Sample Big Question Inquiry Unit

Grade: 6  
Standard: 7/Production, Distribution, and Consumption

Big Question: How has technology affected Minnesota’s economy?

Goals: The students will be able to understand how technology plays a role in Minnesota’s economy.

The students will be able to demonstrate technology and how it is used in a business.

The students will be able to demonstrate knowledge on how technology has shown negative impact on the economy.

Inquiry Questions: How do we use technology in economics?  
How has technology increased the speed in which we do things in business?  
What kind of technology would you develop to help the economy?  
Overall, do you believe technology is good or bad for the economy?

Resources: 6th grade United States and Canada textbook  
Internet (Google, Star Track)  
Newspaper (Business and Local section)  
Almanacs
Lesson 1

Objectives: The students will be able to describe what consists of Minnesota’s economy. The students will be able to identify some technology that is used in today’s economy.

Materials: Learning about technology in the economy worksheet, pencil, computer lab

Procedure: For students to understand how technology is used in today’s economy, they need to understand first what the economy is. This will be an I-search to help the students not only research about the economy but also use technology (Internet, computers) to find answers to their inquiry.

First the students will be taken down to the computer lab to conduct an I-search study on Minnesota’s economy. They will each individually be given a worksheet to fill out as the conduct their search (see attached worksheet). The teacher will explain that they should use the Google search engine to find answers to their inquiry. Each student must do this individually so each gets their own sense of what economy is and what technology is used in the economy. The teacher will encourage the students to expand their search and find more than just one working definition for economy and to come up with a list of at least 5 different types of technology that is useful in today’s economy. (40 min)

The teacher will take the students back to classroom for an informal discussion of their findings. The teacher will list technologies found on the whiteboard and ask the students questions like “How do you think this technology is used?” “Why do you think that this technology was first developed?” The teacher will use this as a forum to gain a base of knowledge regarding economy and technology. (20 minutes)
Learning about technology in the economy

Based on your internet search, what is your definition of the economy?

Compile a list of technology that you have found in your search that is used in today’s economy?

Out of the above list, pick out ONE technology and describe how it is used in today’s economy.
Lesson 2

Objectives: The students will identify technology used in today’s local (Minnesota) economy.

Materials: Business section of Minneapolis Star Tribune, Pioneer Press, Duluth News Tribune, and Rochester Post, notebook, pencil, poster board, markers

Procedure: Now that the students have developed a knowledge base in technology and the economy, we will narrow it down to how technology affects Minnesota’s local economy.

First the teacher will separate the students into groups of four. Then the teacher will explain to the students that they will be conducting research on Minnesota’s economy and the technology used in it by looking through the business section of 4 different Minnesota Newspapers. (10 min)

The students will then go to their groups and start searching through the business section writing notes in their notebook about technology and the Minnesota economy. The teacher will tell the students that will need to explain, as a group, what they found interesting about technology and the Minnesota economy. The teacher will challenge the students to find as much information as they can so they can adequately explain to other students technology works in Minnesota’s economy. (25 min)

The teacher will then have the students report their findings to the rest of the class. The teacher will ask questions like “Was most to the information you found similar to that of what you found on the internet yesterday?” “What differences was there in information between the different newspapers?” Then, as a class, the students will generate a list of technologies that were found to be used in Minnesota’s economy and the list will be written on a posterboard by the teacher and hung on the wall as a reminder to students of the technology used in the economy. (20 min)

The teacher will then have the students write a short self-reflection on what they learned about technology in Minnesota’s economy. The reflection should be a paragraph long, and outlines what they know now about technology in the economy that they didn’t know before. (10 min)
Lesson 3

Objectives: The students will be able to demonstrate knowledge of the history of technology in the Minnesota economy.

Materials: Computer lab, printer

Procedure: Now that the students have knowledge on technology in Minnesota’s economy, we will look at how the history of technology in economy and how it has changed over time.

First, the teacher will take the students to the computer lab to conduct more research on technology in Minnesota’s economy. The teacher will instruct the students to go startrack.com. Once the students are on star track, they will have to type in the pin number given by their teacher (e.g. 765423). The students will then follow the online instructions and web sites to go to. After each track, the students must answer the questions asked and print them out. There will be a total of four tracks to search and complete. The tracks have been pre-setup by the teacher and goes through technology used in the early 1900’s, mid 1900’, late 1900’, and the 21st century. The purpose of this lesson is for the students to compile enough information to create a timeline of the history of technology in Minnesota’s economy. (45 min)

The teacher will then take the students back to the classroom to discuss their findings. The teacher will ask questions like “How are things different today than from the early 1900’s?” “Has more advanced technology improved how things are done in today’s economy?” The purpose of this discussion is to get the students to think more deeply about the technology used in the economy. It is also to compare findings and discuss similarities and differences in their findings. (15-20 min)
Lesson 4

**Objectives:** The students will create a timeline of representing the technology used throughout Minnesota’s history since 1900 in economics.

**Materials:** Poster board, markers, star track printouts

**Procedure:** The teacher will split the students up into groups of 5 to create a timeline of the history of technology. The teacher will tell the students to use their star track printouts from the day before to use as a reference to their timeline. Then, on a poster board, each group will create a timeline of the technology used in Minnesota’s history. The students will draw a symbol for each technology used rather than writing the word on their timeline. The timeline is expected to be colorful and pertain to their findings on star track. (35 min)

After the students are finished with creating their timeline, they will present their timeline to their fellow classmates. They will explain the symbols they drew and what they stand for. Then, they will field questions from their classmates about their timeline. Each group is required to ask one question regarding their timeline on technology in economics. This is to foster deeper thinking towards technology and how it has changed within the economy over the years. The teacher will ask questions like “What are some positive/negative impacts that changing technology has had over the years?” “Do you believe that Minnesota should have done something different regarding their technology use in the economy?” Finally, each timeline will be hung up by the teacher on each wall of the room (2 will be on one wall). (20 min)
Lesson 5 (Culminating Activity)
*Note: This will be a lesson that covers 2 days

Objectives: The students will create their own hypothetical technology that they believe would be useful in Minnesota’s economy.

The students will present their technology to the classroom and be able to explain rationale for their invented technology.

The students will create a visual medium to advertise their technology.

Materials: Poster board, markers

Procedure (Day 1): The teacher will divide the students up into their timeline groups. The students will then be asked, using their knowledge on technology and how it is used in today’s Minnesota economy, to create their own technology they think would be useful to Minnesota’s economy. After brainstorming ideas, the groups will narrow their thoughts to one technology they would like to create. Then, they will be asked to create an advertisement on poster board that promotes their created technology. The teacher will encourage the students to be creative and think about what can be useful in today’s economy. Tell the students to think of themselves as inventors and to cover ground we discussed as a class this past week regarding technology. (60 min)

(Day 2): The teacher will give the students 10-15 minutes to finish up their advertisements and discuss how they want to go about presenting their product. Each member in the group is required to speak and give information regarding their technology. Each group will have 5-10 minutes to present and answer questions regarding their technology. All groups are required to ask at least 1 question about the technology that is being presented. When all the groups have finished presenting, the teacher will hang up each advertisement next to the groups timeline to show how the class has demonstrated knowledge acquisition of technology and its use/effects in the Minnesota economy. (45-60 min)
# Collaborative Work Skills: My Technology in Minnesota's Economy

Teacher Name: Mr. Fiedeldy

Student Name: ______________________________________

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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<tbody>
<tr>
<td><strong>Quality of Work</strong></td>
<td>Provides work of the highest quality.</td>
<td>Provides high quality work.</td>
<td>Provides work that has good quality and shows effort and participation.</td>
<td>Provides work of marginal quality with errors.</td>
</tr>
<tr>
<td><strong>Preparedness</strong></td>
<td>Group was well prepared and presented all necessary requirements.</td>
<td>Group was prepared and presented most or all requirements.</td>
<td>Group needs was prepared but missed one requirement.</td>
<td>Group was not prepared and was missing multiple requirements of the task.</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td>Every group member participated and played a role in the development of technology and subsequent presentation.</td>
<td>Most group members participated and played a role in the development of technology and subsequent presentation.</td>
<td>Only some of the group members worked on the development of the technology and only some of the group members did the presenting.</td>
<td>Only 2-3 members developed the technology and presented it to the class.</td>
</tr>
<tr>
<td><strong>Neatness</strong></td>
<td>Group prepared a very neat advertisement that was clear and easy to read.</td>
<td>Group prepared a neat advertisement and put good effort towards making it legible.</td>
<td>Group prepared a marginally neat advertisement with little focus on legibility.</td>
<td>Group prepared a very sloppy advertisement that shows no focus on neatness.</td>
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