

MY COMMUNITY AND THE WORLD

What's the Connection?



Overview Students map the sources of everyday needs and destinations for wastes. Use this activity to generate questions and begin an exploration of the Ecological Footprint, energy, life cycles, or food systems. This document serves as a hands-on introduction to the systems thinking concepts of human-environmental interdependence and local-global connections.

What should young people do with their lives today? Many things, obviously. But the most daring thing is to create stable communities in which the terrible disease of loneliness can be cured.

Kurt Vonnegut (1981)

Topics / Concepts

community, product life cycle, waste, maps

Subject Areas

geography, social studies, environmental science

Materials and Preparation

Cut out the statement cards provided.

Post a map of the local region or city, as well as a global map.

Cut out lengths of yarn. Students will use yarn to connect their local community to global locations where materials come from, or where wastes go, as indicated on the prompts.

Cut out the strips for the timeline activity.

Create a twenty-foot timeline on the floor using masking tape. Scale: 1 feet = 10 years. (A twenty foot timeline thus represents 200 years.) Mark the middle of the timeline 'now', with 100 years in the past and 100 years in the future as shown in the resources section.

Activity C integrates WeExplore, an online learning environment where students can share field notes, videos, maps, websites, and photos in an inquiry-based storyline. WeExplore requires an account, but is free to use.

ACTIVITY A: MAKING CONNECTIONS: MY COMMUNITY AND THE WORLD

In this activity your students will complete unfinished statements about where their community's needs come from, and where wastes go. Statements are written on strips to cut out and attach to a map.

1. Copy and cut out each of the cards on the following pages. Each statement begins with a prompt about an everyday need in your community. Shaded statements ask students to identify the source of materials for these needs (the "inputs"); unshaded statements ask students to locate where wastes or other "outputs" go. Students should complete each statement to the best of their abilities.
2. You will need to have a large world map where students can attach their statement. Using a piece

of yarn or string, your students will connect their local community to the place on the global map they identified in their completed statement. For example, if they answered that the granola bars in the cafeteria comes from Venezuela, they would connect the local community (the location of the cafeteria) to Venezuela. (If no wall maps are available, draw connections on the map below.) Then they will use a paperclip to attach their statement to the yarn so that others can read it.

3. Review all connections and statements as a class and discuss these questions:

Questions for Reflection

- » *What statements were easiest to answer?*
- » *Which were most difficult?*
- » *Give an example of a connection you had not considered before.*
- » *Did anything surprise you?*

Differentiation/Adaptations:

- » *Allow students preparation time for their cards. Allow ELLs to write down their sentence before everyone goes to share.*
- » *Allow students from other cultures to talk about the industry and exports that their home culture produces. Diverse perspectives will strengthen this activity.*
- » *Use the frame sentences as a way to help practice specific parts of speech.*

ACTIVITY B: LIFE STORY OF A POTATO CHIP

Students use a map and “live” timeline to explore how an everyday item (potato chips) has connections across time and place. Instruct students to read the directions in the Student Pages and label the timeline and the map with each stage of the life story of the potato chip. Alternatively, you can complete the activity as a class creating a life size timeline. After the activity is complete direct students to respond to the reflection questions found at the end of this activity.

1. Choose five students to come up and stand by the timeline on the floor. Give each student one timeline strip. Have each student read their strip and then stand on the appropriate place on the timeline as the students in their seats mark the appropriate place on their page. Note that the times for stages 4-6 are off the timeline (250 years; 400 million years). Have students estimate these, asking, “How far do you think that would be?”
2. Students at their seats should follow along and mark the appropriate places on their timelines.
3. Project the “Life story of a Potato Chip Answer Key” to review the results. (Cover the map at the bottom.) Students at their seats should check their work with a partner. Solicit students’ input to adjust students on the ‘live’ timeline. For stages 3-5, tell students how far they would be off the timeline, showing the calculations on the board if desired. If 1 foot = ten years, then Stages 3-4: 400 million years = 40 million feet, or 7,575.76 miles and Stage 5: 250 years = 25 feet.

Questions for Reflection

- » *In your own words or with pictures describe the process required for a bag of potato chips to get into your hands. Answers will vary.*
- » *What resources are used for this process? seeds, water, soil, oil/petroleum to make the bag, to produce the product in a factory, and to transport the product,*
- » *What wastes are created from this process? pollution from factory & transportation, chip bag*
- » *Why might it be important to consider the life story of the products we use? What does the story help us understand? Answers will vary. In general, though, understanding the life story helps us to see the bigger pictures of how our everyday lives are connected to the rest of the world and to begin to understand the implications of these kinds of connections.*
- » *What are the consequences for the environment? Answers will vary. The story of this potato chip is quite elaborate and involves many countries and uses many resources which in turn creates more waste and pollution.*
- » *Rewrite the story of the potato chip to reduce the environmental impact. Answers will vary.*

Differentiation/Adaptations:

- » *Complete this activity with the entire class to include any low-proficiency students in the class.*
- » *Complete this activity as a jigsaw where ELLs and other low-proficiency students can participate in groups that eventually come together as an entire class.*
- » *Give a word bank or frame sentences to complete the reflection questions so that vocabulary does not inhibit comprehension.*

ACTIVITY C: WEEXPLORE

In this concluding activity students will research the lifecycle of a product they use in their everyday lives creating a time line and graphic to show from where their product came, materials needed to produce the product, and the products end or disposal. Students will share their research by creating a storyline using WeExplore (<http://we-explore.com>).

Differentiation/Adaptations:

- » *Complete the activity in groups.*
- » *Use products with more advanced or less advanced lifecycles so that there are more or less steps involved in the research and presentation.*
- » *Create a teacher management account for WeExplore at <http://tmedialab.com/basecamp>. Follow the instructions there for setting up a class and adding your students.*
- » *Once students are logged in to WeExplore at <http://we-explore.com>, they can create storylines individually or in groups..*

BREAKDOWN OF TIME NEEDED PER ACTIVITY

<i>Activity</i>	<i>Description</i>	<i>Time Estimate</i>
A. Making Connections: My Community and the World	Using a regional and global map, students locate the source of materials for everyday needs, as well as the final destination of wastes.	30 minutes
B. Life Cycle of a Potato Chip	Students use a map and “live” timeline to explore how an everyday item (potato chips) has connections across time and place.	45 minutes
C. WeExplore	Students will create their own life story of a product through their own research and will then share their story with others using WeExplore (http://we-explore.com).	75 minutes

OUTCOME AND ASSESSMENT

<i>Outcomes</i>	<i>Assessment</i>
<p>Students will understand that:</p> <ul style="list-style-type: none"> › My everyday needs and activities connect me to the larger world. › The environment is the source of all we use and the final receptacle (sink) for all wastes. › Wastes do not disappear. (“There is no away.”) 	<p>Students demonstrate their knowledge as they:</p> <ul style="list-style-type: none"> › Locate and map local-global connections involving everyday needs and activities. (Activity A, B, C) › Describe how wastes travel, but do not disappear. (Activity A, B, C)

ALIGNMENT TO STANDARDS

Common Core English Language Arts Anchor Standards

ELA Reading Grades 6-12

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. (Activity B)

Research to Build and Present Knowledge

9. Draw evidence from literary or informational texts to support analysis, reflection, and research. (Activity C)

Speaking and Listening Grades 6-12

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively. (Activity A, C)

2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally. (Activity A, C)

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task purpose and audience. (Activity C)

Geography Standards

Environment and Society

The geographically informed person knows and understands:

Standard 14: How human actions modify the physical environment. (Activity A, B)

Standard 16: The changes that occur in the meaning, use, distribution, and importance of resources (Activity A, B)

The World in Spatial Terms

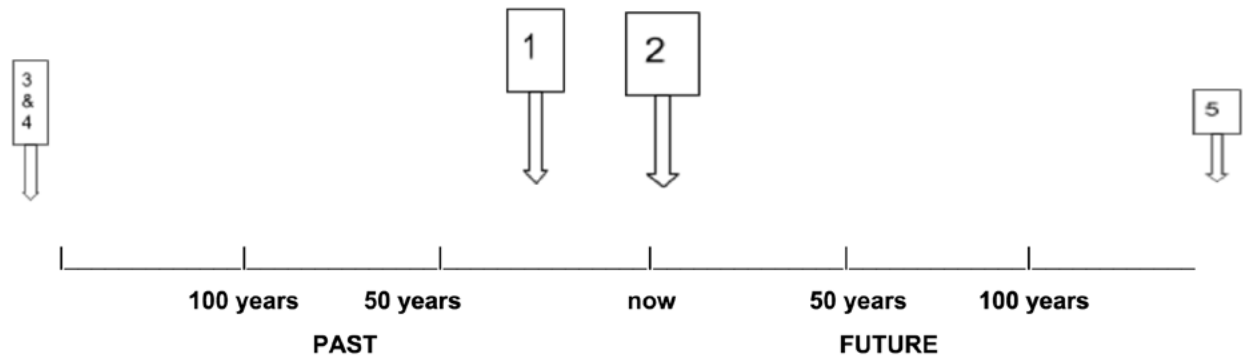
Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective. (Activity A)

ADDITIONAL RESOURCES

ACTIVITY A:



ACTIVITY B:



The gas at my local station comes from _____

When the rainwater runs off my driveway, it flows into
_____ and then into _____

The coffee or tea or cocoa at my favorite café comes from

The fuel source for my electricity comes from

The emissions from our school or community's energy use go

The water in my school comes from _____

After being treated, the sewage from our school goes

When our school upgrades its computers, the old ones go

The milk in my school comes from _____

Food waste from our school goes _____

1. GROWING THE POTATO: The potato, a russet Burbank, was grown in **Idaho**. The potato was harvested three months ago, and it grew for five months before that, so the potato 'was born' about eight months ago.

2. MANUFACTURING: The potatoes were taken to a factory in **Ohio** about two months ago. (The potatoes were fried in corn oil made from last fall's crop from Iowa.) Salt for the potatoes came from a mine in Windsor, Ontario (Canada).

3. PACKAGING: The potato chip bag is made from polyethylene, a plastic made from petroleum oil that was imported from **Venezuela**. This oil was formed from the decayed remains of animals and plants that were alive about 400 million years ago.

4. TRANSPORTATION: The potato chips came by truck from the factory to the store. The fuel for the truck was made from petroleum oil from **Saudi Arabia**. The oil was formed from the decayed remains of plants and animals that were alive about 400 million years ago.

5. DISPOSAL OF THE BAG: The potato chip bag will go into a landfill in **your community**. There, it will take at least 250 years to break into little pieces.

My Community and the World: What's the Connection?

Student Pages

Activity A) Making Connections: My Community and the World

In this activity your teacher will provide you with statements which you will complete and then cut out and attach to a map. These statements will be about where your community's needs come from, and where wastes go. Afterward you will participate in a class discussion about this activity. To prepare for the discussion answer the following questions.

- What statements were easiest to answer? Why?
- Which were most difficult? Why?
- Give an example of a connection you had not considered before.
- Did anything surprise you?

Activity B) Life Story of a Potato Chip

1. Read the stages of the life story of the potato chips. Each stage tells when and where it took place. (The time is underlined, and the **place is bolded**.)

2. On the timeline below, write the number of each stage to show when it took place. (Hint: You may have to extend the timeline.) For stage 2, base your response on the first sentence.

3. Then, write the number of each stage on the map to show **where** it took place. For Stage 2, base your response on the first sentence.

Stages in the life story of a bag of potato chips:

1. GROWING THE POTATO: The potato, a russet Burbank, was grown in **Idaho**. The potato was harvested three months ago, and it grew for five months before that, so the potato 'was born' about eight months ago.

2. MANUFACTURING: The potatoes were taken to a factory in **Ohio** about two months ago. The potatoes were fried in corn oil made from last fall's crop from Iowa. Salt for the potatoes came from a mine in **Windsor, Ontario (Canada)**.

3. PACKAGING: The potato chip bag is made from polyethylene, a plastic made from petroleum oil that was imported from **Venezuela**. This oil was formed from the decayed remains of animals and plants that were alive about 400 million years ago.

4. TRANSPORTATION: The potato chips came by truck from the factory to the store. The truck was assembled in a factory in Michigan, with parts manufacturing in China and Mexico. The fuel for the truck was made from petroleum oil from **Saudi Arabia**. The oil was formed from the decayed remains of plants and animals that were alive about 400 million years ago.

5. DISPOSAL OF THE BAG: The potato chip bag will go into a landfill in **your community**. There, it will take at least 250 years to break into little pieces. It will not decompose.

Timeline:



Reflection Questions:

1. In your own words or with pictures describe the process required for a bag of potato chips to get into your hands.

2. What natural resources are used for this process?

3. What wastes are created from this process?

4. Why might it be important to consider the life story of the products we use? What does the story help us understand?

5. What are the consequences for the environment?

6. Rewrite the story of the potato chip to reduce the environmental impact.

Activity C) WeExplore

Your instructor will explain WeExplore to you and how you can complete this activity.

Now it's your turn to research the life story of a product you use.

- 1) Choose a product to research. Think of something you use in your everyday life (food products, personal care products, clothing).

- 2) Create a timeline and graphic to show from where your product came, materials needed to produce the product, and the wastes produced throughout the process.

- 3) Create a storyline using a combination of field notes, maps, photos, and videos.

- 4) Post your story on WeExplore.

- 5) View and respond to at least three of your classmate's WeExplore projects.