Apple Game: Materials and Set Up

NOTE: Materials listed in bold are those that are not included in this guide

All Materials

- Station signs (8.5” X 11”) for each station (7 total)
- Station cards for apples at all stations (28 total)
  - Print each state's cards on a different color paper to make it easy for players to get their cards at each station. For example, print all New York cards on green paper or mount the cards on green paper.
- 4 whole apples
- Picture of apples wrapped on tray
- Picture of applesauce in bowl
- Picture of apple sauce in jar
- Picture of Pop-Tarts in box
- Picture of single apple Pop-Tart
- Sand in cup
- 1 cup of soil with balls of aluminum foil buried in it
- 1 cup with 4 paper or pipe cleaner trees (you need to make these)
- Small bottle of motor oil
- Clear plastic cups
- 2 happy faces
- 2 neutral faces
- 2 sad faces
- 1 question mark
- Scarf
- 42 petroleum cards
- 40 pollution cards
- 1 sand card
- 4 tree cards
- 3 city dump cards
- 6 recycle cards
- 3 mineral cards
Apple Game: Materials and Set Up (continued)

Set up each station with the materials below

Production:
- Production Station sign (hung on wall)
- Production Station cards for each state's apple
- 4 whole apples
- 4 petroleum cards
- 4 pollution cards

Distribution:
- Distribution Station sign (hung on wall)
- Distribution Station cards for each state's apple
- 10 petroleum cards
- 10 pollution cards

Processing:
- Processing Station sign (hung on wall)
- Processing Station cards for each state's apple
- Picture of applesauce in bowl
- Picture of single apple Pop-Tart
- 6 petroleum cards
- 6 pollution cards

Packaging:
- Packing Station sign (hung on wall)
- Packing Station cards for each state's apple
- Picture of apple sauce in jar
- Picture of Pop-Tarts in box
- Picture of apples wrapped on tray
- Sand in cup
- Soil with balls of foil buried in it
- Cup with 4 pipe cleaner trees
- Small bottle of motor oil
- 1 Sand card
- 3 mineral cards

Packaging station (continued)
- 4 tree cards
- 12 petroleum cards
- 10 pollution cards
- Plastic cups

Purchasing:
- Purchasing Station sign (hung on wall)
- Purchasing Station cards for each state's apple
- 1 happy face card
- 1 question mark card
- 1 sad face card
- Scarf
- 1 petroleum card
- 1 pollution card

Consumption:
- Consumption Station sign (hung on wall)
- Consumption cards for each state's apple
- 1 happy face card
- 2 neutral face cards
- 1 sad face card

Waste Management:
- Waste Management sign (hung on wall)
- Waste Management cards for each state's apple
- 6 recycle cards
- 3 city dump cards
- 9 petroleum cards
- 9 pollution cards
Food Item Cards

Make one copy. Cut the images out. Attach the top image to the top left of a sheet of chart paper and the bottom image to the bottom right, leaving space for campers to map the steps in between.
Food Item Cards

Make one copy. Cut the images out and attach the top image to the top of the chart paper and the bottom image at the bottom, leaving space for campers to map the steps in between.
**Food Item Cards**

Make one copy. Cut the images out and attach the top image to the top of the chart paper and the bottom image at the bottom, leaving space for campers to map the steps in between.
Food Item Cards

Make one copy. Cut the images out and attach the top image to the top of the chart paper and the bottom image at the bottom, leaving space for campers to map the steps in between.
Parts of Food System Cards (small)

Make 4 copies. Cut out the cards. Each small group should receive one set of cards.

- Production
- Distribution
- Processing
- Packaging
- Purchasing
- Consumption
Parts of Food System Cards (small)

Make 4 copies. Cut out the cards. Each small group should receive one set of cards.
**Apple Game: Overview**

The purpose of the Apple Game is to introduce campers to our food system. That is, to understand the interacting parts of the system that gets our food to us; and to also explore how the various choices along the way determine the healthfulness and environmental impact of the foods we eat. In the game, campers become apples from all over the country that travel through the seven steps of the food system. For this game, campers pretend they live in New York City. Below, we introduce you to these seven steps.

**Production** — This is where the story of food begins, with farmers growing the plants and raising the animals that we eat. The choices of what is grown and raised, and farmers’ practices determine the health and ecological impact of the production step.

**Distribution** — Many foods need to be transported at one or more points on their journey to us, such as from the farm to a cleaning facility, or to a factory for processing and packaging. All of the transportation throughout the system is represented in this step. How far, what type of vehicles (e.g. barge, train, truck, plane), and other factors determine the environmental impact of transporting our food. Since much of the transporting of food in the United States is by truck, this is the mode of transportation used in this game.

**Processing** — Some foods stay whole (just as they were grown as plants and animals) while other foods get processed. Sometimes this processing is minimal, such as peeling and cooking down an apple to make applesauce, and sometimes this processing is a lot, such as mixing an apple with many other ingredients to make an apple Pop-Tart. How much, and in what ways, foods are processed determine their healthfulness and environmental impact.

**Packaging** — Some foods, such as whole fruits and vegetables, do not need any packaging. Other foods need to be put into a package. Several different raw materials, are used to make food packages. What types, how much, and how many different raw materials are used determine the ecological impact of our food packages.

**Purchasing** — For many of us, the purchasing part of the system is where we first encounter food. We can get foods at places such as farmers markets that can help connect us to where and who produced our food. However, most Americans do the majority of their shopping at typical supermarkets. Supermarkets often disconnect us to the food system and all the steps food has to take before reaching supermarket shelves.

**Consumption** — This is where we can connect with the food, particularly if we prepare the food for ourselves. In this step, the food (and everything that happened to it along its journey) becomes part of us, as the saying goes, “we are what we eat!” Knowing about the journey of our food can help us determine the healthfulness and environmental impact of what we eat.

**Waste management** — When our leftover food or food packaging get thrown in the garbage, they break out of the cycle: those resources will go to a landfill, be incinerated, or go to other waste disposal systems in which they will not be used again. When leftover food (and sometimes even packages or utensils) are used for compost, they are fed back into the system and can help grow more food. Sometimes, we can return glass bottles and other packaging to the food manufacturer so they can be washed and used again. Some food packages can be recycled (be sure to know the recycling regulations where you live) and enables the resources to be used again.
Apple Game: Overview (continued)

Apple Game: Logistics of Game Play
Divide the group into four “teams” for each apple, or ask for four volunteers, and have these volunteers play the apples while everyone else watches. With younger children, adapt the game by having the group leader explain what happens to each apple instead of having players read the cards.

With older children you can have a deeper conversation about each station as you play the game or, at the end of the game, you can go back through and discuss each part of the food system in more detail.

Before game play:
1. Use the Apple Game: Materials and Set Up lesson resource sheet to gather all materials and set up the stations. Try to set up the stations all around the room starting with “Production” so that the “Waste Management” station completes the cycle and is close to the “Production” station.

2. Read through the Apple Game: Instructions lesson resource as well as all the apple cards, to become familiar with what happens at each station. Please note that the “apples” are given cards at each step in the food system. Depending on the card the apples receive, the apple will have to complete a specified number of laps around the room.

   Note: Remember to tell campers they are pretending they live in New York City for this game. Tell campers that New York state is well known for growing apples. Alternatively, the game could be adapted for another place and could use a different food.

Going deeper into the food system:
• Production: In the game, we keep the producing part of the system consistent for all the farms that grew the apples. For a more in depth conversation, you might want to have farms that use different growing techniques such as organic which builds soil and uses natural inputs versus “conventional” methods that rely heavily on external inputs such as chemical fertilizers and pesticides.

• Distribution: In the game, trucks transport the apples. You could discuss that barges (when they can be used) are more energy efficient, as are trains. Planes are the least energy efficient, and larger full trucks are more energy efficient than smaller trucks, especially when these trucks are not full. There is also lots of work being done to create food hubs and infrastructure to make food transportation more efficient (especially for small and mid-size farms). You could look up and discuss what is going on in your area.

• Processing: You might want to explain that some processing changes food minimally, such as changing the form of the food. Apple sauce, peanut butter, yogurt, grilled chicken breast, white rice, orange juice, and canned tomatoes are all examples of foods that have minimal processing. Whereas, foods made with many ingredients mixed together (particularly if the ingredients are not items we would have in our homes) become dramatically changed from their original form. These foods are overly processed food products that tend to have both a negative ecological impact and also have a negative health impact.

• Packaging: The game tends to make people think about the fact that every package comes from something that comes from the earth. This might be a great time to launch into exploring more about
Apple Game: Overview (continued)

how much food packaging waste we create and what we can do to minimize food packaging.

- **Purchasing:** After the game, you might want to have a discussion about the different places in your community where you can get food directly from the farmer so that you can learn more about the journey the food took to get to you. We do suggest a trip to a local farmers market on Day 4 - Navigate the Environment. You might want to note that many food packages say where the food was distributed from, this does not mean this is where the food or its ingredients were grown. For example, a food item may be distributed in California but the ingredients were grown and processed in China.

- **Consumption:** Campers will be cooking and eating together throughout camp. Try to purchase as many ingredients as possible from local sources and make sure to highlight these ingredients with campers. When eating with campers, direct conversation around where the different ingredients came from, was the recipe easy to prepare, and what is nice about sharing food with friends etc.

- **Waste management:** The game uses the current (2013) waste and recycling regulations in New York City. You can change the game to make it meet your communities’ regulations.
Apple Game: Instructions

These instructions guide activity at each station. The “group leader” can be a teacher, a teaching assistant, or a mature camper. Text that is in bold indicates a card the “apple” needs to collect.

Production:
Have all “apples” read their card. Tell everyone the mission of all the apples is, “to be good for the people they feed and good for the earth.” The farmers who grew these apples used a pest management system. Give each group an apple, one petroleum and pollution card.

Distribution:
After everyone reads their cards explain to the group that the “apples” will travel around the room. For each lap pick up 1 petroleum and 1 pollution card.

- New York: 1 lap
- Ohio: 2 laps
- Colorado: 3 laps
- Washington: 4 laps

Processing:
After everyone reads their cards tell the apples they will:

- New York and Washington: Sit back and relax!
- Ohio:
  - Do 20 jumping jacks. Take 1 petroleum and 1 pollution card.
- Colorado:
  - Do 40 jumping jacks. Take 5 petroleum and 5 pollution cards for each of the five main ingredients.

Packaging:
After everyone reads their cards, explain that they are going to get the natural resources used to make their packaging.

- New York: Sit back and relax!
- Ohio:
  - Uses sand to make glass. Take 1 sand card, 1 petroleum and 1 pollution card.
  - Uses minerals to make the lid. Mine for minerals (take a foil ball out of the soil). Take 1 mineral, 1 petroleum and 1 pollution card.
  - Cuts down tree for label and cardboard shipping box (take a pipe cleaner tree). Take 1 tree, 1 petroleum, and 1 pollution card.
- Colorado:
  - Cuts down two trees for packaging and shipping box (take two pipe cleaner trees). Take 2 tree, 2 petroleum, and 2 pollution cards.
  - The liner is made of plastic and metal (pour a small amount of oil into a cup) and mine for minerals (take a foil ball out of the soil). Take 2 petroleum, 2 mineral, and 2 pollution cards.
- Washington:
  - Cut down a tree for your shipping box (take one pipe cleaner tree). Take 1 tree, 1 petroleum, and 1 pollution card.
  - Pour a small amount of oil in a cup for your Styrofoam tray and plastic wrap. Take 4 petroleum and 2 pollution cards.

Purchasing:
After everyone reads their cards, explain you are going to give each apple something that will show how it feels about where it is being sold.

- New York:
  - 1 happy face card, you are in the good food hall of fame.
- Ohio:
  - 1 question mark card, you don’t know where
Apple Game: Instructions (continued)

you fit

• Colorado:
  -1 sad face card, you are in the junk food hall of shame.
• Washington:
  -You are cold in the produce section, put on a scarf. Take one petroleum and one pollution card for the refrigeration needed in the produce section.

Consumption:
After everyone reads their cards, explain that they are going to get a symbol for how they were for the people they fed:

• New York:
  -1 happy face card, you were delicious and nutritious.
• Ohio:
  -1 neutral face card, you were pretty good for the people you fed.
• Colorado:
  -1 sad face card, you had too much added sugar and too many chemical ingredients.
• Washington:
  -1 neutral face card, you were a bit mealy but pretty good for the people you fed.

Waste Management:
After everyone reads their cards, explain that they are going to see how they are disposed of or reused.

• New York:
  -Put your core in the compost bin.
• Ohio:
  -Recycle your jar, jar lid, and cardboard shipping box. Nothing goes to the dump! Take 3 recycle cards, 3 petroleum, and 3 pollution cards.
• Colorado:
  -Recycle your 2 boxes and put your liner in the city dump. Take 2 recycle, 1 city dump, 3 petroleum, and 3 pollution cards.
• Washington:
  -Put your core in the compost bin, recycle your box, and put your Styrofoam tray and plastic liner in the city dump. Take 1 recycle, 2 city dump, 3 petroleum, and 3 pollution cards.

Final Thoughts:
Have all apples think about their journey and decide how successful they were at meeting their mission.
Apple Game Cards

Make 1 copy for the class.
Apple Game Cards (continued)

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Apple Game Cards (continued)

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Apple Game Cards (continued)

Make 1 copy for the class.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

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Production

**New York Apple**

I am an apple that was grown in upstate New York.

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Distribution

**New York Apple**

Because I was grown in New York, I don’t have to travel very far to get to New York City.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

**Processing**

**New York Apple**

I am going to remain a fresh, whole apple, so I don’t have to undergo any change.

**Packaging**

**New York Apple**

As a fresh, whole apple that was grown locally, I require no packaging. The farmer who grew me uses the same wooden crates over and over to pick and transport her apples.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Purchasing

New York Apple

I am happy because I’m sitting in a wooden crate at the sunny farmers market with the farmer that grew me.

Consumption

New York Apple

The people I fed feel great! I tasted fresh and juicy. I gave them energy to work and play. I am very happy because I was healthy for the people I fed.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Waste Management

New York Apple

Now that I have been eaten, all I have left is a core. This core can be composted and the compost can be used on my farm to help grow more apples.
**Apple Game Cards (continued)**

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

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**Production**

**Ohio Apple**

I am an apple that was grown in Ohio.

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**Distribution**

**Ohio Apple**

Because I was grown in Ohio, I will have to travel some distance to get to New York City.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Processing

Ohio Apple

I went to the food factory and got changed into applesauce! This used energy.

Packaging

Ohio Apple

My packaging as applesauce requires a glass jar with an aluminum lid, a paper label, and a cardboard shipping box.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Purchasing

Ohio Apple

I am being sold in aisle seven at the grocery store.

Consumption

Ohio Apple

I was good for the people I fed.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Waste Management

Ohio Apple

My glass jar, my metal lid, and my shipping box can all be recycled.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Production

Colorado Apple

I am an apple grown in Colorado.

Distribution

Colorado Apple

Because I was grown in Colorado, I will have to travel a good distance to get to New York City.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

### Processing

#### Colorado Apple

I went to the food factory and got changed into an apple Pop-Tart! I was mixed with other ingredients. These ingredients came from these plants: wheat, soybeans, beets (sugar) and corn. This used a lot of energy.

### Packaging

#### Colorado Apple

My packaging as a Pop-Tart requires a cardboard box, a plastic liner, and a cardboard shipping box.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Purchasing

Colorado Apple

I am being sold in aisle 14 at the grocery store.

Consumption

Colorado Apple

The people I fed thought I tasted great because I am so sweet. But, they ran out of energy very quickly and started to feel “yucky”. They also had to brush their teeth to prevent cavities.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Waste Management

Colorado Apple

My boxes can be recycled, but since my liner is both plastic and metal it has to go to the city dump.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Production

Washington Apple

I am an apple grown in Washington State.

Distribution

Washington Apple

Because I was grown in Washington State I will have to travel a great distance to get to New York City.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

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Processing

**Washington Apple**

I am going to remain a fresh, whole apple, so I don’t have to undergo any changes.

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Packaging

**Washington Apple**

Because I am an apple from far away, I had to be put into a package to be transported safely.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Purchasing

Washington Apple

I am being sold in the chilled produce section of the grocery store. I was turned away from the sunny farmers market because I was not grown by a local farmer.

Consumption

Washington Apple

The people I fed had mixed feelings. Although I looked bright and red, I just didn’t taste as good as they expected.
Apple Game Cards (continued)

Make one copy of each card. Cut each card out and mount them on colored paper by state. For example, all New York Apple cards are mounted on green paper. There are seven cards per state. 28 cards total.

Waste Management

Washington Apple

My core can be put in the compost, but my packaging has to go to the city dump.
Apple Game Cards (continued)

Make one copy of each card.
Apple Game Cards (continued)

Make one copy of each card.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 2 happy face and 2 grin face cards are needed in total.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 2 sad face, 1 question mark, and 1 sand card are needed in total.
Apple Game Cards (continued)

Make 11 copies of this page and cut cards out. 42 petroleum cards are needed in total.

Petroleum

Petroleum

Petroleum

Petroleum
Apple Game Cards (continued)

Make 10 copies of this page and cut cards out. 40 pollution cards are needed in total.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 4 tree cards are needed in total.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 3 city dump cards and 3 minerals cards are needed in total.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 3 mineral cards and 6 recycle cards are needed in total.
Apple Game Cards (continued)

Make 1 copy of this page and cut cards out. 6 recycle cards are needed in total.

Recycle

Recycle

Recycle

Recycle