



# Summer Activities for Grades 3-5

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# Find lessons and activities for social studies and science on the following topics:

## Social Studies

### Early American Government

Civics, Grade 3–5

#### Lesson Summary

In this lesson, you will learn about the history of the United States Constitution and how it became the foundation for our country's government.

### Expedition Everest

Geography, Grade 3–5

#### Lesson Summary

In this lesson, you will learn about the features of mountains. You will also learn how mountainous environments influence people's lives.

### Goods and Services

Economics, Grade 3–5

#### Lesson Summary

In this lesson, you will differentiate between goods and services. You will also explain how the actions of producers and consumers affect an economy.

## Science

### Energy

Matter, Grade 3–5

#### Lesson Summary

In this lesson, you will identify different types of energy. You will also learn about energy transformation.

### Magic Balloon

Matter, Grade 3–5

#### Lesson Summary

In this lesson, you will learn about the states of matter. You will also conduct an experiment to explore what happens during a chemical reaction.

### Windmills

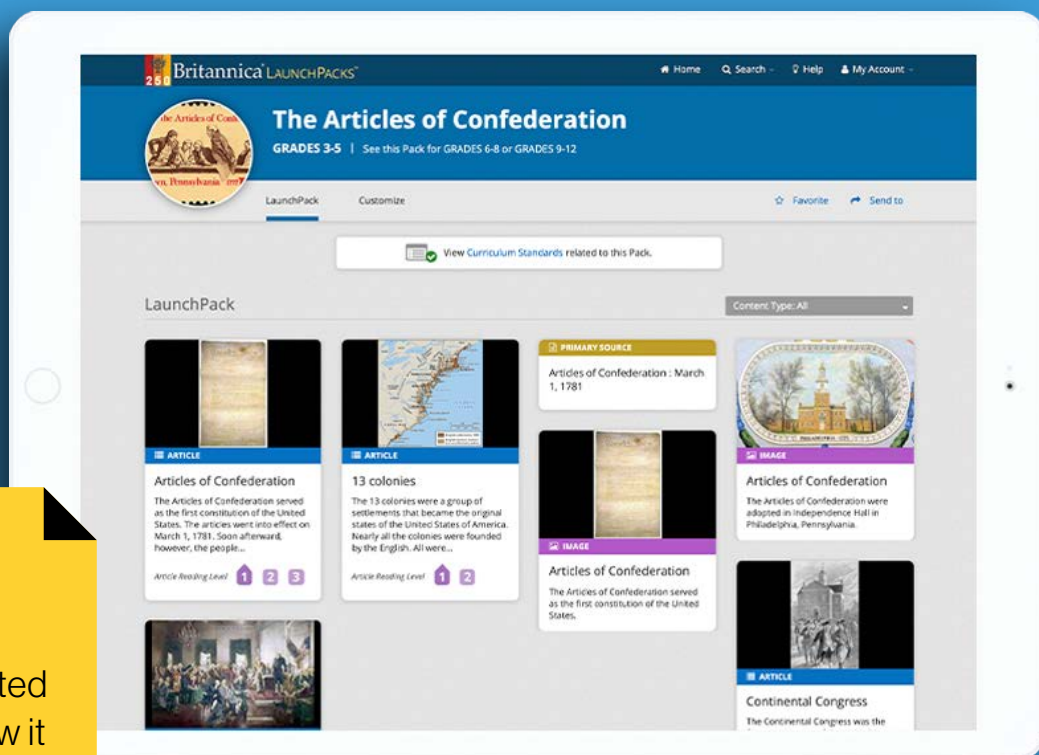
Inquiry & Design, Grade 3–5

#### Lesson Summary

In this lesson, you will learn how wind turbines produce electricity. You will also design your own windmill.

# Early American Government

## Civics, Grade 3–5



### Lesson Summary

In this lesson, you will learn about the history of the United States Constitution and how it became the foundation for our country's government.

### Explore

What is the most important document in the history of the United States? Most would agree that it is the United States Constitution. Did you know that the first U.S. constitution was called the Articles of Confederation? Read the [Articles of Confederation article](#) to learn about this early document in America's history. Record what you learned in the "Articles of Confederation" section of the [Early American Government: Venn Diagram](#).

### Discover

The United States Constitution is the most basic law of the United States. The Constitution set up the three branches of government: legislative, judicial, and executive. Read the [United States Constitution article](#) to learn more about this important document.

### Engage

What did you discover about the United States Constitution? Complete the [Early American Government Comprehension Worksheet](#) to show what you learned. Then compare and contrast the United States Constitution and the Articles of Confederation by completing the [Early American Government: Venn Diagram](#).

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

Date: \_\_\_\_\_

## Early American Government

Write a description for each term below.

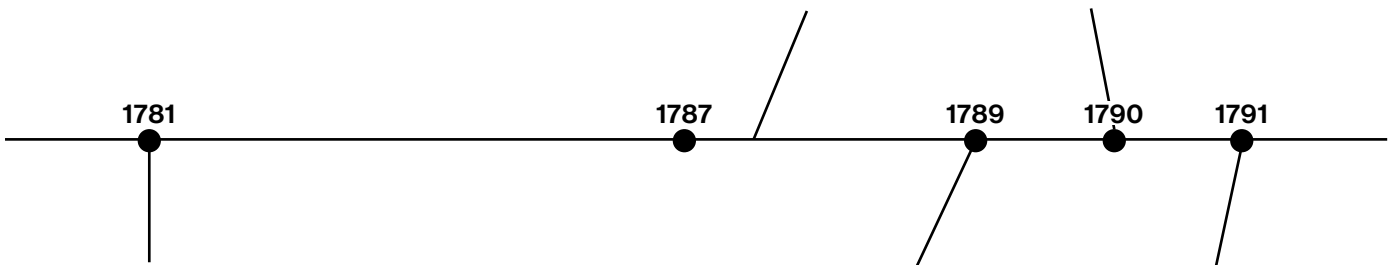
1. Articles of Confederation	
2. Amendments	
3. Checks and Balances	
4. Bill of Rights	
5. Branches of Government	

Think about what you read about the United States Constitution. Then answer the questions below.

6. Describe the federal system of government that the Constitution establishes. How is it different than the early government of America?

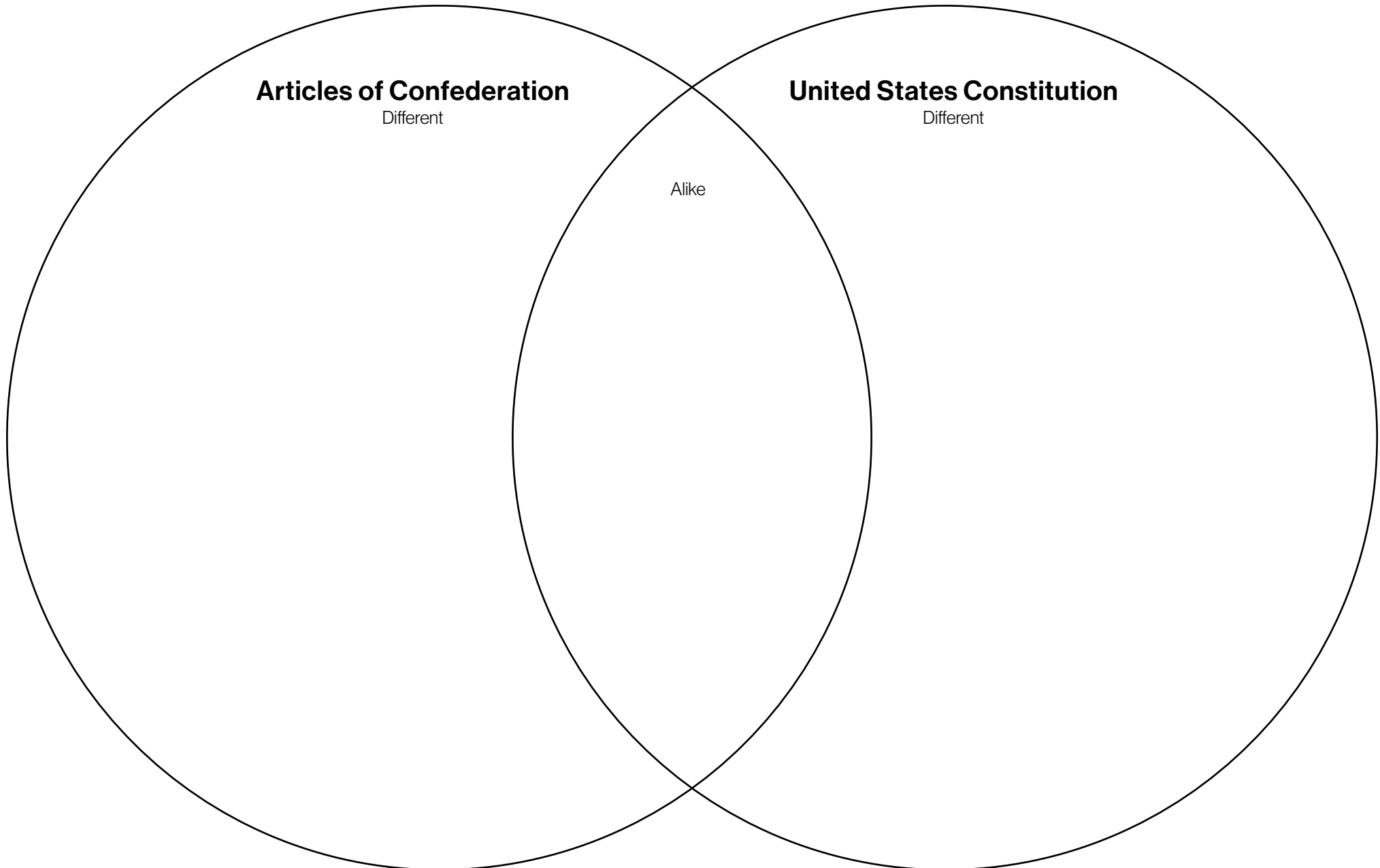
7. Why did the United States Constitution set up three branches of government?

Use the information in the Articles of Confederation and United States Constitution articles to complete the timeline with important events in American history.



## Early American Government: Venn Diagram

Compare and contrast the Articles of Confederation and the United States Constitution.

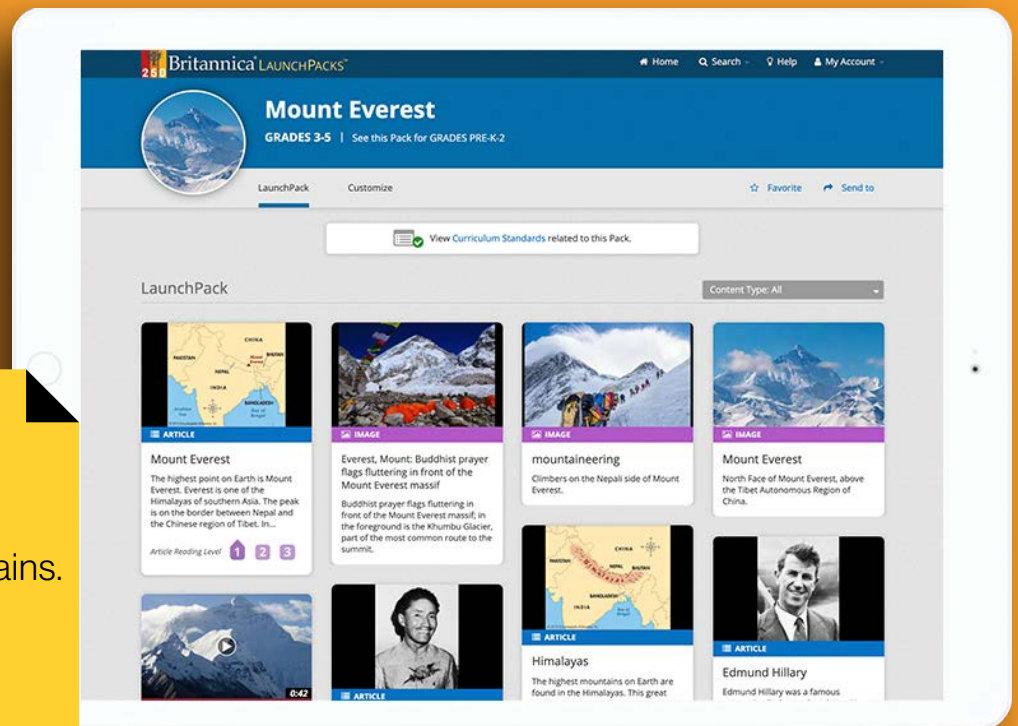


# Expedition Everest

## Geography, Grade 3–5

### Lesson Summary

In this lesson, you will learn about the features of mountains. You will also learn how mountainous environments influence people's lives.



### Explore

Do you live near any mountains? Mountains are landforms that rise high above the land around them. All continents have mountain ranges, or groups of mountains. Do you know what the tallest mountain in the world is? It is Mount Everest. What do you know and what do you want to know about Mount Everest? Record your thoughts in the first two columns of the **Mount Everest: KWL Chart**. Then read the **Mount Everest article** to learn more about the world's tallest mountain. Record what you learned in the final column of the **Mount Everest: KWL Chart**.

### Discover

Life in the mountains can be difficult, but technology has made it easier. Read the **Mountain article** to learn what it is like to live in the mountains.

### Practice

What did you discover from the article? Complete the **Life in the Mountains: Comprehension Worksheet** to show what you learned.

### Extra

Watch the **Mount Everest video**. Then imagine you are on an expedition to climb Mount Everest! Use the **Expedition Everest Journal Page** to write a journal entry about what you see and experience.

## Mount Everest: KWL Chart

Complete the chart with information that you know, want to know, and learned about Mount Everest.

<b>K</b> What I Already Know	<b>W</b> What I Want to Know	<b>L</b> What I Learned

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

Date: \_\_\_\_\_

## Life in the Mountains

Complete each sentence with the correct term from the word bank.

mountain	ranges	volcanoes	plate tectonics	erosion
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1. A \_\_\_\_\_ is a landform that is taller than a hill.
2. \_\_\_\_\_ is the theory that explains how mountains like the Himalayas were formed.
3. \_\_\_\_\_ causes older mountain ranges to have rounded peaks.
4. Mountains are typically found in groups called \_\_\_\_\_.
5. Some mountains, like Mount Rainier, are formed by the activity of \_\_\_\_\_.

Complete the table with the location of each mountain or mountain range.

Mountain or Mountain Range	Location
Mount Rainier	The United States
Mount Fuji	
Mount Kilimanjaro	
The Himalayas	

Think about what you read in the article. Then answer the questions below.

**How do mountain ranges provide natural borders?**

**Describe what it is like to live in the mountains. How can life in the mountains be difficult?**



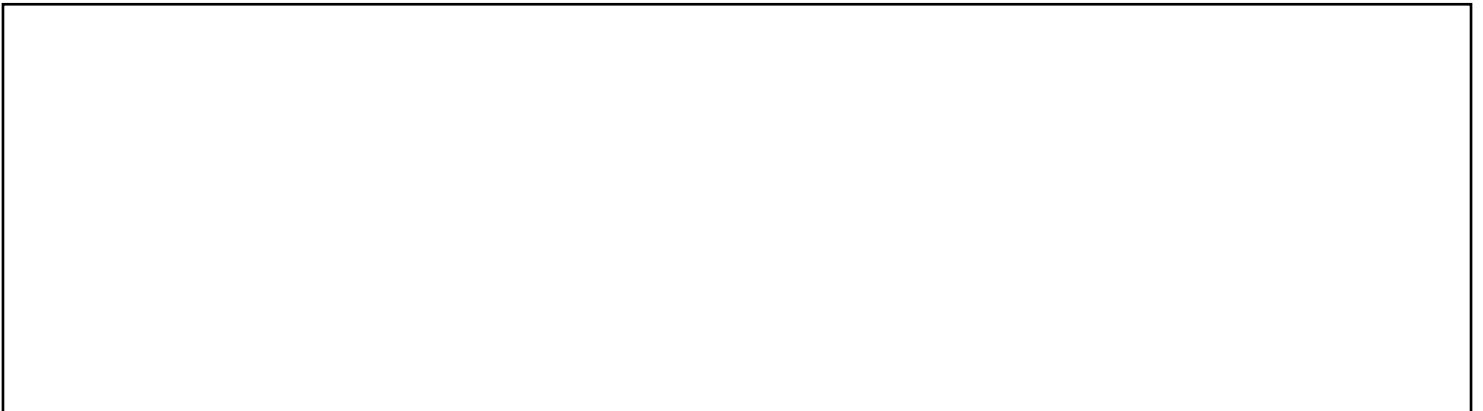
Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Expedition Everest Journal Page

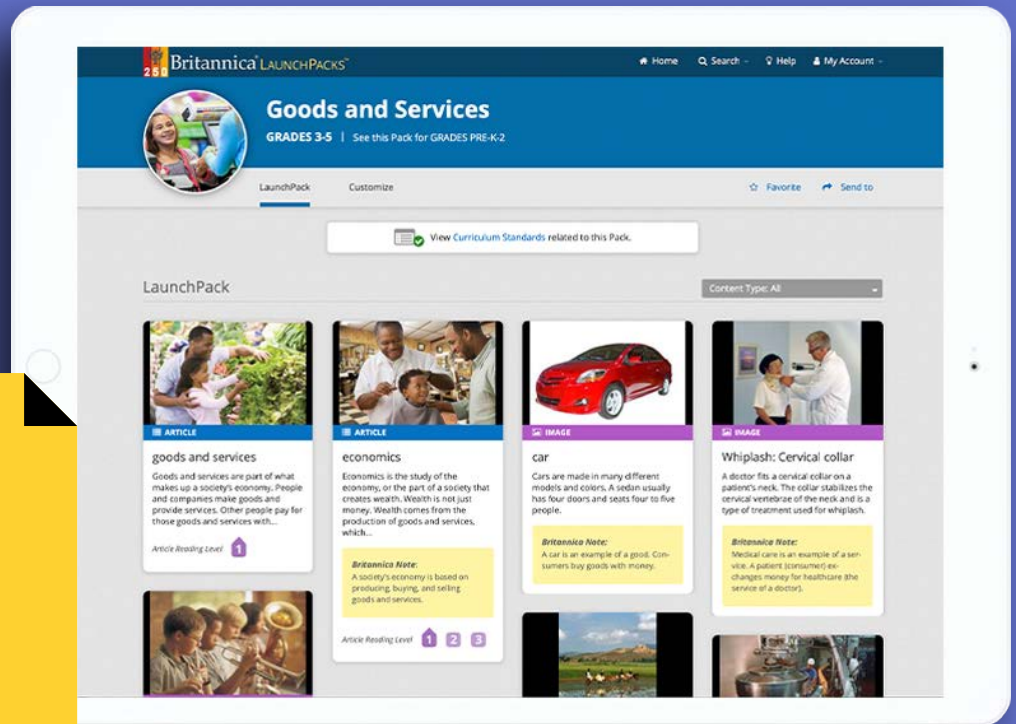
Imagine you are on an expedition to climb Mount Everest. Use this journal page to record your experiences.

Draw what you see:



# Goods and Services

## Economics, Grade 3–5



### Lesson Summary

In this lesson, you will differentiate between goods and services. You will also explain how the actions of producers and consumers affect an economy.

### Explore

What are goods and services? Goods are physical products that people buy. Goods include products like books, clothing items, groceries, and crops. Services are jobs that people do for others in exchange for money. Common services include food service, car repair, and teaching. People use goods and services every day. What goods and services has your family used this week? Write them down on the [Goods and Services Chart](#).

### Discover

An economy is made up of producers and consumers. Producers create goods and provide services. Consumers buy goods and services. Read the [Economics article](#) to learn more about how producers and consumers affect an economy.

### Engage

What did you discover in the article? Complete the [Goods and Services Comprehension Worksheet](#) to show what you learned.

### Create

Have you ever had an idea for a product or service in your community? Use the [My First Business Plan Worksheet](#) to brainstorm ideas for your business. Share your plan with your family and see if they can help get your business started!

## Goods and Services Chart

Complete the chart with information about goods and services in your community.

What was purchased?	Is it a good or a service?	What is the name of the business?
cupcakes	good	Shirley's Bakery

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

Date: \_\_\_\_\_

## Goods and Services Comprehension

Complete each sentence with the correct term from the word box.

goods	services	producers	consumers	capital	industry
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1. \_\_\_\_\_ are objects such as trucks, apples, and toys.
2. An \_\_\_\_\_ is a group of companies producing a similar kind of good or service.
3. \_\_\_\_\_ are things people do for others, like banking or teaching.
4. Tools, factories, and offices are examples of \_\_\_\_\_ needed for production.
5. The \_\_\_\_\_ and \_\_\_\_\_ in an industry together form a market.

Think about what you learned from the article. Then answer the questions below.

6. **Describe the three factors of production. Use examples from the article in your response.**

7. **What role does a consumer play in the economy?**

8. **What is an industry? Name 3 industries that you interact with on a regular basis.**

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

Date: \_\_\_\_\_

## My First Business Plan

Brainstorm an idea for a good or service to provide to your community. Don't forget to share your plan with your family!

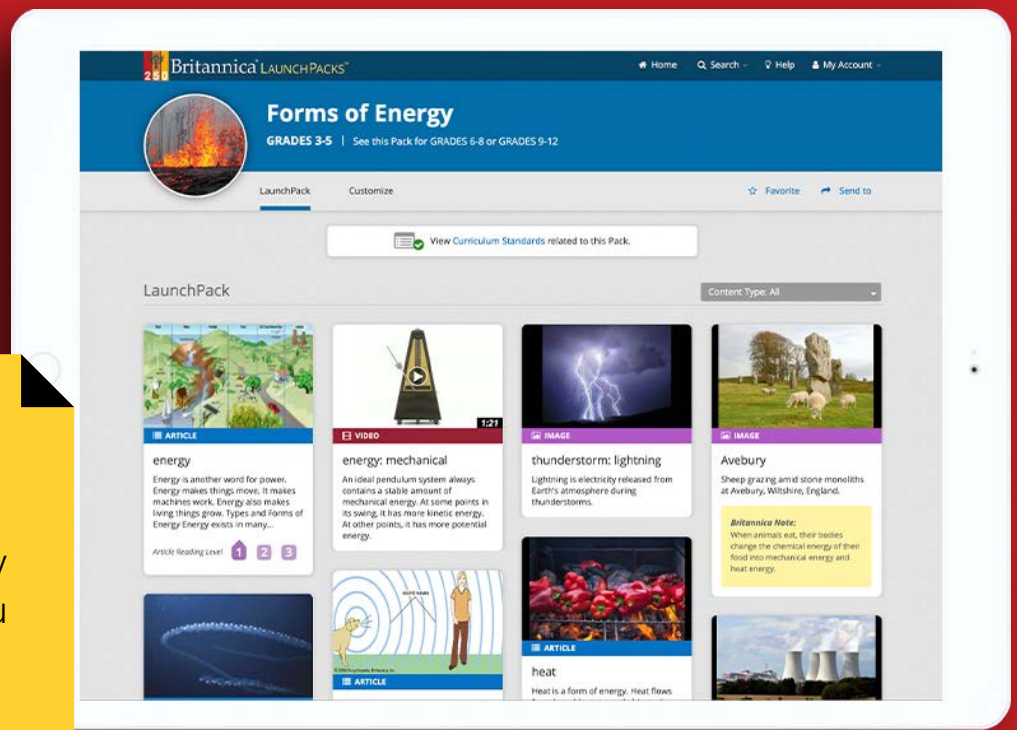
Business Name	
Business Description (What's your idea?)	
Are you providing a good or a service?	Who are your target consumers?
What do you need for production?	
<b>Land:</b>	
<b>Labor:</b>	
<b>Capital:</b>	

# Energy

## Matter, Grade 3–5

### Lesson Summary

In this lesson, you will identify different types of energy. You will also learn about energy transformation.



### Explore

What is energy? Energy is the potential change in matter. It is power that makes things move and grow. Energy is all around us. View the **Energy Sources image** to learn about different sources of energy. Then search your home and neighborhood. How many different energy sources can you find? Record your findings on the **Energy at Home Chart**.

### Discover

There are two major forms of energy: kinetic energy and potential energy. Kinetic energy is moving energy. Potential energy is stored energy. When energy changes form, it is called energy transformation. Read the **Energy article** to learn more about different types of energy and energy transformation.

### Practice

What did you discover from the article? Complete the **Energy Sources Comprehension Worksheet** to show what you learned.

### Create

Explore energy transformation at home! Follow the instructions on **The Science of Popcorn Activity Sheet** to explore the energy used to make popcorn. Record your observations and conclusions on **The Science of Popcorn Observation Sheet**.

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

Date: \_\_\_\_\_

## Energy at Home

Record the energy source, its location, and a picture in the chart below.

Energy Source	Location	Picture

## Energy Sources Comprehension

Complete each sentence with the correct term from the word box.

electrical energy	heat energy	light energy	sound energy
mechanical energy	kinetic energy	potential energy	

1. \_\_\_\_\_ is stored energy.
2. The total moving energy of all the molecules in a substance is \_\_\_\_\_.
3. \_\_\_\_\_ is sent through wires or the air to power things like light bulbs.
4. \_\_\_\_\_ moves in waves and can travel through empty space and air.
5. Moving energy is called \_\_\_\_\_.
6. \_\_\_\_\_ is produced by the back and forth motion of a vibrating object.
7. Machines use \_\_\_\_\_ to do work.

Think about what you learned from the article. Then answer the questions below.

8. Describe how we use energy from food.

9. What is chemical energy?

10. What is energy transformation? Give an example.



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

Date: \_\_\_\_\_

## The Science of Popcorn

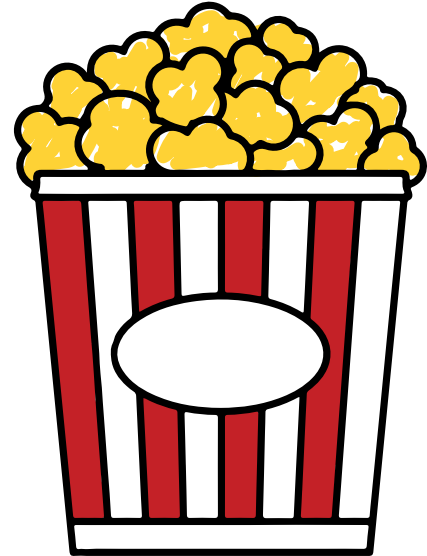
Follow the instructions below to explore the energy used to make popcorn.

### Materials:

- Microwave bag of popcorn
- Microwave
- Oven mitt
- Popcorn Science Observation Sheet

### Directions:

1. Ask an adult to help you gather the materials. This experiment requires the use of a microwave. Please have an adult complete the experiment with you for safety.
2. Follow the directions on the bag of microwave popcorn. Place the popcorn bag in the microwave, enter the recommended amount of time, and press the Start button.
3. Observe what happens while the popcorn is in the microwave. Record your observations on The Science of Popcorn Observation Sheet.
4. Ask an adult to take the popcorn out of the microwave—it will be hot. How does the popcorn bag look different? Record the results and conclusions on The Science of Popcorn Observation Sheet.
5. Enjoy the popcorn with your family!



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

Date: \_\_\_\_\_

## The Science of Popcorn: Observation Sheet

Complete the observation sheet as you complete the Science of Popcorn Activity.

**Question:** What types of energy are used to make popcorn?

### Hypothesis

What will happen to the popcorn in the microwave? What types of energy do you think will be used?

### Observations

What do you see, hear, and smell when the popcorn is popping?

### Results

What happened to the popcorn kernels?

### Conclusions

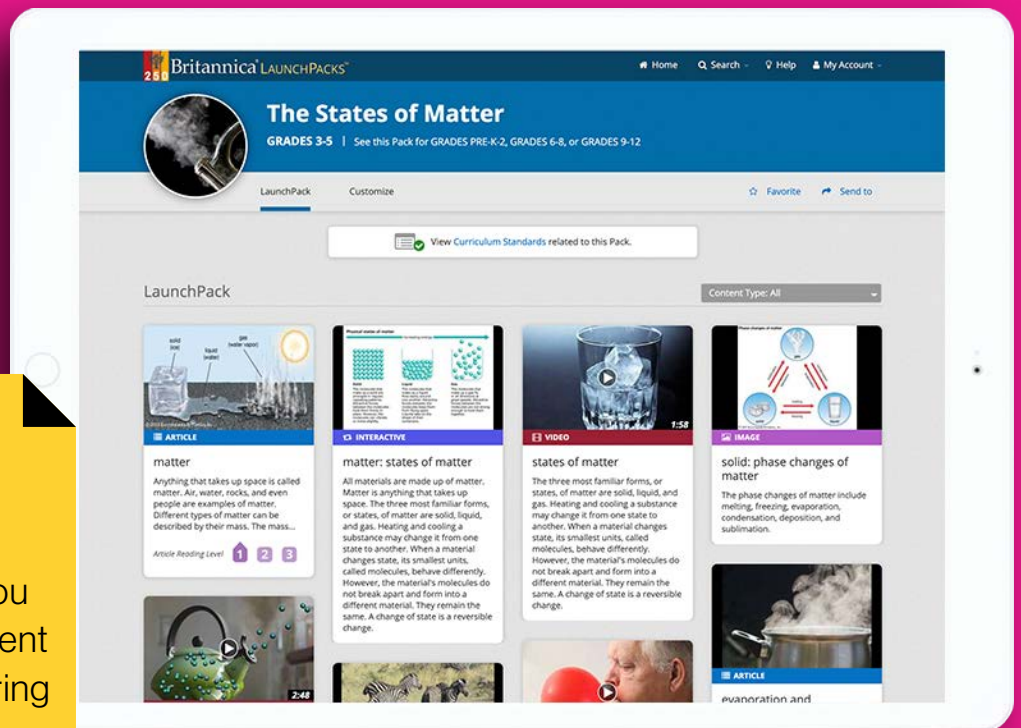
Was your hypothesis correct? Explain your answer.  
What types of energy are used and transformed to make popcorn?

# Magic Balloon

## Matter, Grade 3–5

### Lesson Summary

In this lesson, you will learn about the states of matter. You will also conduct an experiment to explore what happens during a chemical reaction.



### Explore

Have you ever blown up a balloon? The air you breathe into the balloon is a gas. Gas is a form of matter. Explore the **Matter article** and watch the **Gases Take Up Space video** and observe the **States of Matter interactive** to learn more about the different states of matter.

### Discover

Matter is anything that takes up space. There are three common states of matter: solid, liquid, and gas. All matter has physical and chemical properties. Read the **Matter article** to learn more about the properties of different forms of matter.

### Engage

What did you discover from the article? Complete the **Matter Comprehension Worksheet** to show what you learned.

### Create

What happens when you mix two different types of matter? Conduct the Magic Balloon Experiment to find out what happens during a chemical reaction. Use the **Magic Balloon Experiment Guide** and the **Experiment Log** to help you complete the experiment.

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

Date: \_\_\_\_\_

## Matter Comprehension

Record what you learned about each state of matter.

<b>Solid</b>	
<b>Liquid</b>	
<b>Gas</b>	

Match each word with its definition.

1. **Chemical properties of matter**

Anything that takes up space

2. **Chemical reaction**

Measurable descriptions of matter like temperature, density, and color

3. **Physical properties of matter**

The amount of material that makes up an object

4. **Mass**

Tells how matter will change under certain conditions

5. **Matter**

Changes matter into a new type of matter, like rust or ash

Think about what you read about matter. Then answer the questions below.

**How can matter change from one form to another? Give an example.**

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

Date: \_\_\_\_\_

## Magic Balloon Experiment Guide

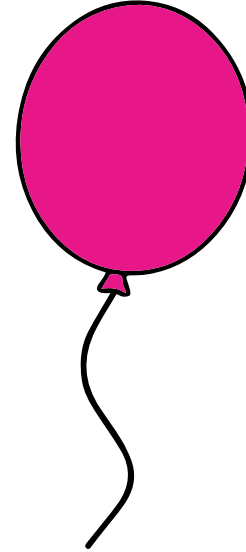
What happens when we mix baking soda and vinegar?

### Materials:

- Latex balloon
- Empty water or soda bottle
- White vinegar
- Baking soda
- Funnel

### Directions:

1. Ask an adult to help you gather the material and conduct the experiment.
2. Read over this guide and complete the Question, Materials, and Procedures sections of your **Experiment Log**.
3. Use the funnel to pour vinegar into the empty bottle. Fill the bottle halfway.
4. Clean your funnel and use it to pour baking soda into the balloon. Fill the balloon about halfway.
5. Carefully attach the base of the balloon to the top of the bottle. Be sure to hold the balloon so that no baking soda enters the bottle.
6. Think about what you learned about matter and complete the Hypothesis section of the Experiment Log.
7. Lift the balloon and let the baking soda pour into the bottle.
8. Observe what happens and complete the Results and Conclusion sections of the Experiment Log.



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

Date: \_\_\_\_\_

## Experiment Log

<b>Question:</b>
<b>Materials:</b> (What did you use?)
<b>Procedure:</b> (What did you do?)
<b>Hypothesis:</b> (What do you think will happen?)
<b>Results:</b> (What did you observe?)
<b>Conclusion:</b> (What did you learn?)

# Windmills

## Inquiry & Design, Grade 3–5

### Lesson Summary

In this lesson, you will learn how wind turbines produce electricity. You will also design your own windmill.



### Explore

Have you ever seen a wind farm? A wind farm is a large area of land with a group of wind turbines. Wind turbines are a kind of windmill that uses wind energy to create electricity. Most electricity is generated from fossil fuels, like coal or gas. However, electricity from wind power produces less pollution. What do you know and want to know about wind turbines? Write down your thoughts in the first two columns of the [Wind Turbines: KWL Chart](#). Then watch the [Wind Turbines video](#). Record what you learned in the last column of your [Wind Turbines: KWL Chart](#).

### Discover

Wind turbines operate by wind power. Wind power is a renewable energy source, which is a source that cannot be used up. Learn more about wind power and how wind turbines operate when you read the [Wind Power article](#).

### Engage

Use what you learned to design your own windmill! Follow the instructions on the [Windmill Design Guide](#). Complete the [Windmill Design Recording Sheet](#) as you work.

### Extra

Britannica Book Club: *Energy Island: How One Community Harnessed the Wind and Changed Their World* by Allan Drummond (2011)

## KWL Chart: Wind Turbines

Complete the chart with what you know, want to know, and learned about wind turbines.

<b>K</b> What I Already Know	<b>W</b> What I Want to Know	<b>L</b> What I Learned



## Windmill Design Guide

Follow the guide to design your own windmill.

### The problem:

Design a windmill that converts wind energy into mechanical energy and lifts a paper cup.

### Materials:

- Plastic straw
- String
- Small paper cup
- Rubber bands
- Sheets of paper (construction, standard, or card stock)
- Single-hole punch
- Pencils

### Plan:

- How will you design the blades of your windmill? Use the article, images, and videos from the lesson for inspiration.
- Have you ever seen a pinwheel in action? Pinwheels have a similar design to windmills. See the image for inspiration.
- Draw a diagram of your windmill.



### Build:

1. Ask an adult to help you gather materials.
2. Choose the paper for, design, and construct the blades of your windmill.
3. Use the single-hole punch (or a sharpened pencil) to put a hole in your blades. Slide the blades onto the middle of the straw.
4. Secure the blades with the rubber bands.
5. Use the single-hole punch to put two holes on each side of the paper cup. Pull one end of the string through the holes and tie a knot to the middle of the other end of the string.
6. Tie the end of the string to one end of the straw.
7. Blow on your windmill to see it in action!

### Test:

- Test out your design by blowing on the windmill blades.
- Record what happened when you tested out your windmill.

### Improve:

- Think about how you can improve your windmill blades.
- Make changes to your windmill.
- Test again.

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

Date: \_\_\_\_\_

## Windmill Design Recording Sheet

Fill in the table as you work through the Windmill Design Guide.

### The problem:

Design a windmill that converts wind energy into mechanical energy and lifts a paper cup.

### Plan:

*How will you construct your windmill?*

### Diagram:

*How will you design your windmill? Draw a picture.*

### Test Results:

*What happened when you tested your windmill?*

### Improvements:

*What changes did you make to your windmill?*