

Chain of Events

Overview:

Students sequence events that result in pipeline corrosion.

Objectives:

The students will:

- sequence events that result in pipeline corrosion; and
- write an essay that uses transitional words to connect ideas.

Materials:

- TEMPLATE: “Cause and Effect Cards”
- STUDENT WORKSHEET: “Pipeline Corrosion: Chain of Events”

Activity Preparation:

Cut out cards on TEMPLATE: “Cause and Effect Cards.”

Activity Procedure:

1. Ask students to list some of the effects of the aurora from prior learning (*possible responses: overheated transformers, power outages, corrosion of the pipeline, radio interference*).
2. Randomly distribute cause and effect cards and explain the cards have events on them that should be in a certain order. Instruct students to hold their cards so others can see them then stand in order of events.
3. On the board, record transition words. Explain these are words or phrases that can be used to link ideas.

Transition words that show sequence, or give order to ideas:

Examples: first, second, third, then, next, after, last, before, finally

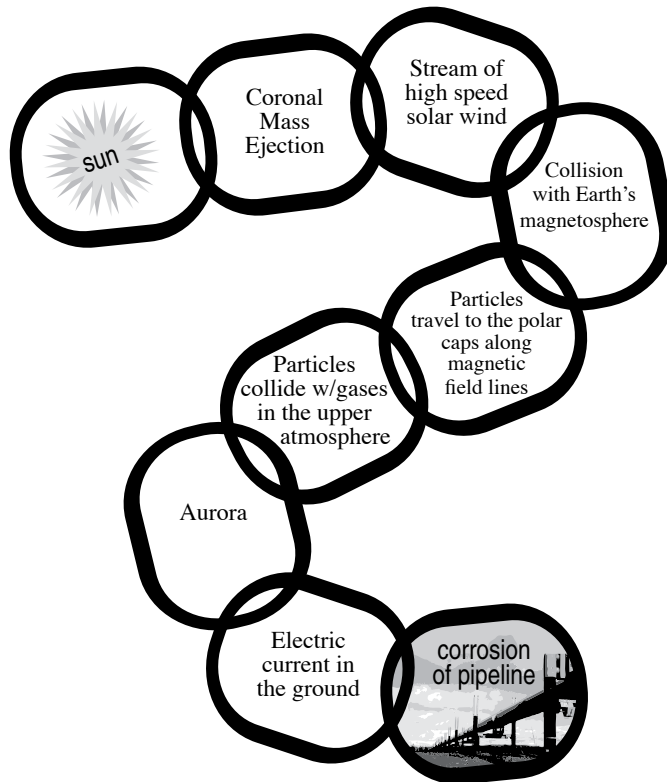
Transition words that show cause and effect:

Examples: as a result, because, consequently, due to, leads to, therefore, thus

4. Instruct each student who is holding a card to describe the location of his or her event using a transitional word or phrase.
5. Distribute STUDENT WORKSHEET: “Pipeline Corrosion: Chain of Events.” Review the directions then instruct students to record the list of transition words in the appropriate boxes on the worksheet.

Chain of Events

Answers to Student Worksheet:



Transition words that show sequence, or order to ideas:

Examples: first, second, third, then, next, after, last, before, finally

Transition words that show cause and effect:

Examples: as a result, because, consequently, due to, leads to, therefore, thus

The student essay should reflect that the student understands the chronological order of events and maintains the unity of the composition with a variety of transitional words and phrases.

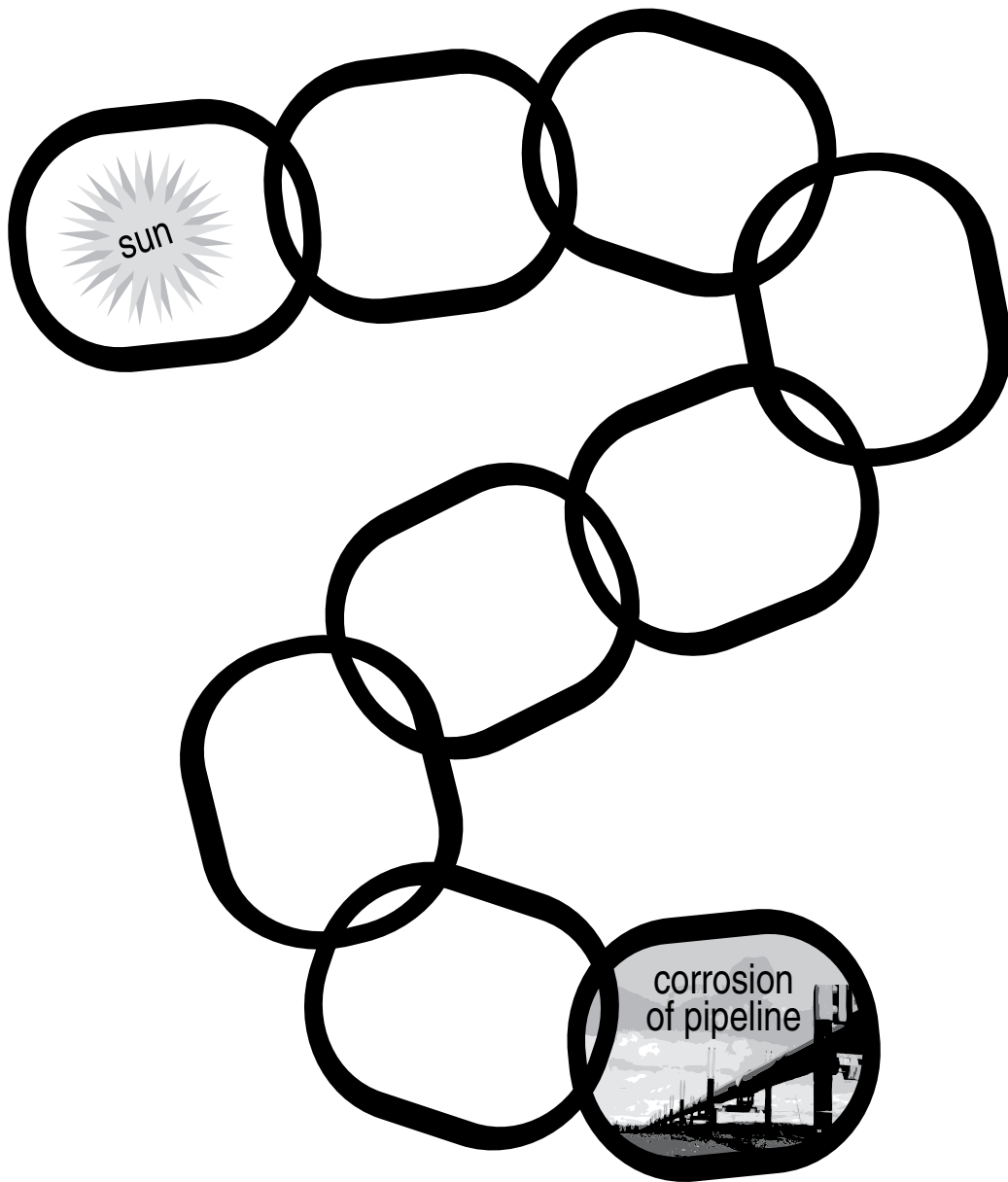
Cause and Effect Cards

<p style="text-align: center;">sun</p>	<p style="text-align: center;">coronal mass ejection</p>	<p style="text-align: center;">stream of high speed solar wind</p>
<p style="text-align: center;">collision with Earth's magnetosphere</p>	<p style="text-align: center;">aurora</p>	<p style="text-align: center;">particles travel to the polar caps along magnetic field lines</p>
<p style="text-align: center;">particles collide with gases in the upper atmosphere</p>	<p style="text-align: center;">electric current in the ground</p>	<p style="text-align: center;">corrosion of pipeline</p>

Pipeline Corrosion: Chain of Events

Directions: Sequence the chain of events that led to the corrosion of the pipeline.

Events						
particles collide with gases in the upper atmosphere	electric current in the ground	stream of high speed solar wind	aurora	particles travel to polar caps along magnetic field lines	coronal mass ejection	collision with Earth's magnetosphere



Pipeline Corrosion: Chain of Events

Use the previous information from the chain of events sequence to write an organized essay that includes transition words. Before writing the essay, create a list of transition words. Transition words are very helpful for bringing ideas together. Use three or four transition words in the essay.

Transition words that show sequence or order to ideas:	Transition words that show cause and effect:
<i>Example: first</i>	<i>Example: as a result</i>

Pipeline Corrosion: Chain of Events Essay
