

apprentice

**Introduce** This apprentice is learning from an expert. An apprentice is a person learning a trade or art by working for a tradesperson or artist for a certain length of time for little or no pay. Let's say the word together: apprentice.

**Demonstrate** The blacksmith's apprentice built a fire. An electrician begins as an apprentice. She learned the printing trade as an apprentice in a printing shop.

**Apply** How does a tradesperson or artist benefit from having an apprentice? How does the apprentice benefit?

**Display** Now I will write the word on the board. Let's read the word together: apprentice.

## All Together

I'm going to ask you some questions.
Answer "yes" or "no."

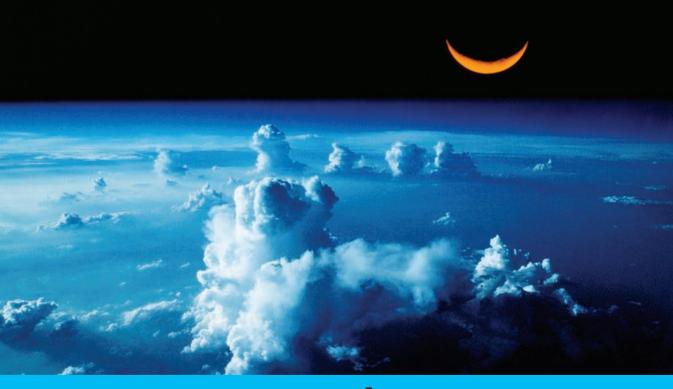
Does an apprentice earn a good salary? Does an apprentice eventually become an expert?

Could an apprentice be described as a beginner?

 I'm going to name some jobs. If you think a master worker in this job would have an apprentice, say "Apprentice." If not, say "No apprentice."

> a plumber a best-selling author the president of a country





atmosphere

**Introduce** This atmosphere contains a layer of clouds. The atmosphere is the air that surrounds the Earth or the air in any given place. Let's say the word together: atmosphere.

**Demonstrate** The rocket sped through the atmosphere. Earth's atmosphere contains oxygen. The atmosphere is a "blanket" of air many miles thick that surrounds our planet.

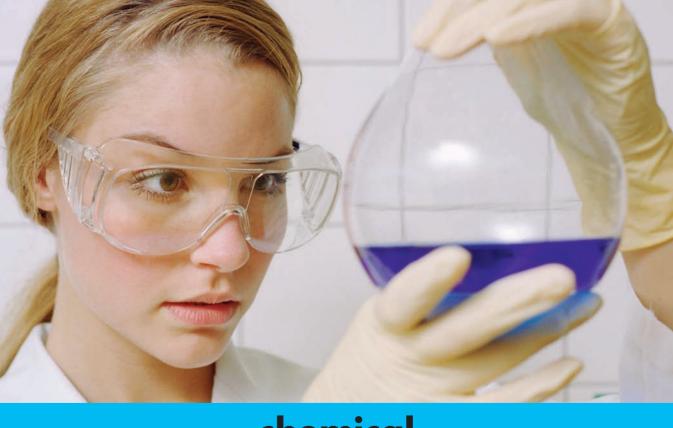
**Apply** The atmosphere produces our weather. What things that are found in Earth's atmosphere have an effect on our weather?

**Display** Now I will write the word on the board. Let's read the word together: atmosphere.

#### **Pencil Talk**

- Draw a diagram of Earth in space. Show Earth's atmosphere and label it. Then write a sentence about your diagram. Use the word atmosphere in your sentence.
- Draw a picture of storm clouds in the atmosphere. Write several sentences that describe the storm clouds. Use the word atmosphere in one of your sentences.
- Imagine you have landed on a planet in a far-off solar system. Write an entry in your log book. Describe the atmosphere of this planet.





chemical

**Introduce** The scientist is looking at a chemical. A chemical is any substance obtained by or used in a chemical process. Let's say the word together: *chemical*.

**Demonstrate** Table salt is a chemical. Sulfuric acid is a chemical that can burn. Hydrogen combines with oxygen to form a chemical substance known as water.

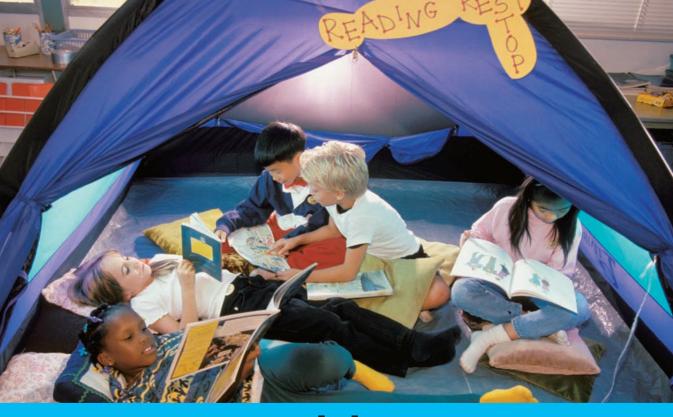
**Apply** When you burn paper, it interacts with oxygen. Is the ash that is left over a chemical? Why do you think this?

**Display** Now I will write the word on the board. Let's read the word together: *chemical*.

## All Together

- I'm going to describe ways some materials act when they are put together.
  If you think the materials are reacting to form new substances, say "Chemical."
  If you think they are not, say "Not chemical."
  - A child makes mud pies from dirt and water.
  - A person eats food, which is then digested.
  - A plant takes in water and sunlight and makes simple sugars.
- I'm going to read you a sentence. Dr. Vance discovered a chemical that helped stop headaches. What does chemical mean in this sentence? What word could we use in place of chemical?





# club

**Introduce** The children belong to a reading club. A club is a group of people joined together for some special purpose. Let's say the word together: *club*.

**Demonstrate** The Spanish Club meets after school on Wednesdays. Our garden club is planting flowers outside the library. Members of the Mystery Club discuss their favorite mystery writers.

**Apply** What might bring the members of a travel club together?

**Display** Now I will write the word on the board. Let's read the word together: *club*.

#### **Team Talk**

- Talk to your partner about a club you would like to form. Tell about the club's purpose and activities.
- With your partner, make a list of all the clubs you can think of in your school.
  Then add the names of any other clubs you know about to your list.
- Look at the photograph on the front of this card. Take turns telling about this club.
  Explain what you think the purpose of the club is.





essay

**Introduce** The girl is writing an essay. An essay is a short written composition that makes a point about something. Let's say the word together: *essay*.

**Demonstrate** The assignment was to write an essay. My essay is about the importance of computers. In an essay, the writer gives his or her own ideas on a particular topic.

**Apply** Imagine on a science test you answer twenty short-answer questions, and then write an essay. How is the answer to the essay answer different from the answers to the short-answer questions?

**Display** Now I will write the word on the board. Let's read the word together: essay.

#### **Pencil Talk**

- Write the word essay in the center of a sheet of paper and circle it. Around the circle, write words and phrases that tell about an essay. For example, you might write short and makes a point. Circle the words and phrases and connect them with lines to the center circle to make a concept web.
- Imagine you are going to write an essay about being a good friend. Write a summary sentence at the top of your paper. Include the word essay in this sentence. Below this, write two details you think should go in the essay.





manufacturing

**Introduce** These workers are involved in manufacturing. Manufacturing is the process of making a product, especially in large quantities, usually with the help of machinery and many workers. Let's say the word together: manufacturing.

**Demonstrate** That factory is involved in the manufacturing of chemicals. Manufacturing led to mass-produced goods. The business of factories is the manufacturing of many products.

**Apply** Why are many workers involved in the manufacturing of a car?

**Display** Now I will write the word on the board. Let's read the word together: manufacturing.

## All Together

 I'm going to describe some workers and the products they make. If you think the process involves manufacturing, say "Manufacturing." If it does not, say "Not manufacturing."

2,000 workers producing small engines an artist making sculptures by hand 500 workers making boxes 50 salespeople traveling the country to sell bottled water

I'm going to ask you some questions.
Answer "yes" or "no."

Is the city council involved in manufacturing?

Is a company that makes tires involved in manufacturing?





pressure

**Introduce** The paramedic applies pressure to a wound. Pressure is the continued action of a weight or other force. Let's say the word together: *pressure*.

**Demonstrate** He put pressure on the door to force it open. The pressure of heavy books made the shelf break. The weight of air pressing down on the Earth causes air pressure.

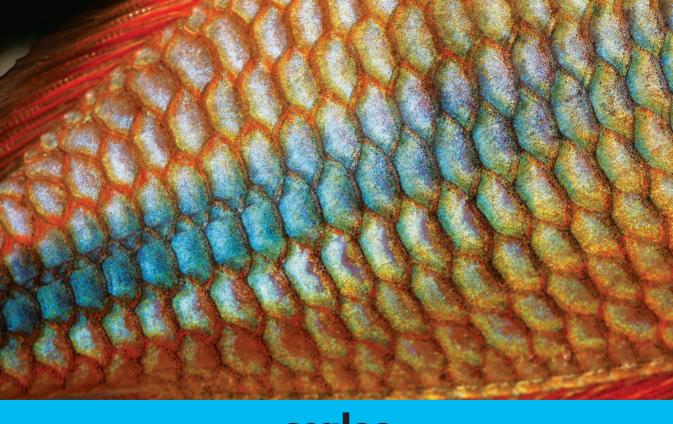
**Apply** Why do you think air pressure is greater at sea level than on a mountaintop?

**Display** Now I will write the word on the board. Let's read the word together: *pressure*.

#### Team Talk

- Talk to your partner about the way pressure on your eardrums changes when you take off and land in an airplane.
  Explain why this is uncomfortable.
- Take turns showing how to put pressure on a cut to make it stop bleeding.
- Write a multiple-choice quiz question that asks your partner to choose the correct definition for pressure.





scales

**Introduce** The scales on this fish make a pattern. Scales are thin, flat, hard plates that form the outer covering of some fishes, snakes, and lizards. Let's say the word together: scales.

**Demonstrate** Scales protect an animal's body. The scales of the lizard were shiny and hard. The scales of each type of snake give it both armor and a unique pattern of colors.

**Apply** Why are the scales of fish removed before the fish are eaten?

**Display** Now I will write the word on the board. Let's read the word together: *scales*.

### All Together

 The word scales is a multiple-meaning word. I'm going to read you two sentences using the word scales. If scales means "thin, flat, hard plates that form the outer covering of some fishes, snakes, and lizards," say "yes." If it doesn't, say "no."

The butcher weighed the meat on the scales.

At the pond we saw the silver flash of scales.

My piano teacher asked me to play some scales.

I'm going to ask you some questions.
Answer "yes" or "no."

Could a snake survive without its scales? Does a monkey have scales? Does a goldfish have scales?

