Word List

Study the definitions of the words. Then do the exercises that follow.

ballast
bal'ast
n. Heavy material used to make a ship steady or control the rising and falling of a vessel like a balloon.
The hot air balloon rose when the water used as ballast was let go.

buoyant
boi'ant
adj. 1. Able to float.
The life jackets are buoyant enough to support a 200-pound person.
2. Cheerful and carefree.
The students were in a buoyant mood on the last day of school.

buoyancy
n. The ability to float.
The buoyancy of helium balloons causes them to rise rapidly.

clamber
klam'ber
v. To climb awkwardly.
I clambered onto the roof to get the kite.

detach
dé tach'
v. To separate from.
I detached the upper portion of the bill and returned it with my payment.
detached
adj. 1. Not connected.
The house comes with a detached garage.
2. Lacking concern; not taking sides.
I tried to stay detached from my friends' quarrel.

eerie
ir'è
adj. Causing uneasiness; strange or mysterious.
The eerie sound you heard was just an owl hooting.

fathom
fath'am
n. A length of six feet, used in measuring the depth of water.
The wreck of the Spanish ship lay in thirty fathoms of water.
v. To figure out; to understand.
We could not fathom how the magician made the goldfish disappear.

pique
pèk
v. To arouse or excite.
Pandora's curiosity was piqued by the mysterious box that she was not supposed to open.
n. A feeling of resentment caused by being ignored, insulted, etc.
It was the scientist's pique at not being invited to take part in the experiment that caused him to write that derogatory article about it.
The Latin word for **water** is *aqua* and forms the root of the adjective **aquatic**. Other words formed from this root include nouns such as *aquarium* and *aqueduct*, “a large pipe or channel for water.” You might guess that the word *aquiline* comes from the same Latin root. Actually, it comes from a different Latin word altogether, *aquila*, which means “eagle.” An *aquiline* nose is one that is curved like an eagle’s beak.

The ancient Greeks believed that the dead went to the underworld, where they bathed in the river Lethe, which caused them to forget their earthly lives. The Latin word *letum*, “death,” comes from the name of the river and forms the English adjective **lethal**, “capable of causing death” (a lethal injection; a lethal weapon).

The noun **plight** carries with it a reminder of love and marriage in centuries past. Once it was a verb and meant “to promise; to pledge.” When persons got engaged to be married, they “plighted their troth.” This means they would dishonor themselves if they were not faithful and true to each other. **Troth** is a word that has disappeared entirely from the language. Once it meant “loyalty; faithfulness; honor.”

Several words come from the Latin *vigilare*, “to be watchful.” In addition to **vigilant**, there is *vigil*, a watch kept during normal hours of sleep (Parents keep a *vigil* by the bedside of a very sick child) and *vigilante*, a person who takes the law into her or his own hands, usually as part of a group.
probe

v. 1. To poke or prod.
I probed the snow with my ski pole to determine how deep it was.

2. To examine closely.
The Odyssey space craft was launched in 2001 to probe the surface of the planet Mars.

n. 1. A long, slender instrument used to examine a wound or part of the body.
The doctor used a probe to look for fragments of glass in the wound.

2. A thorough investigation.
The police probe into illegal gambling led to twelve arrests.

realize

v. 1. To be aware of.
I didn’t realize how astute you were until you came up with that brilliant idea.

2. To bring into being; to make happen.
I realized a lifelong dream by going skydiving.

rupture

v. To split or break.
Frost ruptured the water pipe, flooding the basement.

n. 1. A breaking or tearing apart by force.
The earthquake caused a rupture in the highway that took three months to repair.

2. The breaking of a friendly relationship.
The rupture between Cuba and the United States began when Fidel Castro seized control of the island.

sphere

n. 1. An object with all points on its surface equally distant from its center; a ball or globe.
The earth is not quite a sphere because it is flattened at the poles.

2. An area of power, influence, or activity.
The 1823 Monroe Doctrine extended the United States’ sphere of influence throughout the Americas.

spherical adj. Of or relating to the shape of a sphere.
The spherical lamp threw light in all directions.

submerge

v. 1. To go underwater.
From the shore, we could see the dolphins jump and then submerge.

2. To put underwater or cover with water.
The tide submerges the rocks when it is high.

tedious

adj. Seeming to go on for a long time; boring.
The lecture was so tedious that I nearly fell asleep.

tedium n. Boredom.
We tried to relieve the tedium of our long drive by telling jokes.
**ultimate**  
adj. 1. Final.  
Anwar's **ultimate** goal is to be chief of surgery at a teaching hospital.  
2. The greatest possible; maximum.  
The producer has **ultimate** control over the movie.  
*n.* Something that is the greatest; the maximum.  
The ads claim that this soap is the **ultimate** in cleaning products.

**unscathed**  
adj. Completely unharmed.  
Because of its sturdy construction, the house survived the hurricane **unscathed**.

### 11A Finding Meanings

Choose two phrases to form a sentence that correctly uses a word from Word List 11. Write each sentence in the space provided.

1. (a) be baffled by it.  
   (b) To realize a dream is to  
   (c) make it happen.  
   (d) To fathom a dream is to

2. (a) material used to make a ship steady.  
   (b) a feeling of gloom.  
   (c) Buoyancy is  
   (d) Ballast is

3. (a) A sphere is  
   (b) a measurement of depth.  
   (c) A fathom is  
   (d) something forgotten.

4. (a) To probe a person's interest  
   (b) is to satisfy it.  
   (c) is to arouse it.  
   (d) To pique a person's interest

5. (a) A sphere is  
   (b) A rupture is  
   (c) a breaking apart by force.  
   (d) an inquiry into the cause of something.
6. (a) It is separated from the rest.  (c) If something is eerie,  
   (b) If something is detached,  (d) It is added to something else.

7. (a) A feeling of resentment.  (c) Buoyancy is  
   (b) Pique is  (d) Fear of the unknown.

8. (a) Is to be unharmed.  (c) Is to show a lack of interest.  
   (b) To be tedious  (d) To be unscathed

9. (a) To clamber is to  (c) To probe is to  
   (b) Remove oneself.  (d) Examine closely.

10. (a) An ultimate task is one that  (c) Is impossible to do.  
    (b) Is very boring.  (d) A tedious task is one that
Improve each of the following sentences by crossing out the bold phrase and replacing it with a word (or a form of the word) from Word List 11.

1. The **unnatural and strange** silence that filled the deserted house was suddenly shattered.

2. The police could not **figure out exactly** how the painting had been stolen from the museum.

3. When I moved to Alaska, I didn’t **have any idea** how much I would miss my friends.

4. This damaged life jacket may have lost some of its **ability to keep a person afloat**.

5. The college president will head the **thorough inquiry** into the causes of student unrest.

6. I’ve ridden many roller coasters, but the Corkscrew Cannonball is without any doubt the **one that is greater than all the rest**.

7. While I was telling her my troubles, my friend seemed curiously **uninvolved in what I was saying**.

8. Nuclear submarines can **go underwater** for several weeks.

9. I **climbed with difficulty** over the rocks to get to the sea wall.

10. A banker by profession, she was also involved in politics, diplomacy, and other **areas of activity**.
Circle the letter or letters of each correct answer. A question may have more than one correct answer.

1. Which of the following would make a good **ballast**?
   (a) iron bars  (c) sand
   (b) helium gas  (d) straw

2. Which of the following could be **fathomed**?
   (a) a purpose  (c) a motive
   (b) a puzzle  (d) a mystery

3. For which of the following might a **probe** be used?
   (a) brain surgery  (c) a picnic
   (b) a soccer game  (d) a flat tire

4. Which of the following can be **submerged**?
   (a) waves  (c) a submarine
   (b) the sun  (d) an anchor

5. Which of the following can be **buoyant**?
   (a) a person’s spirits  (c) an anchor
   (b) a life jacket  (d) a brick

6. Which of the following might **rupture**?
   (a) a friendship  (c) a gas tank
   (b) a balloon  (d) an epidemic

7. Which of the following is **spherical**?
   (a) a pingpong ball  (c) a rainbow
   (b) a hockey puck  (d) a ball bearing

8. Which of the following can one **detach**?
   (a) the ink from a pen  (c) a postage stamp from a roll
   (b) the toothpaste from the tube  (d) a page from a notebook
Complete the analogies by selecting the pair of words whose relationship most resembles the relationship of the pair in capital letters. Circle the letter of the pair you choose.

1. CIRCLE : SPHERE ::
   (a) link : chain
   (b) length : breadth
   (c) triangle : rectangle
   (d) square : cube

2. FATHOM : DEPTH ::
   (a) ocean : water
   (b) ounce : weight
   (c) mystery : understanding
   (d) inch : foot

3. TEDIOUS : EXCITEMENT ::
   (a) ruthless : mercy
   (b) irate : anger
   (c) dumbfounded : surprise
   (d) warm : heat

4. STRINGS : PLUCK ::
   (a) clothes : wear
   (b) drum : beat
   (c) candle : glow
   (d) water : flow

5. DELECTABLE : DELICIOUS ::
   (a) melodious : music
   (b) dilapidated : building
   (c) generous : benefactor
   (d) derogatory : insulting

6. FLOWER : GARLAND ::
   (a) soil : garden
   (b) actor : agent
   (c) seed : plant
   (d) link : chain

7. FLOAT : BUOYANT ::
   (a) juggle : nimble
   (b) sink : aquatic
   (c) flourish : active
   (d) probe : eerie

8. HOARD : HORDE ::
   (a) peek : pique
   (b) burn : fire
   (c) lend : bend
   (d) slice : knife

9. AQUATIC : WATER ::
   (a) delicate : delicacy
   (b) solar : sun
   (c) full : moon
   (d) spherical : earth

10. SMOLDER : BLAZE ::
    (a) dampen : submerge
    (b) clamber : awkward
    (c) deny : assert
    (d) avoid : avert
Exploring Earth’s Last Frontier

By the middle of the twentieth century, the earth’s continents had been explored from pole to pole. But even though water covers three-quarters of the earth’s surface, much of the deep ocean floor remained a mystery. Auguste Piccard, a Belgian scientist whose curiosity was piqued by the unknown, changed that. In 1932, he had broken the world’s altitude record by going ten miles up in a balloon. He next planned to design and build a vessel to explore the deepest parts of the ocean.

On October 26, 1948, Piccard made his first dive off the coast of Africa in a bathyscaphe, a large, hollow, spherical vessel made of thick steel. The word comes from two Greek words: bathys, “deep,” and scaphe, “a light boat.” The bathyscaphe could descend into the inky blackness of the ocean depths. With its powerful searchlights, it could probe the ocean floor. Those inside were able to look out through windows made of thick layers of acrylic plastic. Buoyancy was provided by huge tanks containing gasoline, which is lighter than seawater. The vessel hung beneath these tanks. Iron weights fixed to the outside of the hull by magnets were used as ballast, causing the bathyscaphe to descend.

The first test dive was made in water where the seabed lay just twelve fathoms below the surface. Piccard and the other crew member were bolted inside the bathyscaphe, which was then swung over the side of the support ship and submerged. As the vessel sank below the surface, it filled with an eerie blue light, created by sunlight passing through the water. It took just a few minutes for the two pioneers of underwater exploration to reach the ocean floor. Shortly afterward, Piccard detached the iron weights; the bathyscaphe rose to the surface.

Several hours passed while the gasoline tanks were emptied; this had to be completed before the two men were able to clamber out of their cramped quarters. Despite the tedious wait, Piccard was a happy man. His mind was already on his ultimate dream, to explore the very deepest part of the ocean. He was asked later if he had been afraid during the descent. He replied that he had total confidence in the design and the construction of the vessel he had invented; and, therefore, he had no reason to be afraid.
Twelve years later, Piccard's son Jacques realized his father's dream. He and a United States naval officer descended seven miles in a newer, larger, and stronger bathyscaphe to explore the deepest part of the Pacific Ocean. They knew that if there were a single defect in the metal, the enormous pressure would cause cracks to develop. That would rupture the vessel and crush them both. There was no way for them to escape if anything went wrong. Thankfully, the two crew members emerged unscathed after their great adventure. Jacques Piccard's father, who at the age of seventy-six was considered too old to make the descent himself, was waiting on the recovery vessel and was the first to greet them.

Answer each of the following questions in the form of a sentence. If a question does not contain a vocabulary word from the lesson's word list, use one in your answer. Use each word only once.

1. What is the meaning of probe as it is used in the passage?

2. Did the bathyscaphe stay underwater long on its first dive?

3. What caused the bathyscaphe to sink to the bottom of the sea?

4. Why did Piccard detach the iron weights?

5. What strange experience did the men in the first bathyscaphe have as they dived?
6. Why was it necessary to empty the gasoline from the tanks after Auguste Piccard’s dive?

7. What is the depth of water that is equal to 72 feet?

8. How would you describe the period of time between Auguste Piccard’s arrival at the surface and his emergence from the vessel?

9. Why was it vital that the hull of Jacques Piccard’s vessel have no defects?

10. What is the meaning of realized as it is used in the passage?

11. What was the condition of the two men who exited their bathyscaphe after exploring the deepest part of the Pacific Ocean?

12. In what way did Piccard’s son Jacques resemble his father?

13. What is the meaning of ultimate as it is used in the passage?

14. Why would the bathyscaphe have looked the same from any direction?
15. Why were the large tanks filled with gasoline?

**FUN & FASCINATING FACTS**

- The fact that the same word can be used as a unit of measurement and as a synonym for *understand* might at first seem strange. With the word *fathom*, however, the connection is easy to see. Sailors wanting to know the depth of the water would drop a weighted line, marked off in fathoms, or six-foot lengths, over the side of the boat. When the weight reached the bottom, the length of line indicated how deep the sea was at that point. Sailors would say that they had "fathomed" its depth. By extension, a person who was able to "get to the bottom of" something unknown or puzzling was said to have *fathomed* the mystery.

- The word *sphere* comes from the Greek word for a ball, which is *sphaira*. By combining *sphere* with the Greek word *hemi* ("half"), we get *hemisphere*, which is *half* of a *sphere*. Earth is divided into a northern *hemisphere* (everywhere north of the equator) and a southern *hemisphere* (everywhere south of the equator). Earth can also be divided into an eastern *hemisphere* and a western *hemisphere*.

ballast
buoyant
clamber
detach
eerie
fathom
pike
probe
realize
rupture
sphere
submerge
tedious
ultimate
unscathed