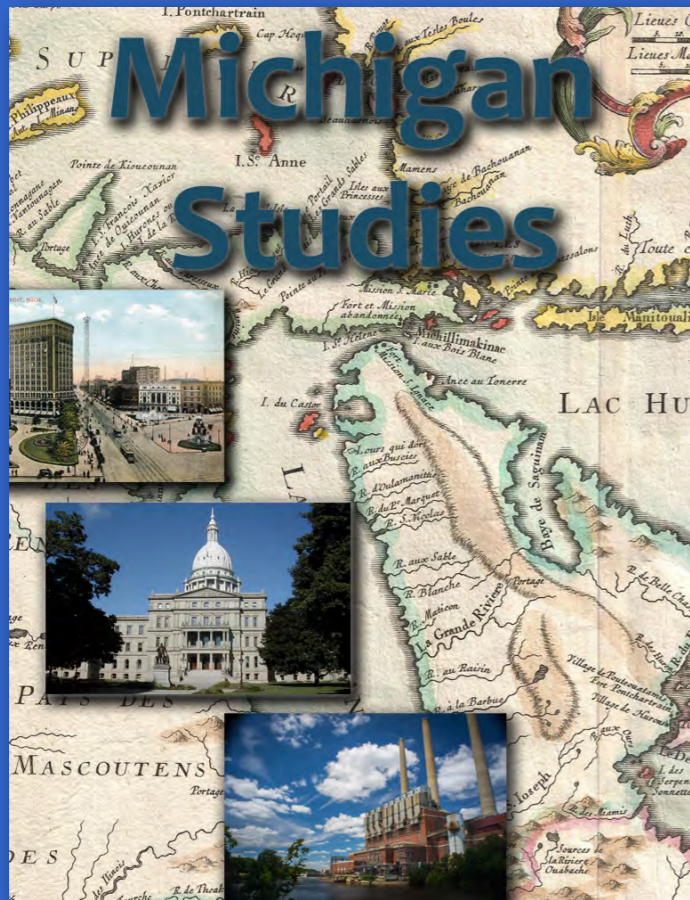




MICHIGAN

OPEN BOOK PROJECT



This is version 1.1 of this resource, released in September of 2016.

Information on the latest version and updates are available on the project homepage: <http://textbooks.wmisd.org/dashboard.html>



MICHIGAN OPEN BOOK PROJECT

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**MICHIGAN
OPEN BOOK PROJECT**

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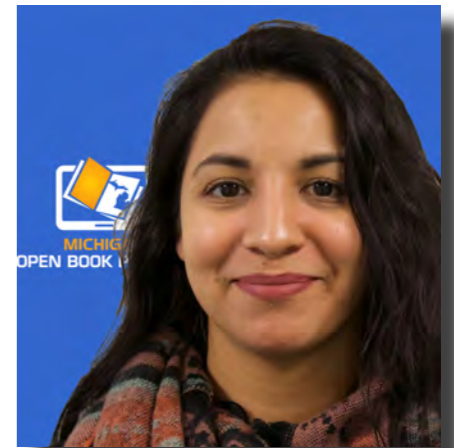
McAnn teaches third grade all subjects at KND Elementary in Onekema Michigan.

Jannan Cotto

Little Traverse Bay Bands of Odawa Indians

Education Department

An advocate of social and eco-justice, Jannan Cotto, Education Director for the Little Traverse Bay Bands of Odawa Indians, has worked in Indigenous Education for 9 years in both urban and reservation communities with the goal of contributing to the educational sovereignty, healing, and well-being of Indigenous people. She graduated from Northeastern Illinois University with a degree in inter-disciplinary studies with an emphasis in English and Education and a minor in Psychology. She is currently studying in an online Master's program at Eastern Michigan University studying Social Foundations of Education with a concentration in eco-justice. She serves as the current Chair of the Confederation of Michigan Tribal Education Directors and serves on the Board of Regents for Bay Mills Community College. One of the focuses of her work includes developing Indigenous land-based education for both Indigenous and non-Indigenous learners that emphasizes Indigenous perspectives, encourages relationships with land, and inspires critical thinking and critical action in our global community. She is currently working on curriculum development through part-



Sandy Freeland

McBain Elementary School

McBain Rural Agricultural School

Sandy is a full time teacher at McBain Elementary School in McBain Michigan. She has taught Kindergarten and Third Grade during her time there. In addition to classroom teaching she's also provided technology professional development for the district. Outside of the school day she can be found learning from others in Twitter chats, participating in groups on Facebook, and working on developing a coding club for her school.





Beth Kastl

Floyd M. Jewett Elementary School

Mesick Consolidated Schools

Beth is an elementary teacher from Floyd M. Jewett Elementary school, where she has worked in a variety of grade levels including first and third grade.

Joy Kooyer

West K-7

Holland Public Schools

Joy received her Bachelor of Science degree from Southern Wesleyan University in Early Childhood Education and her Master's degree in the Art of Teaching from Marygrove College. She has always taught third grade and thinks it the best grade ever. She is the chairperson for the National Geographic Bee. Joy has been Holland Sentinel's Teacher Of The Year and been chosen for WGVU's, "Cool Teacher" award. She enjoys traveling. Her goal is to see all of the 50 state capitals and visit all of the MLB parks. Joy finds great pleasure in reading, scrapbooking and spending time with her husband, Jason and three children, Julia, 12 Harrison, 9 and Jameson, 2.



Marilyn McCauley

Surline Elementary

West Branch Rose City Schools

After attending a wonderful 2 year experience with the amazing professors at Kirtland Community College, I continued to work toward a Bachelors of Science Degree with the wonderful professors at Central Michigan University, also obtaining a teaching certificate. My focused subjects at CMU were language arts and social studies. Michigan State University, with its outstanding professionals, is where I enjoyed working for my Masters Degree in Education. Learning is a continuous journey I treasure through our expert COOR District and Surline Elementary instructors. I also enjoy independent studies I have done



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Dorothy Perry

Academic Services Coordinator

Little Traverse Bay Bands of Odawa Indians

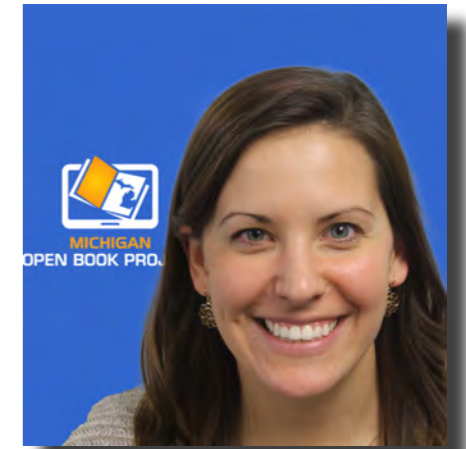
Coming from a long line of Educators, Dorothy Perry has continued to follow in this direction with passion and commitment. The culmination of 25 years in the field of Education includes, Early Childhood Education with a focus on the whole child through self-led discovery and learning. Continuing as a Family/School Liaison and supporting parents with infant/toddler development. For the past 14 years, Dorothy has concentrated on building Indigenous Education programs for youth and community, including developing Land-based cur-

Andrea Raven

Foster Elementary School

Ludington Area Public Schools

Andrea Raven currently teaches 3rd grade at Foster Elementary in Ludington, Michigan. She earned a Bachelor of Arts Degree in Elementary Education and Spanish from Albion College. While at Albion, she studied abroad in Spain. It was a positive experience that allowed her to immerse in the culture and education system. She is completing her seventh year of teaching and has taught both 5th and 3rd grades. Andrea serves as the Social Studies Department Chair at her school. She has earned her Master's Degree in Curriculum Instruction from Grand Valley State University. Outside of the education world,



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Alison Simon

Curriculum Specialist/Grant Writer

Little Traverse Bay Band of Odawa Indians

Biography Forthcoming!



Susan Welch

**Fenton Area Public Schools
State Road Elementary**

Susan Welch currently teaches 4th grade at State Road Elementary in Fenton, Michigan. She has earned a Bachelor of Science Degree in Elementary Education from Central Michigan University and a Master's Degree in the Art of Teaching from Marygrove College with additional graduate work done at Arizona State University. While at CMU, Susan traveled to Perth in Western Australia to study their use of integration to deliver instruction and meet the curriculum standards. Upon graduation, she started her teaching career in Arizona teaching in the Casa Grande and Kyrene school districts. During this time, Susan taught in a fully inclusive elementary classroom with students with many diverse learning needs including monolingual and bilingual Spanish speaking students, as well as various physical and mental challenges. She also was able to learn about the many different Native American cultures represented within her schools. Susan has taught both 3rd and 4th grade in the Fenton Area Public Schools for the past 11 years and also serves as

Carol Bacak-Egbo

Editor

Carol Egbo has more than 40 years of experience in education as a teacher, curriculum developer, staff development specialist, and social studies consultant. She is currently a special lecturer in the Teacher Development and Educational Studies Department at Oakland University, and a contract consultant for the Oakland Intermediate School District. She has been project director for two federal Teaching American History Grants, and was the primary curriculum designer and writer for grades 2-6 of the Michigan Citizenship Collaborative Curriculum (MC3) Project. She has extensive experience in presenting professional development for teachers including summer institutes at University of California-Los Angeles, institutes for the Michigan Department of Education, teacher networks, national and state conferences, teacher seminars sponsored by Michigan State University, Saginaw Valley State University, and Oakland University. She is the recipient of numerous awards including



Carol Gersmehl

Cartographic Consultant

Carol Gersmehl is a map maker and teacher trainer. She worked in a census-data research office, then taught cartography and Geographic Information Systems for 17 years at Macalester College in St. Paul, Minnesota. In 2005, she became co-director of the New York Center for Geographic Learning and co-coordinator of the New York Geographic Alliance. While in New York, she also taught Advanced Placement World Geography and helped advise teachers at a K-12 school in Queens. She still flies back occasionally to work with schools in New York, but now she is cartographic advisor, educational materials author, and teacher-trainer for the Michigan Geographic Alliance.



**MICHIGAN
OPEN BOOK PROJECT**

Chapter 2

What factors most significantly impact Michigan's economy?

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

What is Economics?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

Economics: the study of how people use resources to produce goods and services that people need and want

Goods: things people produce that can be touched or held

Services: actions that people do for someone else

Natural Resources: things in nature people find useful such as trees and water

Economy: activities related to making, trading and selling goods and services

In the first chapter you learned about geography, one of the important areas of social studies. You explored the geography of Michigan and its many special natural characteristics.



Think about the geography of Michigan. What are four of its important natural characteristics? Turn to a partner and discuss or if you are alone type your answer here.

What do people do with the natural characteristics of Michigan? They put them to use! They plant crops in the soil. They use wood from trees to build houses. What do they do with water??? Lots and lots of things! There is a special name for things in nature that people find useful: natural resources. In this section you will learn how natural resources are important in another area of social studies: economics.

What is Economics?

Economics is the study of how people use resources to produce **goods** and **services**. You have probably already learned that goods are things people produce that can be touched or held.

Faygo pop is a Michigan good. What is a good that your family bought recently?

Services are actions people do for someone else. When your dentist cleans your teeth you are getting a service.

There are three main types of resources that people use to produce goods and services. You already know about one of them: **natural resources**. In the next section you will learn about the other two other types.

Think about the Faygo pop. Think about the service of your dentist cleaning your teeth. What natural resource is needed to produce both this good and this service??? Could it be soil? Could it be trees? Could it be sand? If you guessed water you are correct! Water is a natural resource needed for both.



Interactive 2.1 Natural Resources in Michigan

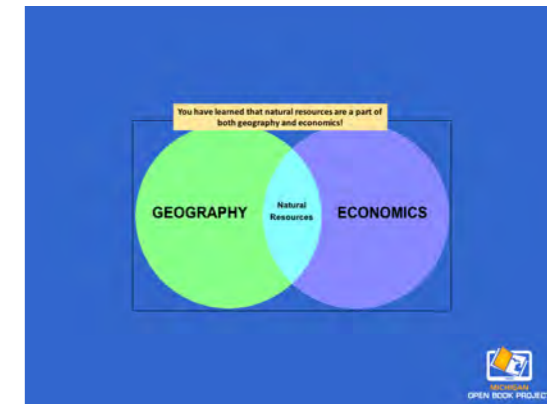


Click here to explore more about natural resources used to produce Michigan goods

PUTTING IT ALL TOGETHER

You learned about the geography of Michigan in the last chapter. In this chapter you will learn about the **economy** of Michigan. You will explore activities related to making, trading and selling goods and services. You will find that what you learned about geography will be useful. Geography and economics are often connected!

Interactive 2.2 Economics and Geography Venn Diagram



Click here to review what you have learned about geography and economics in this section.

How do People use Three Kinds of Resources to Produce Goods in Michigan?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

Human Resources: workers and their skills

Labor: another word for 'work'

Capital Resources: goods used to produce new goods

Entrepreneur: someone who combines natural, human, and capital resources to produce goods or services

Economic Activities: different ways people use resources to produce goods and services.

In the last section you learned that economics is the study of how people use resources to produce goods and services. You learned that natural resources are one type of resource. In this section you will learn about the other two.



Think about a bottle of Faygo pop again. What would it take besides water to produce a bottle of pop? Turn to a partner and discuss or if you are alone type your answer here.

Water can't turn into Faygo pop without people! People work in a factory to produce pop. But, they don't use magic wands to turn water into pop. They use machines. Machines that fill the bottles, put on the labels, and place caps on top.

Human Resources

Human resources are the people who produce the goods. They are the farmers, factory workers and truck drivers. They are the store clerks and baggers. Human resources provide the labor that gets the job done. In economics, human resources also include the skills people have.



These workers are helping create another delicious treat: chocolate! Image source: https://upload.wikimedia.org/wikipedia/commons/a/a9/Chocolate_assembly_line.jpg

Capital Resources

Capital resources are the goods used to produce new goods. They include factories, trucks, tractors and machines. Tools are also capital resources.

Imagine you decide to start a little business producing strawberry popsicles. You would be the human resource! You would need water. That's a natural resource. What about strawberries? They would be another natural resource. What kind of capital resources would you need? You'd need a freezer for sure! You'd also need popsicle sticks. What about some kind of container to freeze them in? You can see that it takes all three kinds of resources to produce a good.



Interactive 2.3 Lemonade Stand Game



Want to try and run your own business. Click on one of these links to run a Lemonade business. Make sure to keep track of the natural, human and capital resources you are using! PLEASE NOTE: THIS REQUIRES FLASH AND MAY NOT WORK PROPERLY ON AN IPAD.

Entrepreneurs

Entrepreneurs are people who combine the three kinds of resources to make new goods or services. Henry Ford was an entrepreneur who created automobiles. William Kellogg was an entrepreneur who invented Kellogg's cereal. You would be an entrepreneur if you really did start your strawberry popsicle business!

Interactive 2.4 What is an Entrepreneur?



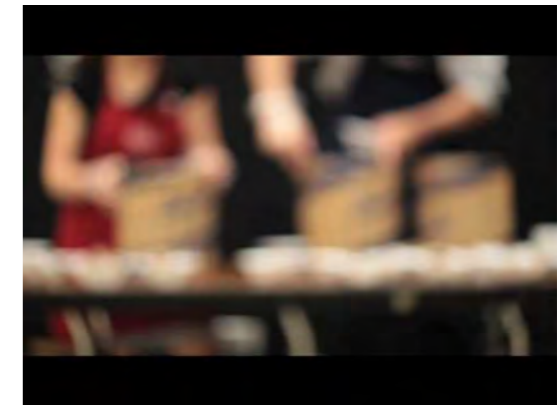
Click here to learn more about entrepreneurs: <https://youtu.be/QqjMKTaEFd4>

Using Resources to Produce Michigan Goods

Many different goods are produced in Michigan every day. Cereal, cars and furniture are just a few of the things that are made in Michigan. People combine natural, human and capital resources to make these goods.

Ice cream is a favorite Michigan good! The Hudsonville Ice Cream Company is located in Ottawa County in Hudsonville which is near the city of Holland, Michigan. It was started by a group of entrepreneurs in 1926.

Interactive 2.5 Hudsonville Ice Cream



Click here to learn about the Hudsonville Ice Cream Company



Image source: https://farm8.staticflickr.com/7641/16591131550_56077dda11_o_d.jpg

Hudsonville Ice Cream uses local natural resources in its ice cream. The company uses milk and fruit from Michigan. It also uses human resources. Scientists, farmers and factory workers all help make the ice cream. Many capital resources are also needed to make the ice cream. These include freezers, mixers and containers.

Interactive 2.6 Ice Cream Sort



Let's practice what you have learned. Click here to sort the three kind of resources and make some ice cream.

You just learned that sugar is one of the natural resources used to make ice cream. But where does sugar come from? Believe it or not some sugar comes from sugar beets. The growing of sugar beets has been an important economic activity of Michigan for over one hundred years. Economic activities are different ways people use resources and produce goods and services. Farming is an economic activity.



Michigan Sugar Beets

Photo courtesy of Carol Egbo

Sugarbeet farming and processing industry in the Great Lakes Bay Region grew out of the decline of the lumbering industry. It has become a very important cash-crop for Michigan farmers, providing many local jobs while contributing to the local economy.

Michigan Sugar Company's four production facilities in Bay City, Caro, Croswell and Sebawaing, and three warehouses in Michigan and Ohio employ over 700 people, year-round, and an additional 1,600 during peak processing season. In all, Michigan Sugar Company's seven facilities generate more than one half billion dollars in direct economic activity, annually.

Section 3

How Does Scarcity Affect the Choices People Make in Michigan?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

Scarcity: not enough of something

Lumbering: an economic activity where trees are cut down

Opportunity Cost: When you make a choice, your opportunity cost is the second thing you wanted most

In the last section you learned that people use resources to produce goods and services. You also learned that there are three kinds of resources: natural resources, human resources and capital resources.



Think about your strawberry popsicle business. What would you do if you didn't have enough strawberries to make all the popsicles people wanted? Turn to a partner and discuss or if you are alone type your answer here.

Scarcity and Choice

In economics there is a special term for not having enough of something. That term is **scarcity**. In the example above you had a scarcity of the natural resource of strawberries. What do people do when they have a scarcity problem? They have to make choices. In the popsicle example you might choose to use some other fruit for the popsicles. What if you had enough strawberries, but you ran out of freezer space! Then, you would have a scarcity of a capital



**Davey Johnson's
Famous Strawberry Popsicles**

resource. You'd have to make a choice again. You might choose to ask a neighbor to use their freezer. What if you had so many orders for strawberry popsicles that you couldn't keep up! That would be a scarcity of human resources! You might choose to hire a friend to help you.

Scarcity is the main problem people face in economics. This is because resources are limited.

This means there are only certain amounts of resources. In the popsicle example you were dealing with limited resources but people wanted lots of popsicles. In economics, people are said to have unlimited wants. This creates the problem of scarcity. Resources are limited but people's wants are unlimited!

Interactive 2.9 Scarcity



Click here to review what you have learned so far!

Scarcity and Michigan History

Throughout its history, scarcity has affected Michigan in different ways. During the early years, trees were scarce in many areas near Michigan. But, people needed lumber to build houses and other buildings. Michigan had trees! Michigan had a lot of trees! Because other areas faced a scarcity of trees, they bought lumber from Michigan. **Lumbering** became an important economic activity in Michigan. People in Michigan used waterways and

railroads to ship lumber. It went to areas where people wanted and needed it. But Michigan's wonderful natural resource was limited. So many trees were cut down that trees became scarce in many areas of Michigan. Now, Michigan had a scarcity of trees!



White Pine Source: https://commons.wikimedia.org/wiki/File:Pinus_strobus_Syvania.jpg

People in Michigan had to make a choice. What economic activity could they do now in the areas where the trees were gone? Think back to what you learned about the sugar industry in Michigan in the last section. Those sugar beet farms you learned about began about 100 years ago. Look again at the counties where the sugar beet farms are.



<https://www.michigansugar.com/growing-production/our-growing-area/>

What do you think was happening in those counties before the sugar beet farms? Those counties had been filled with trees! They had been part of lumbering. When the trees were gone people decided to farm the land instead. Some people decided to grow sugar beets. Remember that scarcity forces people to make choices. A scarcity of trees led people to choose farming as a new economic activity.

There are lots of other examples of scarcity in Michigan history. There have been times when human resources, or workers, were scarce. People began to build more factories in Michigan around 100 years ago. These factories were building things like furniture

and cars. People wanted more and more of these goods. So, the factories needed more workers. People from other states and even other countries came to Michigan to work in the factories. They helped solve the scarcity problem.

There have also been times when capital resources have been scarce. About 100 years ago the General Motors Company was beginning to grow. It was producing cars. The company had a scarcity of capital resources. It needed more machines and more factories. General Motors made a choice. It took over some small companies that had been making cars. In this way it increased its capital resources.

This old ad shows a car made by the Rapid Motor Vehicle Company. This company was taken over by General Motors



Image source: Source: http://www.wikiwand.com/en/Rapid_Motor_Vehicle_Company

Scarcity Today

Scarcity still affects Michigan. People still have to make choices because of it. You and your family face scarcity sometimes. You may want to buy something that is really popular like a new, cool video game. You go to a store to buy it but the store has none left. The owner tells you that the factory doesn't have enough workers to make all the games people want. In other words, there is a scarcity of human resources. You have to make a choice. Should you buy another kind of game? Should you wait until there are some of the one you want?

Michigan businesses face scarcity also. Many Michigan restaurants like to use vegetables right from Michigan farms. They are using an important Michigan natural resource. Sometimes bad weather causes vegetables to be scarce. There is only a limited amount. This means restaurants have to make choices. Should they buy vegetables from other states? Should they use less vegetables in the dishes they make?



Source: <http://msue.anr.msu.edu/uploads/images/Agriculture/Michigan-Vegetables-6-19-13web.jpg>

Opportunity Cost

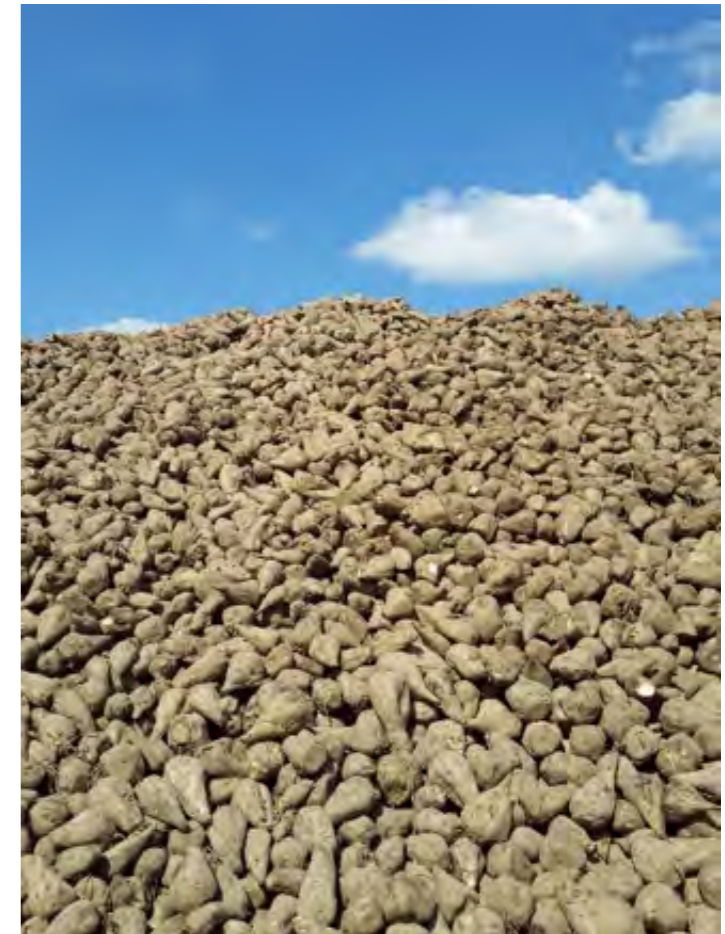
You have learned that because of scarcity, people have to make choices. When a choice is made, there are alternatives, other things, which are not chosen. Think about the example of the video game. You decided you have two choices. Choice number one is to wait until there are more games. Choice number two is to buy a different game. You decide to wait until you can have the game you really want. So you gave up the opportunity to have a new game right away!

There is a special term for whatever is in second place when you make a choice. It is called **opportunity cost**. In the example of the video game, you had two choices. You chose to wait. That cost you the opportunity to have a game right away.

Think about someone who was deciding what to farm on land where there had once been trees. The farmer decided on three choices: potatoes, corn and sugar beets. He decided sugar beets was the best choice. Corn was his second choice. Potatoes was his third choice. What was his opportunity cost??? What was in second place? Corn!!!! That was his opportunity cost. Choosing to grow sugar beets cost him the opportunity to grow corn. Making choices is not easy because there is always an opportunity cost!

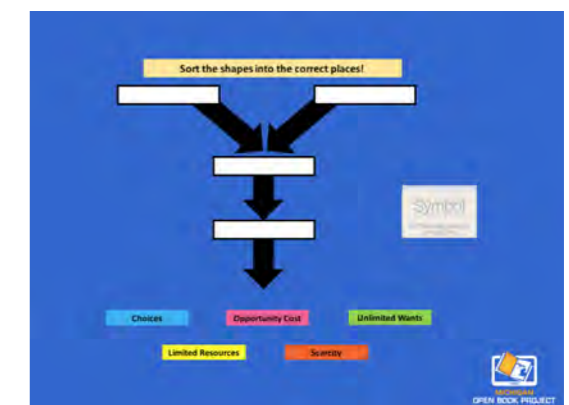
Putting It All Together

Resources are limited. Human wants are unlimited! This causes scarcity. Because of scarcity people can't have everything they want. Businesses can't make all the goods they want to make. Michigan can't produce all the goods it would like to produce. So, people have to make choices. Businesses have to make choices. States like Michigan have to make choices. . When a choice is made, there are alternatives, other things, which are not chosen. There is a special term for whatever is in second place when you make a choice. It is called opportunity cost.



Sugar Beets. Photo Credit: Carol Egbo

Interactive 2.10 Graphic Organizer



Click here to show what you know!

What Are Some Important Economic Activities of Michigan?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

Economic Activities: different ways people use resources to produce goods and services.

Agriculture: another word for farming

Manufacturing: the making of goods in a factory

Tourism: an economic activity in which tourists visit an area and spend money

Tourist: a person who goes sight-seeing and spends money in a place away from where they live.

Mining: digging minerals from the Earth

Minerals: natural resources found in the ground such as iron ore

You have learned that people want a lot of goods and services. In economics these wants are considered unlimited! You have also learned that people use their resources to make goods and services. You have learned about three kinds of resources: natural resources, human resources and capital resources. You also discovered that these resources are limited! Unlimited wants plus limited resources equals scarcity!



Think about your own community. What economic activities take place there? Are there farms nearby? If so, what do they grow? Are there factories? If so, what do they make?

In this section you will learn more about the economic activities of Michigan. These are the different ways people use resources in Michigan to produce goods and services. Because of scarcity people have chosen these activities wisely.

Agriculture

Have you ever thought about the food in your lunch box or on your lunch tray? Where does it come from? Does any of it come from Michigan? Chances are, it does! **Agriculture**, or farming, is an important economic activity of Michigan. It involves the growing and care of crops and animals. There are 54,900 farms in Michigan!



Photo courtesy of Carol Egbo

Agriculture has a long history in Michigan. Indigenous people farmed the land hundreds and hundreds of years ago. They grew crops such as corn, beans and squash. Today Michigan is a major producer of many agricultural products including cherries, berries, corn and soybeans. Michigan farmers also raise animals such as cows, pigs and sheep.

Interactive 2.11 Dairy Farming in Michigan



Watch the following video to learn about an important Michigan agricultural product

Michigan ranks Number 1 in the United States for growing blueberries and tart cherries. It ranks Number 2 for celery and Number 3 for sugar beets!

As you watch the video above think about the following questions:

- How many dairy farms are there in Michigan?
- How long does it take for the milk to leave the farm?
- How long is it before the milk gets to a store in Michigan?
- Does Michigan's milk get shipped to other states or does it just stay in Michigan?

Manufacturing

Manufacturing is another important economic activity of Michigan. Manufacturing is the making of goods in a factory. Earlier in this chapter you saw photographs of a sugar making factory. You saw many different kinds of machines used in that factory.



Image source: https://upload.wikimedia.org/wikipedia/commons/thumb/7/78/Manufacturing_equipment_110.jpg/640px-Manufacturing_equipment_110.jp

Manufacturing makes more money in Michigan than any other economic activity. Michigan leads the country in automobile manufacturing. In addition, more than 700 different companies make auto supplies in Michigan. But Michigan manufactures lots

of other products also! More than half the office furniture made in the United States is produced by Michigan companies. Michigan also manufactures cereal, paper, boats and sporting equipment.

Interactive 2.12 How are Cars Made?



Watch the following video to see how a car is made.

Interactive 2.13 Products from Michigan



Click to learn where some products in Michigan are produced.



What was one thing you found interesting about the ways cars are made? Did you ever imagine that the car you ride in started out as thin sheets of steel?

Tourism

Tourism is another important economic activity of Michigan.

Tourists are people who go sight-seeing and visit places away from where they live. They usually spend money in the places they visit. They stay at hotels and motels. They eat out in restaurants. They buy things to take home with them. That is why tourism can be an important economic activity in a state.



What are some things you think tourists would like to do in Michigan? Turn to a partner and discuss or if you are alone type your answer here.

Many tourists in Michigan enjoy visiting the beaches during the summer. People also visit in the fall to see the colorful trees. People visit in winter to go skiing and snowmobiling. People visit different places in Michigan in the spring to see the budding trees and flowers. Tourists also visit historic places like old forts and lighthouses.

Tourists also visit Michigan special events like the Dream Cruise in Pontiac. They visit festivals like the Tulip Festival in Holland. You don't have to come from somewhere else to be a tourist in Michigan! You can be a tourist in your own state.



Image source: https://pixabay.com/static/uploads/photo/2013/01/04/23/09/mackinaw-city-lighthouse-73597_640.jpg.



<https://commons.wikimedia.org/w/index.php?curid=6434515>



https://en.wikipedia.org/wiki/Woodward_Dream_Cruise#/media/File:2007_Dream_Cruise_photo.jpg

Other Economic Activities

Besides the three major economic activities there are other ones that help Michigan's economy. You learned that Michigan was once a big lumber producer. Unfortunately, people used up most of the trees. What happens when natural resources are mostly used up? That's right! The resource becomes scarce

and may even disappear. Luckily people began to replant trees in Michigan. Some of the forests came back! Today Michigan has more than 800 logging and trucking companies involved in lumbering. Michigan produces some of the best hard maple and red oak lumber in the world!



Image source: https://upload.wikimedia.org/wikipedia/commons/a/a6/Timber_DonnellyMills2005_SeanMcClean.jpg.

Interactive 2.14 Location and Economic Activities



DIGGING DEEPER

What does location have to do with economic activities? Can't you start a farm anywhere in Michigan? Click here to find out.

Another important economic activity in Michigan is **mining**.

Mining is digging minerals like iron ore from the Earth. Like farming, mining has a long history in Michigan. Indigenous people mined copper in Michigan over 7,000 years ago. Today iron ore, gravel, limestone, sand and other **minerals** are mined in Michigan. Many of these are important in manufacturing. Without iron, we would not have steel for cars!



Limestone Quarry at Rogers City, Michigan

https://commons.wikimedia.org/wiki/File:Michigan_Limestone_and_Chemical_quarry.jpg

PUTTING IT ALL TOGETHER

Economic activities are different ways to produce goods and services. Farming, manufacturing and tourism are major economic activities in Michigan. Others include lumbering and mining. These activities are possible because of Michigan's many resources. Michigan's natural resources of soil and water make farming possible. Michigan's capital resources of factories and machines make manufacturing possible. Michigan's human resources make all of Michigan's economic activities possible!

How Does Specialization Affect Michigan?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

Specialization: when individuals, regions, and countries produce certain kinds of goods or services

Trade: to exchange one thing for another

Interdependence: when people are dependent on other people in order to get the things they do not produce such as iron ore

In the last section you learned about important economic activities of Michigan. These included agriculture, manufacturing and tourism. You also learned about some of the goods produced in Michigan. These included cherries, sugar and cars.

In this section you will learn about how people decide what to produce. Why do people in Michigan grow cherries instead of oranges? If oranges are not grown in Michigan, why is it so easy to buy them in a store in Michigan? Keep reading to find out!



You have learned that resources are limited. This causes scarcity. What does scarcity force people to do? Turn to a partner and discuss or if you are alone, type your answer here.

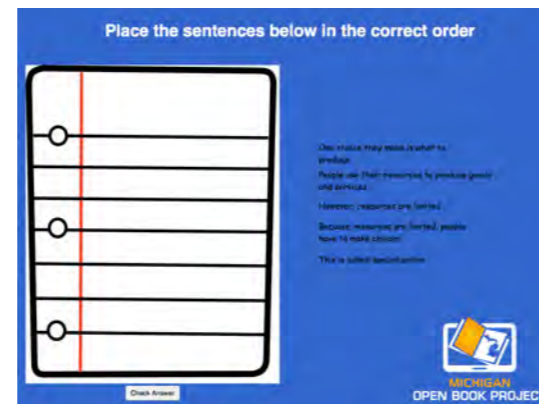
Specialization

People have to make choices because of scarcity. Oranges would not grow well in Michigan. They only grow where it is warm most of the year. Michigan has a scarcity of warm days in winter! So in Michigan farmers had to choose other kinds of fruit to grow like cherries or apples. In economics this is called **specialization**.

Specialization is when people or places produce certain kinds of goods or services. Michigan specializes in agricultural products such as cherries, blueberries, apples, corn and potatoes. Michigan specializes in manufactured products such as cars and furniture.

You have learned that certain places in Michigan specialize in certain products. Traverse City specializes in cherries. Grand Rapids specializes in furniture. What about Mackinac Island? What is a special product made there?? Fudge! For over 100 years Mackinac Island has been making and selling fudge. The downtown streets have multiple fudge and candy shops. People on Mackinac Island have made a great deal of money selling fudge. What is an example of specialization in your community?

Interactive 2.15 Specialization



Click here to show what you know about specialization!

Interactive 2.16 Michigan County Specialization



*Counties often specialize also!
Click here to see what goods your county specializes in.*

trade with states like Florida, which specialize in growing oranges. Apples grow well in Michigan's climate. Apples grown in Michigan are sold in states like Florida where they are not grown. Trade benefits both trading partners. Michigan gets oranges and Florida gets apples!



Michigan produces a lot of goods. However, it does not have the resources to produce everything the people of Michigan want, like oranges! Therefore, Michigan trades with other places to get the goods it does not produce. Oranges need a warm climate, so oranges grow well in states like Florida. Michigan is able to

Interactive 2.17 Specialization



Click here to see how specialization and trade works!

Interdependence

As you just discovered in the activity, trade connects places together. It creates a big web of products moving between places. These places come to depend on each other for products. Michigan depends on Florida for oranges. It depends on California for lettuce. California and Florida depend on Michigan for cherries! In economics this is called **interdependence**.



<https://upload.wikimedia.org/wikipedia/commons/4/40/Banana>



Does Michigan just trade products with other states? Look at the bunch of bananas here and the close-up of the label on the bananas. What do you notice?

The label says the bananas are from Guatemala! Where is Guatemala? Look on this map to find out.



<http://minerals.usgs.gov/minerals/pubs/country/latin.gif>

As you can see on the map, Guatemala is a country that borders Mexico. It is far from Michigan! What does this tell you??? It must mean Michigan trades with different countries also! It gets bananas from Guatemala.

Bananas can't grow in Michigan.

What Michigan products are sold in Guatemala? Take a close look at this box of Kellogg's Cereal. The label is in Spanish. Kellogg's sells cereal like this in Spanish-speaking countries like Guatemala.

Products produced in many different countries can be found in Michigan.

Michigan's number one trading partner is Canada. Why do you think Canada is number one? Where is Canada located?



Image source: <http://www.seriousseats.com/images/2011/09/20110916-mexican-cereal-frosted-flakes.jpg>

Canada is Michigan's biggest trading partner because it is right next-door. It is Michigan's neighbor. Michigan's number two trading partner is Mexico. You can probably guess why!

DIGGING DEEPER

Make a chart like the one below. Then, take it home. Search through your home for products that come from other countries. Check your clothes. Check your toys. Check things like computers or televisions. Then, fill in the chart with what you have found!

Product	Where did it come from?

PUTTING IT ALL TOGETHER

People use resources to produce goods. But, resources are limited! This causes scarcity. Because of scarcity people have to make choices. One of the important choices people make is what to produce. This is called specialization. People in Michigan have chosen to specialize in certain goods. These include agricultural products like cherries and sugar beets. These include manufacturing products like furniture and cars. Michigan trades with other states and even different countries. Michigan trades to get the products that it does not produce. When places trade with each other they become dependent on each other. This is called interdependence.

Section Project

Take a look at some of the products that are made in Michigan:

Gerber Baby Food - Fremont, Michigan

Kindel Furniture Company - Grand Rapids, Michigan

Faygo Pop - Detroit, Michigan

Kellogg's Cereal - Battle Creek

Better Made Potato Chips - Detroit, Michigan

Hudsonville Ice Cream - Hudsonville, Michigan

Carron Game Boards - Ludington, Michigan

Mackinac Island Fudge - Mackinac Island

Jiffy Mix - Chelsea, Michigan

Iverson Snow Shoes - Shingleton, Michigan

BOSS Snow plows - Iron Mountain, Michigan

Create an advertisement or commercial to encourage people from around the world to buy one of the products that is made in Michigan. Make sure to include the product name, a slogan, a visual, and a good reason to buy the Michigan-made product.

What Might Be In Michigan's Economic Future?

QUESTIONS TO GUIDE INQUIRY

1. How does our location and resources affect our economy?
2. What role does specialization and trade play in our lives?
3. How does scarcity influence our economy?

TERMS, PLACES, PEOPLE:

wind farms: A group of wind turbines in the same location

wind turbine: a tall tower with blades that makes use of wind to create electricity

In this chapter you have learned about Michigan's economy. You have learned about how people in Michigan take the three kinds of resources and produce goods and services. You have learned about important economic activities in Michigan like agriculture, manufacturing and tourism. You have learned about some of the goods in which Michigan specializes. You have learned about how Michigan trades with different states and different countries to get the goods that are not produced in Michigan.



Think about the economy of Michigan 100 years from now. What is one thing that you think will be different from Michigan's economy today? Turn to a partner and discuss, or if you are alone, type your answer here.

In this section you will try to peek into the future. Will there be some new economic activities in Michigan? Will people develop some new goods and services? Will there be new kinds of scarcity problems?

How has Michigan's economy changed?

Economic activities in Michigan have changed over time. One hundred and fifty years ago there were more people working on farms than in factories. That began to change. Now way more people work in factories than on farms. Manufacturing brings in more money in Michigan than agriculture. Tourism has also grown a lot in the last 100 years.

There is less lumbering in Michigan now than 150 years ago. Why is that? Remember what you learned about the number of trees cut down? It was a huge amount.

The kinds of goods produced in Michigan have changed over time also. Cars look very different now than they did 100 years ago! Farm goods have changed also. Crops like sugar beets and soybeans that weren't grown 150 years ago are grown now in Michigan.



Image source: <https://upload.wikimedia.org/wikipedia/commons/7/74/1910Ford-T.jpg>

Why did Michigan's economy change?

Why did the economic activities and goods change in Michigan? What do you think happened? Scarcity caused some changes. Lumbering slowed down because of a scarcity of trees. There are fewer farms because of a scarcity of farm land. How did that happen? Cities and the number of people in Michigan have grown. Houses and cities took over farmland. This has resulted in a scarcity of farm land in some areas.



Michigan Sugar Beets

Photo courtesy of the Michigan Sugar Company

Some changes were caused by changes in what people wanted. Over time people wanted more and more manufactured goods. They wanted stoves and refrigerators and cars! This led to other changes. Tourism grew because more people had cars and could drive to places.

Michigan's economy grew when businesses created new products that people wanted. It grew as tourists visited more and more places. It grew as people found better ways to use resources.

Windfarms: Something New in Michigan's Economy

Sugar beets grow on a sugar beet farm. Potatoes grow on a potato farm. What grows on a wind farm??? Electricity! **Wind turbines** are tall towers with blades that make use of wind to create electricity. A wind farm is a group of wind turbines in the same location.

Companies rent land from farmers. Then, they put wind turbines on the land. Farmers can continue to grow their crops right near the wind turbines.

Wind farms are new to Michigan's economy. They have helped Michigan's economy in many ways. They make use of a free natural resource: wind! They create jobs. People work at making parts for wind turbines. People work at moving wind turbine parts to wind farms. Wind farms also provide something all people need and want: electricity!

Many people feel wind farms have also helped Michigan's environment. They create a clean form of energy. They do not pollute the air or water. This helps protect the environment.

Not everyone agrees that wind farms are a good thing. Some people

believe they are an eyesore for the communities that have them. Others claim that the noise created by turbines has kept them awake at night.

Interactive 2.18 Wind Turbine Time Lapse Video



To get an idea of how big a wind turbine is and how they put one together click here! <https://www.youtube.com/watch?v=1AvlhZAqYcE>



Wind Turbines on a Sugar Beet Farm

Image Credit: Carol Egbo

Where are Michigan Wind Farms located?

Remember that in the section on economic activities you learned that location matters! Factories are located near cities because they need workers. They are also located where there is a good transportation network. This may include lots of roads and maybe a railroad. Potato farms are located where the soil and climate are good for potatoes. Where would you locate a wind

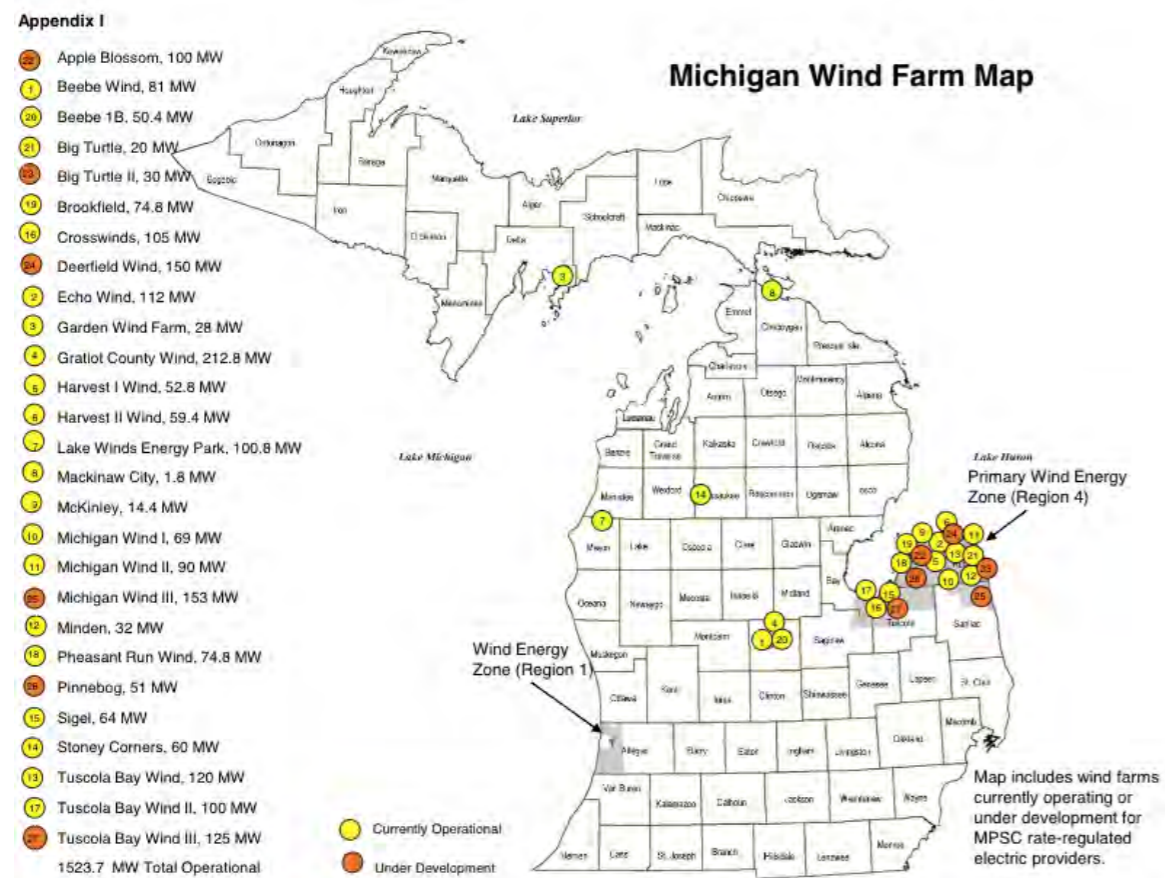


Image source: https://www.michigan.gov/documents/mpsc/wind_map_407661_7.pdf

farm??? Take a look this map. Where are most of the wind farms located?

You probably noticed that most of the wind farms are in the Thumb region of Michigan. Why do you think this is true? You are correct if you guessed that this is where winds on land are strongest.

Manufacturing Wind Turbines and Wind Turbine Parts

People began to build wind farms in Michigan less than 20 years ago. The idea caught on slowly. One problem was that the parts for wind turbines were not made in Michigan. In fact, few parts were even made in the United States. It cost a lot of money to buy wind turbine parts from another country! That has changed. Michigan companies are now manufacturing the wind towers, blades, gear boxes and other parts. This has made use of two important Michigan resources. Human resources, skilled workers, are working in the factories. The factories themselves are important capital resources.

Interactive 2.19 Ventower Industries



Click here to learn about Ventower Industries. It was the first Michigan company to manufacture large wind turbines.

Meet a Michigander!

My name is Ben Lovinggood, My trucking career started in 1969. I started out hauling seafood from Miami, Florida to



Massachusetts. You haul seafood in a 40 foot long refrigerated trailer. After that I went to hauling carpet and yarn from Greenville, South Carolina to Los Angeles, California. After several years I changed and started hauling cattle on a 48 foot trailer.

After several years I changed and started pulling a flatbed trailer that was 53 feet long. While pulling a flatbed I hauled many things that were oversized. But now I haul the biggest things I have ever hauled. Now I haul wind turbine parts.

To be able to haul large windmill parts you have to have special trailers. Some of these cost as much as 300,000 dollars! When you are hauling these oversized loads you can only haul at special times. You can't haul at night. You can only use certain routes. If your load is over 12 feet wide you have to have escorts. These are usually small trucks. One is in the front and one in the back. These cost extra money. For these reasons transportation costs are very high for moving windmill equipment. I hope this helps you understand the trucking industry a little bit better. I am now 71 years old and still trucking. I am home every night. I still pull a flatbed trailer.

Image credit: Joy Lovinggood Kooyer



Part of a Wind Turbine being transported. Photo Courtesy of Eghele Egbo

Interactive 2.20 Wind Farm Sounds



DAVE Interactive: Click to hear a farmer describe the wind turbine on his farm. Some people complain that wind turbines are noisy. Listen to the wind turbine yourself. Listen to what the farmer says. Then, decide for yourself!

Wind Energy Facts

Michigan has 23 wind farms that together have around 900 wind turbines.

Most wind turbines on Michigan wind farms are about 400 feet tall.

In 2015 Michigan wind farms produced enough energy to power 400,000 homes.

Michigan has 32 manufacturing places that make wind turbine parts like blades and gear boxes.

PUTTING IT ALL TOGETHER

Michigan's economic activities have changed over time. They have changed because of scarcity problems. They have changed because people's wants have changed. They have changed because people have had new ideas for goods. Wind farms and the manufacturing of wind turbines and wind turbine parts are

examples of a new change. What about the future? What new economic activities will there be in Michigan? What will be some new goods that will be produced? Who knows?? You may be the one to work in a new economic activity? Or, you may be the one to invent a new product!

Section Project

You have learned about a lot of agricultural products Michigan grows. These include blueberries, apples, cherries, corn, potatoes and celery. You also know that Michigan has a lot of natural resources like fish, trees, minerals and water. Pick one of these agricultural products or natural resources and invent a new product! Then, create an advertisement or commercial to encourage people to buy it. For example, you could invent blueberry-flavored gum! But you'll be able to think of something way more creative!