

## Instructional Recipe

# What will I invent to have a secure future in Texas?

4<sup>th</sup> Grade, Social Studies

### Step 1 – Ask

**Objectives:** Students will explain how developments in transportation and communication have influenced economic activities in Texas.

#### Introduction:



*Transporting Cattle by Ship.* The Portal to Texas History.  
<http://texashistory.unt.edu/ark:/67531/metaph43333/>. Accessed July 28, 2009.

#### Ask:

- ★ How has the transportation of cattle changed since this picture taken after 1939?
- ★ How has transportation changed from 1901 to today?
- ★ How have those changes affected trade with the United States and across the globe?
- ★ What could you invent to improve transportation of cattle?

#### Vocabulary:

- ★ **communication** – a network for sending messages or transporting troops or supplies
- ★ **economic activity** – production and distribution of goods and services
- ★ **industry** – a general business activity, trade or manufacture
- ★ **transportation** – the business of transporting goods, people, etc.

#### TEKS:

**(4.13E)** explain how developments in transportation and communication have influenced economic activities in Texas.  
**(4.5A)** identify the impact of various issues and events on life in Texas such as urbanization, increased use of oil and gas, and the growth of aerospace and other technology industries.

**(4.22C)** organize and interpret information in outlines, reports, databases, and visuals including graphs, charts, timelines and maps.

**(4.23D)** create written and visual material such as journal entries, reports, graphic organizers, outlines, and bibliographies.

#### Technology Application TEKS:

**4A** Apply appropriate electronic search strategies in the acquisition of information including keyword and Boolean search strategies.

**6A** Apply critical analysis to resolve information conflicts and validate information

**6B** Determine the success of strategies used to acquire electronic information

**6C** Determine usefulness and appropriateness of digital information

**7A** Use software programs with audio, video, and graphics to enhance learning experiences

**7B** Use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia

**7C** Use a variety of data types including text, graphics, digital audio, and video

**10A** Use font attributes, color, white space, and graphics to ensure that products are appropriate for the defined audience

**10B** Use font attributes, color, white space, and graphics to ensure that products are appropriate for the communication media including multimedia screen displays, Internet documents, and printed material

**11A** Publish information in a variety of media including, but not limited to, printed copy, monitor display, Internet documents and video

**11B** Use presentation software to communicate with specific audiences

## Step 2 – Investigate

Search the Texas Heritage Online Resources and the K-12 Databases for articles on Texas.

### Texas Heritage Online Resources:

- ★ Texas Historical Foundation. *Heritage, Volume 15, Number 02, Spring 1997*. Austin, Texas. The Portal to Texas History. <http://texashistory.unt.edu/ark:/67531/metaph45402/>. Accessed July 28, 2009.
- ★ Texas Historical Foundation. *Heritage, Volume 13, Number 02, Spring 1995*. Austin, Texas. The Portal to Texas History. <http://texashistory.unt.edu/ark:/67531/metaph45410/>. Accessed July 28, 2009.
- ★ Texas Historical Foundation. *Heritage, Spring 2005*. Austin, Texas. The Portal to Texas History. <http://texashistory.unt.edu/ark:/67531/metaph45370/>. Accessed July 28, 2009.

### EBSCO Resources:

- ★ A Battle for Military Bucks. By: Donnelly, Sally B.. *Time*, 7/31/2006, Vol. 168 Issue 5, p16-17, 2p, 2 color; Reading Level (Lexile): 1380; **(AN 21682001)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=21682001&site=srck5-live>>
- ★ Competing With India and China. By: Newman, Richard J.. *U.S. News & World Report*, 10/10/2005, Vol. 139 Issue 13, pEE18-EE18, 1p, 1 color; Reading Level (Lexile): 810; **(AN 18418798)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=18418798&site=srck5-live>>
- ★ One Chip, Two Chips. By: Golden, Frederic. *Time*, 10/23/2000, Vol. 156 Issue 17, p78, 2/3p, 4 color; Reading Level (Lexile): 1190; **(AN 3656274)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=3656274&site=srck5-live>>
- ★ Rethinking Refuges? By: Milius, Susan. *Science News*, 5/15/2004, Vol. 165 Issue 20, p310-310, 1/2p; Reading Level (Lexile): 1360; **(AN 13126241)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=13126241&site=srck5-live>>
- ★ RISING power. By: Fairley, Peter. *Discover*, Jun2009, Vol. 30 Issue 6, p44-48, 5p, 2 color; Reading Level (Lexile): 1310; **(AN 39787802)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=39787802&site=srck5-live>>
- ★ Shielding the coast: Galveston oceanographer says his proposed wall and gate system could repel most surges By: Berger, Eric. *Houston Chronicle (TX)*, 04/08/2009; **(AN 2W62W61395056866)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=nfh&AN=2W62W61395056866&site=srck5-live>>
- ★ The little engines that can't. By: Levinson, M.; Annin, P.. *Newsweek*, 1/27/92, Vol. 119 Issue 4, p46, 1p, 1 color; Reading Level (Lexile): 1050; **(AN 9201271337)**  
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=9201271337&site=srck5-live>>

### Additional Websites:

- ★ Texas. Office of Governor Rick Perry. "Governor Rick Perry Announces Strategic Plan to Create Jobs.: Press Release. 20 Oct. 2004. 28 Jul 2009  
<<http://governor.state.tx.us/news/press-release/4530/>>



### Step 3 – Create

Students can work individually or with partners to create a chart that organizes the information they learned about Texas. Here are some suggested topics:

🔗 Technology Link – Use Microsoft Excel or a table in Microsoft Word to organize information.

Allow students to share and discuss their concept maps as an entire class.

<b>Economic Activity</b>	<b>Effects on Transportation</b>	<b>Effects on Communication</b>
<b>Advanced technology &amp; manufacturing</b>		
<b>Energy</b>		
<b>Aerospace and defense</b>		
<b>Biotechnology and life sciences</b>		
<b>Information technology and computer technology</b>		
<b>Petroleum refining and chemical products</b>		
<b>Service industries such as banking, tourism,</b>		



#### Step 4 – Discuss

Students may choose to complete one of the following projects:

- ★ Choose one industry that affects transportation and/or communication in Texas. **Write a news story to forecast what will happen to this industry in the next 30 years in Texas, the United States and the world.** Will the industry grow or change the Texas economy in the next 30 years?
- ★ **Design a brochure to sell a new product or service.** Your product should improve one of the industries that affect transportation and/or communication in Texas. Explain how this new product or service will impact the United States and the world.
- ★ **Create a map of Texas and research report to show where one industry will grow in the next 30 years.** Be sure to include an explanation of where the industry began, how it grew, and why you think it will grow in Texas, the United States, and the world.

🔗 Technology Link – Use a word processing or desktop publishing program to write your news story, brochure or map explanation. Use the EBSCO image collection to locate graphics about Texas.



#### Step 5 – Reflect

Allow students to present their projects to the rest of the class. Use the following suggested rubric to assess the students' work. Make sure that the students are familiar with the rubric *before* they begin creating their project. They should refer to the rubric repeatedly to monitor their progress in creating their project.

🔗 Technology Link: You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

## Creating a News Story: Transportation and Communication Industries

Teacher Name: \_\_\_\_\_

Student/Group Name: \_\_\_\_\_

CATEGORY	4	3	2	1
Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Stays on Topic	Stays on topic all (100%) of the time.	Stays on topic most (99-90%) of the time.	Stays on topic some (89%-75%) of the time.	It was hard to tell what the topic was.
Content	Shows a full understanding of the topic.	Shows a good understanding of the topic.	Shows a good understanding of parts of the topic.	Does not seem to understand the topic very well.
Time-Limit	Presentation is 5-6 minutes long.	Presentation is 4 minutes long.	Presentation is 3 minutes long.	Presentation is less than 3 minutes OR more than 6 minutes.

## Making A Brochure : Transportation and Communication Industries

Teacher Name: \_\_\_\_\_

Student/Group Name: \_\_\_\_\_

CATEGORY	4	3	2	1
Knowledge Gained	All students in the group can accurately answer all questions related to facts in the brochure and to technical processes used to create the brochure.	All students in the group can accurately answer most questions related to facts in the brochure and to technical processes used to create the brochure.	Most students in the group can accurately answer most questions related to facts in the brochure and to technical processes used to create the brochure.	Several students in the group appear to have little knowledge about the facts or technical processes used in the brochure.
Content - Accuracy	All facts in the brochure are accurate.	99-90% of the facts in the brochure are accurate.	89-80% of the facts in the brochure are accurate.	Fewer than 80% of the facts in the brochure are accurate.
Attractiveness & Organization	The brochure has exceptionally attractive formatting and well-organized information.	The brochure has attractive formatting and well-organized information.	The brochure has well-organized information.	The brochure's formatting and organization of material are confusing to the reader.
Writing - Organization	Each section in the brochure has a clear beginning, middle, and end.	Almost all sections of the brochure have a clear beginning, middle and end.	Most sections of the brochure have a clear beginning, middle and end.	Less than half of the sections of the brochure have a clear beginning, middle and end.

## Map & Research Report: Transportation and Communication Industries

Teacher Name: \_\_\_\_\_

Student Name: \_\_\_\_\_

CATEGORY	4	3	2	1
Quality of Information	Information clearly relates to the main topic. It includes several supporting details and/or examples.	Information clearly relates to the main topic. It provides 1-2 supporting details and/or examples.	Information clearly relates to the main topic. No details and/or examples are given.	Information has little or nothing to do with the main topic.
Organization	Information is very organized with well-constructed paragraphs and subheadings.	Information is organized with well-constructed paragraphs.	Information is organized, but paragraphs are not well-constructed.	The information appears to be disorganized. 8)
Internet Use	Successfully uses suggested internet links to find information and navigates within these sites easily without assistance.	Usually able to use suggested internet links to find information and navigates within these sites easily without assistance.	Occasionally able to use suggested internet links to find information and navigates within these sites easily without assistance.	Needs assistance or supervision to use suggested internet links and/or to navigate within these sites.
Map & Image	Appropriate image is placed in accurate region of Texas.	Image is inaccurately placed on map.	Inappropriate image is placed inaccurately on map.	No image is placed on map.