

Glass

Pre-Reading

A. Warm-Up Questions

1. Do you know how glass is made?
2. Who do you think invented glass?
3. What does an archaeologist do?
4. Do you know which city is world famous for its beautiful glassmaking?
5. What is an "environmentally friendly" product?



B. Vocabulary Preview

Match the words on the left with the correct meanings on the right.

- | | |
|-------------------------|---|
| _____ 1. eventually | a) a small ball of wood or glass |
| _____ 2. invent | b) the opposite of wide |
| _____ 3. bead | c) to become liquid |
| _____ 4. vase | d) to create something new |
| _____ 5. narrow | e) a period of 100 years |
| _____ 6. century | f) a container to hold flowers |
| _____ 7. spread | g) finally |
| _____ 8. melt | h) modern, having the latest improvements |
| _____ 9. insulation | i) to move or extend to a greater area |
| _____ 10. sophisticated | j) material used to stop the loss of heat |

Reading

1. Glass is a substance made from sand, limestone, and soda, which are combined and heated to 1500 degrees Celsius. As the mixture cools, it becomes very thick and **eventually** becomes solid.
2. Historians believe that the ancient Egyptians **invented** glass. Archaeologists have found 5,000-year-old glass **beads** there. About 100 BC, Syrian craftsmen learned how to make hollow pots or **vases** by blowing air into molten glass through a long, **narrow**, iron tube. The Romans used this glassblowing technique to create beautiful artwork. They also found a way to make glass for windows.
3. After the fall of the Roman Empire, glassmaking declined for several centuries. It was revived in the 8th **century** in the Middle East and soon **spread** to other parts of the world.
4. In the 15th century, glassmakers in Venice, Italy, discovered how to make clear glass (crystal). Until then, glass had impurities in it. Venice became famous for its exquisite glass bottles and still is today. Several Venetian craftsmen took their trade to other parts of Europe, such as Germany, where beautiful Bohemian glassware is made.
5. In the 17th century, lead crystal glass was invented. This much-improved material was used in optical lenses, telescopes, and microscopes.
6. Machines that could make glass bottles began to appear in the late 1880s. In 1907, Michael Owens, an American, invented a machine that produced 2,500 bottles every hour. Since then, many scientific discoveries have improved the quality of glass and how it is produced and have found new uses for it.
7. Today, glass is used for things such as windows and light bulbs, kitchenware, **insulation**, and **sophisticated** scientific equipment. Thousands of products, from wine to cosmetics, are packaged in glass containers. Fortunately, because it takes less energy to **melt** recycled glass than to make new glass, glass is considered to be an environmentally friendly material.

*Are you a pessimist
or an optimist?
A pessimist sees
a glass half empty.
An optimist sees
a glass half full.*

Comprehension

A. True or False?

Read the statements below.

If the statement is true, write T beside the sentence.

If it is false, write F and correct the information.

- _____ 1. Glass was invented by the Romans.
- _____ 2. Heat is used in the process of glassmaking.
- _____ 3. Glass windows were first made by the Egyptians.
- _____ 4. Venice has been famous for its glassmaking for hundreds of years.
- _____ 5. Michael Owens discovered how to make crystal.

B. Ask and Answer

Practice asking and answering the following questions with your partner.

Then write your answers in complete sentences in your notebook.

- 1. Who do historians think invented glass and why do they think this?
- 2. How did the Syrians and Romans contribute to the development of glassmaking?
- 3. When did glassmaking decline and when was it revived?
- 4. Why is Venice famous for glassmaking?
- 5. What material was invented in the 17th century and how was this new material used?
- 6. What effect have scientific discoveries of the last century had on glassmaking?
- 7. Why is glass considered to be an environmentally friendly product?

Vocabulary Review

Choose the word or phrase with the closest meaning to the underlined word or phrase in the following sentences.

1. Historians believe that the ancient Egyptians invented glass.
a) intelligent
b) from long ago
c) rich
2. Syrian craftsmen learned how to make hollow pots or vases.
a) whole
b) not big
c) not solid
3. Glassmaking declined for several centuries before it was revived.
a) improved
b) lessened
c) spread
4. Glassmaking declined for several centuries and then revived in the 8th century.
a) died
b) moved to a new place
c) became strong or important again
5. The Syrian craftsmen made vases by blowing air into molten glass.
a) made liquid by heat
b) solid
c) crystal
6. Venice became famous for its exquisite glass bottles.
a) very expensive
b) very beautiful
c) very cheap
7. Several Venetian craftsmen took their trade to other parts of Europe.
a) vases or containers
b) products
c) occupation or skill
8. Lead crystal glass was used in optical lenses, telescopes, and microscopes.
a) related to windows
b) related to sight
c) telephones

Discussion

1. Glass is used in thousands of commonly used products. With your classmates, make a list of many of the glass products you encounter every day.
2. Have you ever been to a glassmaking studio? If so, discuss the process you saw and the products that were made there.
3. What kind of glass recycling programs are there in your community?
4. Glass is used to make many beautiful pieces of artwork such as stained glass windows, glass sculptures, glass beaded jewelry, etc. Tell your classmates about some of the beautiful glass artwork you have seen.