

FOOD AND THE ENVIRONMENT: THE HISTORY OF FOOD



Hunter-gatherers



Small Family Farms



Agricultural Revolution



Modern Factory Farms



Industrial Revolution

SUMMARY

This lesson traces the interplay between human evolution, food production, and consumption since prehistoric times. By showing how the human diet has been impacted by technological and cultural advancements, we show the upsides and downsides of the modern food system.

Duration: 90 mins, 2 Sessions | Grade Level: 4th-7th

Module 1: Food and the Environment

The History of Food

LESSON CONTENTS

• At A Glance	2
• Prior Knowledge & Misconceptions	3
• Lesson Breakdown	4
• Detailed Lesson Script	
• PART I	5
• PART II	9

LESSON RESOURCES

greenbeetz.org

our website hosts lesson slides, lesson videos, and teacher training videos, glossary, standards alignment and more

Worksheets

- History of Food Timeline Cards and Demo
- Video Worksheet
- Exit Card Assessment

THE HISTORY OF FOOD: AT A GLANCE



ESSENTIAL QUESTION

How long has the food system that we live in existed? The goal of this lesson is for students to gain an understanding of the scope and chronology of the history of food and the rapid pace of change of our food system in relatively recent years.



STUDENT LEARNING GOALS AND OBJECTIVES

After this lesson students will be able to:

- Understand how the food system has evolved since prehistoric times.
- Compare and contrast the traditional food system with the modern food system, focusing on the pros and cons.
- Understand the problems with processed foods (a major component of our modern food system).
- Identify key events in the history of food and list them chronologically (time order).



KEY POINTS

- Early **hunter/gatherers** wandered the earth exploring food on a trial and error basis.
- **Agricultural Revolution:** around 9,000 BC, humans began to settle down into larger communities and created **farms**.
- In the early 1900s, scientific advances led to the development of electricity, new technologies, and **chemicals** (like pesticides, herbicides, and fertilizers).
- **The industrialization of farming** expanded dramatically starting in the 1950s. Farms started to look more like factories and less like nature.
- Today, nearly all food is produced using the factory farming methods that were developed in the **last 100 years**.
- **The modern food system** has its upsides (pros) and downsides (cons). The upside is that food is available to more people. The downside is that producing food in this way can be unhealthy for us, the plants and animals involved, and the Earth.



VOCABULARY

Traditional food system - farmers grow their own plants and raise their own animals to consume; they also use natural resources to prepare food.

Modern food system - what we have developed and used for the last 100 years; farmers use new technology and chemicals to produce a larger quantity of food to sell. The modern food system includes:

Factory farms/industrial farms - huge farms that produce food more the way a factory would.

Pesticides - chemicals that kill pests in order to allow more crops to grow.

PRIOR KNOWLEDGE AND MISCONCEPTIONS

PRIOR KNOWLEDGE

- If prompted, students may know that historically humans were hunters and gatherers and will confirm that “at some point” humans began to farm. However, it is unlikely that students will know what dates are associated with these key periods or the cause and effects.
- Rather than emphasize the dates, focus on making sure that students see the logic of the sequence of events and the key causes and effects of each new development.

COMMON MISCONCEPTIONS

Students may focus exclusively on the “cons” of the factory/industrial farm system.

POSSIBLE RESPONSE

Make sure that students have opportunities to discuss both the pros and the cons.

LESSON BREAKDOWN

TIME	ACTIVITY	MATERIALS/RESOURCES
PART 1		
3-5 min	Introduction	Lesson Slides
7-10 min	Lesson Video: History of Food	Vimeo or YouTube • Video Worksheets
12-15 min	Class Discussion & Vocab Review	Lesson Slides
10 min	History of Food Timeline Introduction	Copy of Timeline cards, pre-cut
5-7 min	Food Detective Assessment	Exit Card
PART 2		
5 min	Review	--
20 min	Activity: History of Food Timeline	<ul style="list-style-type: none"> • Copy of Timeline cards, pre-cut • Pre-measured string or paper or rulers to measure distance • Tape
7 min	Snackz & Factz	Unsweetened Applesauce
8 min	Test Your Noodle	Slides
5 min	Food Detective Assessment	Exit Card
Extension Option		Food Detective Extension Question

DETAILED LESSON SCRIPT: PART I

Introduction: Turn & Talk

3-5 minutes

LESSON SLIDES



INTRODUCTION

Ask your students to discuss just one or all the questions as a warm up to this lesson.

Remind them to be prepared to share.

QUESTIONS

What is your favorite food?

How do you think it was made?

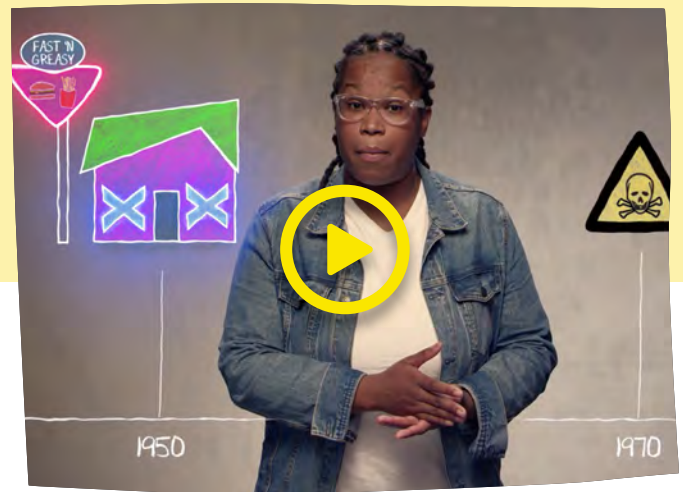
Do you think people could have eaten this food 150 years ago? Why or why not?

Lesson Video: The History of Food

7-10 minutes

DIFFERENTIATION

- Watch the video once. Then allow students to jot down notes on the worksheet.
- Re-watch the video, but this time, pause periodically so students can jot down notes about information they missed.
- Preview the vocabulary before watching the video, which will help students better understand the concepts and retain the information.



Name: _____ Date: _____

The History of Food: Part I - Video Worksheet

Read the questions before you watch the video! You can jot down your ideas as you watch or wait until the end.

1. What did hunters and gatherers eat? How did they eat food?	
2. What happened during the Agricultural Revolution? When does it take place?	
3. In the early 1900s, how does the discovery of electricity change how humans prepare and consume food?	
4. What is factory farming and the modern food system?	
5. What is processed food? Who produces it?	
6. What makes processed food taste so good?	
7. What are the pros (benefits) of the modern food system?	
8. What are the cons (negatives) of the modern food system?	

Class Discussion & Vocab Review


12-15 minutes | Lesson Slides

Use the following Questions, Vocabulary and Key Points to assist you in a class discussion.

Discussion questions for consideration:

- *How has the food system changed since prehistoric times?*
- *What are the pros and cons of the traditional and modern food systems?*
- *What are the problems with processed foods (a major component of our modern food system)?*

Key Points & Vocabulary

VOCABULARY 	
Traditional Food System	Farmers grow their own plants and raise their own animals to consume. They focus on imitating nature to produce food rather than rely on chemical inputs—such farms are usually highly biodiverse
Modern Food System	A system of farming developed in the last 100 years. Farmers use new technologies and chemicals that produces consistent quality and quantities of food; this system is generally much less labor intensive and mechanized.
Factory Farms/ Industrial Farms	Huge farms that maximize food production through extensive mechanization, the use of chemical fertilizers and pesticides, and overcrowding of animals and crops—usually growing a single crop (monoculture).
Pesticides	Chemicals that kill pests, allowing for greater yields and making production much less laborious.

Key Points & Vocabulary (CONTINUED)

KEY POINTS OF THE TIMELINE



Early **hunter-gatherers** wandered the earth exploring food on a trial and error basis, hunting the animals in their areas and gathering nuts, fruits, and other plant products to eat for survival. **Food was eaten raw.**

Around **9,000 BC**, human beings began settling down into larger communities and created small farms. This time period was called the **Agricultural Revolution**. It represented the first major change in the natural food cycle that had existed for millions of years, because humans now controlled which plants grew and what animals they had on their farms. Humans grew and prepared their own food using the natural resources around them, and things stayed this way for many thousands of years.

In the early 1900s, with the development of electricity, new technologies (like motorized tractors), and chemicals (such as pesticides and fertilizers), farmers were able to work more land and produce more food. **Farms started to look more like factories**, and less like nature.

A In present day, nearly all food is produced using the “**factory farming**” and “**industrial farming**” methods developed in the last one hundred years.

- Local farms and home cooking with whole foods (food as it was grown before industrial farming) have been replaced by factory farms, food companies, supermarket chains, and fast food franchises selling processed (altered) foods.
- **Processed foods** are designed to last a long time, but the chemicals used to do this (like preservatives) are very unhealthy for us. These foods also taste great due to the large amount of added salt, sugars, fats, and artificial flavors, but are extremely unhealthy.
- The “processed” (or altered) foods we eat now come to us from distant factories in heavy packaging, such as boxes, bags, bottles, jars, and cans.

The **modern food system** has its upsides and its downsides. The upside is that food is generally more available to more people and malnutrition worldwide has decreased. The downside is that producing food this way can be very unhealthy for us, the plants and animals involved, and the Earth.

History of Food Timeline Introduction

10 minutes



IN PARTNER OR TEAM WORK:

- Based on what students learned from the video, have students create a timeline of the history of food.

They can include drawings, brief descriptions, and dates of key events.

- Differentiation: Provide key events and/or dates and have students:

1. Put them in order,
2. Describe them, and
3. Illustrate the events.

Food Detective Assessment

5-7 minutes

Have students answer the following on an Exit Card:

1. Describe the changes in how humans have gotten food over the last 800,000 years.

DETAILED LESSON SCRIPT: PART II

Review

5 minutes

You may need to provide students with a summary from last session (reference the Key Points from the previous session) to help them make sense of the images on the timeline cards they are about to receive or you can rewatch the lesson video if needed.



Activity: History of Food Timeline

20 minutes

Let's pick up where we left off and dive into the History of Food Timeline. The objective of this activity is for students to have a full understanding of the scope and chronology of the History of Food!



The History of Food Timeline Cards

CARD 4

Spread of Agriculture



Agriculture has arisen on all inhabited continents except Australia.

SET-UP FOR TEACHERS

DIRECTIONS

Divide students into groups and give each group a stack of Food Timeline Cards.

Some pictures may all go together because the events occurred at the same time in history (all of the Industrialization of the Food System cards for example).

When the students finish, have one or two groups present depending on time. Make sure that all groups agree upon the order.

MATERIALS

- History of Food Timeline cards
- Timeline “Demo Key”
- Tape Measure
- String/yarn/paper,/pen (something to show or draw the lines of the timeline)
- Food Detective Activity - Google Form (*optional*)

ACTIVITY OBJECTIVE

In their groups, students will receive a stack of Food Timeline cards and should work together to place them in chronological order.

Snackz & Factz

10 minutes

Today's snack suggestion:
Unsweetened applesauce pouch or individual cup (or if you have a classroom tasting set up you can make the applesauce in class—even better!!)



DO

Present/Display the “Factz” about today's Snack to the class as they are tasting.

SAY

Could this snack have been possible 100 years ago? How? Or why not?

MATERIALS

- Applesauce (store bought or classroom made)

FACTZ

Applesauce is made by stewing apples to a pulp. Apples already have lots of natural fruit sugars. For optimal nutrition, choose applesauce without added sugar or sweeteners.

Different varieties of apples produce different texture sauces, from very fine and smooth to slightly coarse and grainy.

Test Your Noodle

8 minutes

(Optional: students complete this online)

1. Describe how food was prepared or eaten before the use of fire.
(Raw)
2. Name the period of time, starting around 9000 BC, when humans began to shift from hunting and gathering to planting and growing their own food?
(Agricultural Revolution)
3. What is one of the benefits of the industrialized food production system that humans utilize today?
(Higher food production, less starvation, convenience, food lasts longer)
4. Name one of the developments that made factory farming possible.
(Electricity, motorized machinery like tractors, advancements in chemical such as pesticides and fertilizers)
5. List at least two reasons that processed foods taste so great.
(Added sugar, added fat, added salt, artificial flavors)

Food Detective Extension (Optional)

5 minutes

Reflecting on tonight's dinner or your favorite meal draw a picture or diagram or jotlist of how you think your food made it to your plate. The first time this is done, it's recommended students reflect on a single ingredient or food items like the tomato sauce from pizza instead of the entire pizza.

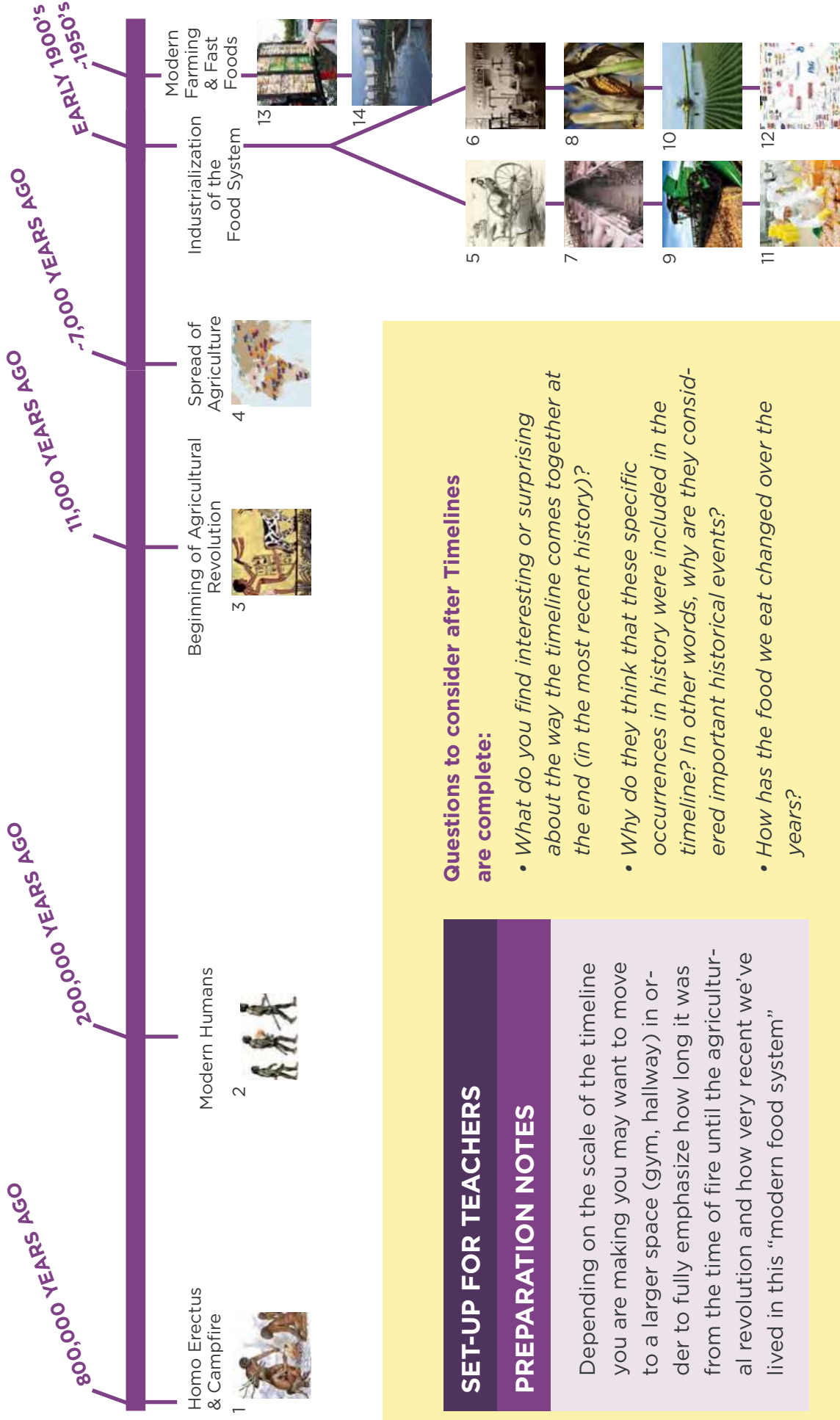
Reflect on the following questions to complete this assignment:

- *Where did the ingredient start?*
- *What kind of packaging did the food come in? Where is that packaging now?*
- *What happened to the food/ingredient as it traveled to your plate?*
- *What may have been added to the food system to make your food grow?*
- *How did the food get to you?*
- *What stops or changes were necessary along the way?*



HISTORY OF FOOD TIMELINE DEMO KEY

Set up your colored yarn & cards in the following order



Questions to consider after Timelines are complete:

- What do you find interesting or surprising about the way the timeline comes together at the end (in the most recent history)?
- Why do they think that these specific occurrences in history were included in the timeline? In other words, why are they considered important historical events?
- How has the food we eat changed over the years?

SET-UP FOR TEACHERS

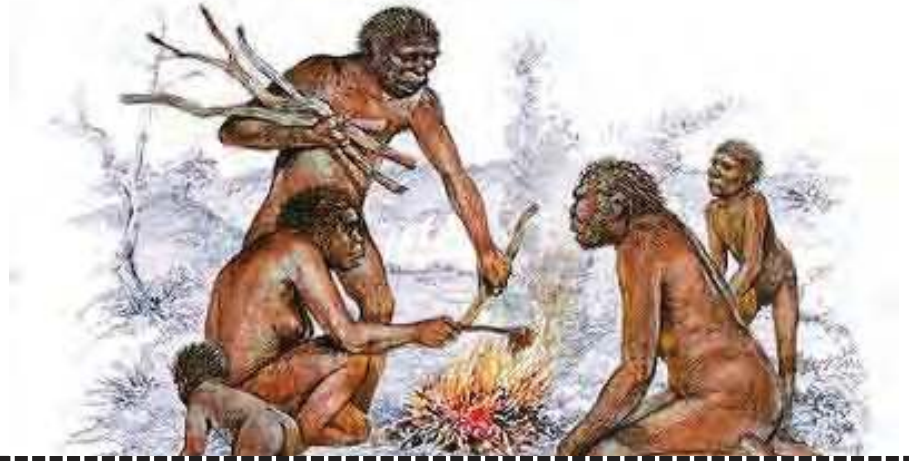
PREPARATION NOTES

Depending on the scale of the timeline you are making you may want to move to a larger space (gym, hallway) in order to fully emphasize how long it was from the time of fire until the agricultural revolution and how very recent we've lived in this "modern food system"

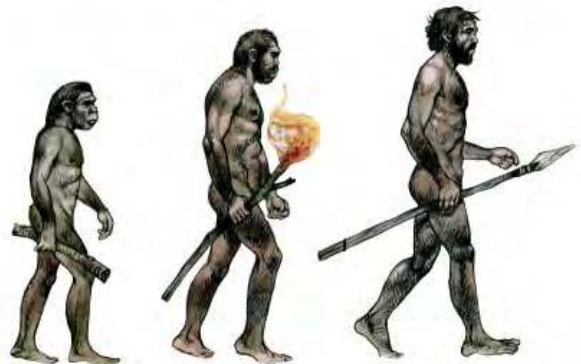
Lesson 3 The History of Food
Timeline Cards to hang/tape on yarn.
Each card should include the text
below along with an image.

Card 1

Our human ancestor, Homo erectus, begins using fire.
Food no longer must be eaten raw.



Card 2



Card 3



The Agricultural Revolution occurred as humans raised animals and planted crops. During the Agricultural Revolution, human beings went from being hunter-gatherers to raising livestock and planting crops. Agriculture allowed for humans to settle down in one location and create larger communities.

Lesson 3 The History of Food
Timeline Cards to hang/tape on yarn.
Each card should include the text
below along with an image.



Humans consume a lot of fast foods and processed foods, which may taste great but is unhealthy for us and the planet.

Card 13



Modern
Farming
Today

Card 14

Lesson 3 The History of Food
Timeline Cards to hang/tape on yarn.
Each card should include the text
below along with an image.



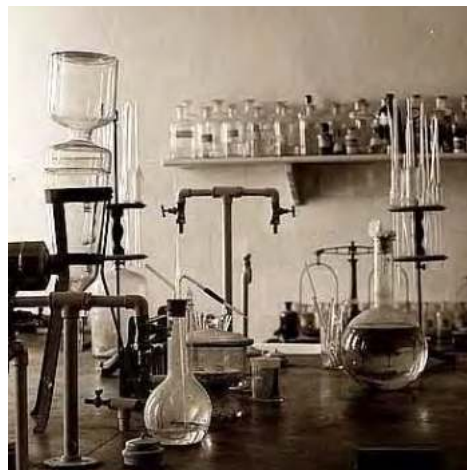
Agriculture has arisen on all inhabited continents except Australia.

Card 4



For over ten thousand years, humans grew and prepared their food all naturally. The industrial revolution was a time of increased technology and innovation, paving the way for the industrial farming of the future.

Card 5



Chemical fertilizers, pesticides and preservatives were invented and used to artificially increase food production - a major disruption in the natural food cycle. The negative consequences to human health and the environment were unknown at the time.

Card 6

Lesson 3 The History of Food
Timeline Cards to hang/tape on yarn.
Each card should include the text
below along with an image.



Farmers focus on producing just one animal or plant in extremely large numbers. Living and growing conditions are very poor.

Card 7



Specialization and Monocultures became the standard as farmers focused on producing just one animal or plant.

Card 8

Large scale mechanization.



Card 9

Lesson 3 The History of Food
 Timeline Cards to hang/tape on yarn.
 Each card should include the text
 below along with an image.

Chemical Fertilizers and Pesticides



Card 10

Food is processed (altered) in some way to make it taste better and last longer. Food processing plants generally use large amounts of salts, sugar, fats and artificial preservatives and flavors.



Card 11

Massive food corporations produce and sell the vast majority of the food we eat today.



Card 12

Name: _____

Date: _____

The History of Food: Part 1 - Video Worksheet

Read the questions before you watch the video. You can jot down your ideas as you watch or wait until the end.

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2. What happened during the Agricultural Revolution? When does it take place?	
3. In the early 1900s, how does the discovery of electricity change how humans prepare and consume food?	
4. What is factory farming and the modern food system?	
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7. What are the pros (benefits) of the modern food system?	
8. What are the cons (negatives) of the modern food system?	

The History of Food: Part 1 - Video Worksheet

Answers

1. What did hunters and gatherers eat? How did they eat food?	Plants, berries, and nuts using their jaws (no materials to grind, chop, etc.); and raw meat as they had no fire.
2. What happened during the Agricultural Revolution? When did it take place?	Humans settle in larger communities and begin to grow their own food on family farms. Humans control which animals to raise and crops to grow; humans don't need to wander to get food after 9,000 BC.
3. In the early 1900s, how does the discovery of electricity change how humans prepare and consume food?	It allows farms to use more technology, chemicals, and allows farmers to produce large quantities of food.
4. What is factory farming and the modern food system?	Many animals are raised in smaller spaces to maximize the amount of food we can produce; antibiotics are used to deal with effects of overcrowding and increased sickness; pesticides are used to increase crop growth. Huge companies buy meat and crops and mass produce it to sell to supermarket chains.
5. What is processed food? Who produces it?	Food that is mechanically prepared - usually to an unrecognizable state with huge ingredient lists. It's shipped in bags, bottles, and cans; huge companies create it.
6. What makes processed food taste so good?	Artificial flavors and high levels of: sugars, salt, and fats.
7. What are the pros (benefits) of the modern food system?	Much more food is available for more people; it's less laborious, and some people think it tastes better.
8. What are the cons (negatives) of the modern food system?	Food is less healthy for people; use of pesticides and antibiotics can be hard on the environment, animals, and humans

Name: _____

Date: _____

History of Food: Part 1 - Exit Card

Describe the changes in how humans have gotten food over the last 800,000 years?

Draw a timeline of the history of food. You can include pictures, a brief description, and dates of key events.

Name: _____

Date: _____

History of Food: Part 2 - Exit Card

1. What events allowed us to have a modern food system? Explain.
2. Do you think the modern food system is overall better or worse than a traditional food system? Why?

Name: _____

Date: _____

History of Food: Part 2 - Exit Card

1. What events allowed us to have a modern food system? Explain.
2. Do you think the modern food system is overall better or worse than a traditional food system? Why?
