. Write or call the company and ask permission. Do not allow students to show up at the company without first making an appointment. No more than two or three students should attend the meeting. They should dress neatly and bring pads and pens for notes.
- Prepare in advance. Does the company have a website you can look at? Is there a newspaper article you can read about the company or its industry? What does the company manufacture? What questions will you ask? Assign questions to each group member.
- Be on time. Give yourself enough time to reach the company, and ask for directions in advance if you are unsure where the company is located. What entrance should you use? Some companies have more than one building or entrance.

Acknowledgments

Please acknowledge a company's assistance! A letter of thanks from the students or teacher to the individual who assisted you will be appreciated. If you have some tangible result from your research, you can include a copy. If the person who assisted you is not the president of the company, please send a copy of your letter of acknowledgment to the president or supervisor of the person you are thanking.