## **Compound and Complex Sentences**

A **simple sentence** expresses a complete thought. It has a subject and a predicate. The Negro League formed in 1920.

A **compound sentence** contains two simple sentences joined by a comma and a conjunction such as *and*, *but*, or *or*.

The athletes played several games a day, and they traveled on a bus.

A **complex sentence** contains an independent clause, which can stand alone, and a dependent clause, which cannot stand alone. The clauses are joined by a word such as *if, when, because, until, before, after,* or *since.* In the following sentence, the independent clause is underlined once; the dependent clause is underlined twice.

Many years would pass before the major leagues were integrated.

**Directions** Join each pair of simple sentences with *and*, *but*, or *or*. Write the compound sentence on the lines. Change punctuation and capital letters as necessary.

1. My sister can hit the ball hard. She pitches well too.

2. The game should have started at one o'clock. A thunderstorm began at 12:45.

3. The teams will make up the game next Sunday. They will wait until the end of the season.

**Directions** Write *compound* after each compound sentence. Write *complex* after each complex sentence. Underline the word that joins the two clauses in each sentence.

- **4.** All players are important to a team, but the pitcher may be most important. \_\_\_\_\_
- **5.** If a pitcher strikes out batters, the opposing team cannot score.
- **6.** Outfielders must catch the ball when the batter hits a pop fly.
- 7. The game was tied, and no one left the bleachers.
- **8.** The pitcher struck out two batters, but the third batter hit a home run.

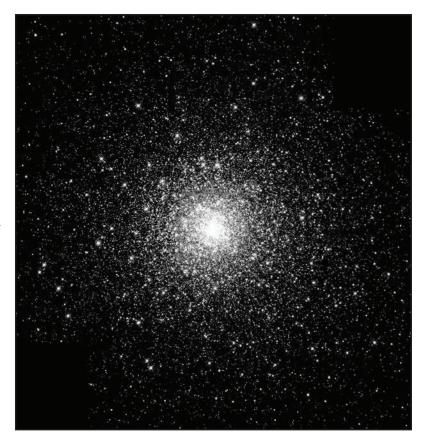


**Home Activity** Your child learned about compound and complex sentences. Have your child write a paragraph about a baseball game, using at least one compound sentence and one complex sentence.

## **Star Clusters**

by Adam Raglan

- Our star, the Sun, is what astronomers call a field star. It is so far away from other stars that it doesn't really interact with them. Based on our experience of the Sun, it's easy to think all stars are field stars. However, scientists know this isn't true. Stars actually have all kinds of relationships. One type of relationship is called a star cluster.
- A star cluster is a group of stars in a small area. They are so close that their gravity keeps them from drifting away from each other. (Gravity is the invisible pulling force that all objects make. The Earth's gravity holds you on the planet, and the Sun's gravity keeps the solar system together.) As a star cluster moves, its stars move as a group. If you can imagine the stars being connected by invisible rods, then you've got the idea. Astronomers talk about two types of clusters: globular and open. Many



Globular Cluster M 80 contains more than two hundred thousand stars.

globular clusters are as much as a few hundred light-years<sup>1</sup> across. Open clusters can be about 50 light-years across. This makes them millions of times larger than our solar system. The two types of clusters do not have a lot in common.

Globular clusters are spherical (ball-shaped). They hold millions of stars. Most globular clusters are many billions of years old; some of them are nearly as old as the universe. Many of the stars are red giants, which are much larger, cooler, and older than our Sun. You can't find a globular cluster with your own eyes; they are too distant and too dim. Even with a good telescope, most globular clusters look like tiny smudges. Only the most powerful telescopes can get a good look at one of them.

<sup>&</sup>lt;sup>1</sup> **light-year:** the distance a beam of light in space can travel in one year. A light year is a measure of distance, not of time.

- Open clusters can be any shape. They have hundreds or thousands of stars, not millions. Compared with globular clusters, open clusters are young—just hundreds of millions of years old, not billions. The brightest stars in open clusters are blue giants, which are much larger, hotter, and younger than our Sun. Finally, some open clusters are close enough to Earth that you can find them with a small telescope. You can even see one with your own eyes. The open cluster called the Pleiades appears in the sky between late fall and early spring.
- Globular and open clusters are different in many other ways, including how they form, what their stars are made of, and where they appear in the universe. One of the things they do have in common is that studying clusters has helped astronomers better understand the place of our own Sun—that lonely field star—in the vast universe.
  - Which detail from the text supports the idea that our Sun is not a part of a star cluster?
    - **A** "It is so far away from other stars that it doesn't really interact with them."
    - **B** "They are so close that their gravity keeps them from drifting away from each other."
    - C "If you can imagine the stars being connected by invisible rods, then you've got the idea."
    - **D** "Globular and open clusters are different in many other ways, including how they form, what their stars are made of, and where they appear in the universe."
  - **8** What is the meaning of the word "astronomer" as it is used in the passage?
    - A a designer and maker of telescopes
    - **B** an astronaut who travels to distant solar systems
    - **C** a writer who creates descriptive names for stars and planets
    - **D** a scientist who studies stars and other objects in space

Go On

- Two main ideas in the passage are that open clusters and globular clusters have little in common and that globular clusters are very old. Which sentence from the passage provides support for both ideas?
  - **A** "Many globular clusters are as much as a few hundred light-years across."
  - **B** "You can't find a globular cluster with your own eyes; they are too distant and too dim."
  - "Compared with globular clusters, open clusters are young—just hundreds of millions of years old, not billions."
  - **D** "Globular and open clusters are different in many other ways, including how they form, what their stars are made of, and where they appear in the universe."
- **10** Read this sentence from the passage.

Only the most powerful telescopes can get a good look at one of them.

What idea from the passage does this sentence support?

- A Globular clusters are huge.
- **B** Globular clusters are distant.
- **C** Globular clusters are old.
- **D** Globular clusters are spheres.
- Which of these describes one way in which open clusters and globular clusters are the same?
  - **A** Both contain stars that are larger than our Sun.
  - **B** Both are impossible to see without a telescope.
  - **C** Both are formed through the same process.
  - **D** Both contain stars connected by invisible rods.

- 12 Based on information in "Star Clusters," which statement is most likely true?
  - **A** Stars do occasionally escape from both kinds of star clusters.
  - **B** Stars exist for a longer period of time if they are in open clusters.
  - **C** People who are not scientists tend to think that all stars are field stars.
  - **D** Globular and open clusters are similar in more ways than astronomers think they are.
- Look at the photograph on page 4. Which detail about globular clusters does this photograph make clear?
  - **A** Globular clusters are extremely old.
  - **B** Globular clusters are made up of billions of stars.
  - **C** Globular clusters are spherical in shape.
  - **D** Globular clusters are impossible to see without a good telescope.
- Which passage detail would be **most** important to include in a summary of the passage?
  - **A** Earth's gravity is what holds you on the planet.
  - **B** Open clusters can be around 50 light-years across.
  - **C** Even with a good telescope, most globular clusters just look like smudges.
  - **D** Studying clusters helps scientists understand more about our own Sun.
- Which sentence from paragraph 2 supports the idea that star clusters are held together by gravity?
  - **A** "A star cluster is a group of stars in a small area."
  - **B** "As a star cluster moves, its stars move as a group."
  - **C** "Open clusters can be about 50 light-years across."
  - **D** "The two types of clusters do not have a lot in common."

Go On

## **Compound and Complex Sentences**

**Directions** Write *compound* if the sentence is a compound sentence. Write *complex* if the sentence is a complex sentence.

- 1. Great athletes seem superhuman, but they often begin humbly.
- 2. After they learned the basics, they practiced hard.
- 3. If they had failures, they did not give up.
- **4.** They kept at it for years, and they steadily improved.

**Directions** Combine each pair of simple sentences using the conjunction in ( ). Write the compound sentence on the line.

- 5. I like swimming. My dad coaches track. (but)
- **6.** I can jump like a rabbit. I can run like a racehorse. (and)
- **7.** I could choose one sport. I could do both. (or)
- **8.** According to Mom, I should decide. She is usually right. (and)

**Directions** Write the word in ( ) that best connects the clauses. Underline the dependent clause in the complex sentence.

- **9.** The players are tired \_\_\_\_\_\_ they have played two games. (because, if)
- 10. \_\_\_\_\_ they finish their games, they sleep on the bus. (Although, After)
- 11. They may travel for hours \_\_\_\_\_\_ they reach the next town. (before, since)
- 12. The driver will not wake them \_\_\_\_\_\_ the bus gets to the hotel. (after, until)