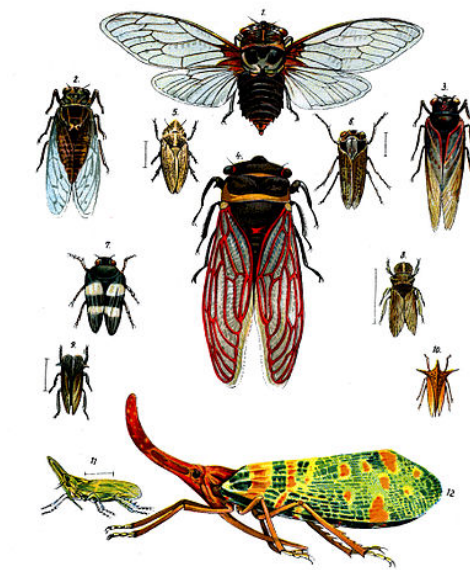


Cicadas: No Ordinary Bugs

By ReadWorks



1. Eichenzikade (*Cicada plebeja*), 2. Mannzikade (*Cicada orni*).
3. Siebzehnjährige Zikade (*Cicada septendecim*), 4. Prachtzikade (*Cicada speciosa*).
5. Weidenschauzikade (*Aphrophora salicis*), 6. Minierzikade (*Cixius nervosus*).
7. Gehänderte Stürmzikade (*Cercopis bivittata*), 8. Ohrzikade (*Ledra aurita*).
9. Dornzirpe (*Centrotus cornutus*), 10. Langhorzikade (*Triquetra grossa*).
11. Europäischer Laternenenträger (*Dictyophora europaea*).
12. Chinesischer Laternenenträger (*Fulgora caudellaria*).

Cicadas are not ordinary bugs. Unlike ants or grasshoppers, they rarely walk the earth. Most of their lives are spent deep underground. They crawl up to the earth's surface when they are ready to mate, traveling together in groups known as broods. Broods are like families. Every brood has a different cycle and stays in the same location for life.

Cicada broods are found all over the world. Each one is assigned a roman numeral. Depending on their broods, cicadas have different life cycles. In the United States, there are 15 different broods. Most of them are on a 17-year cycle. However, three have a 13-year cycle.

Once they are almost fully grown, cicadas emerge above ground to mate. After hurriedly mating and laying eggs for the next generation, they die soon thereafter.

With their large, red, fiery eyes, cicadas look scary. Yet they are harmless. They can't sting or bite. Like all insects, they have three body parts: the head, thorax, and abdomen. They have short, bristly antennae. Their bodies are bluish-black. Sometimes their clear wings have orange veins. Adult cicadas grow to about 1 to 2 inches long and have six jointed legs. They are one of the noisiest creatures on earth.

The reason that cicadas are so noisy is the male bugs call out to the females to attract a mate. It's a competition where each male tries to call louder than the next. The song of an individual cicada is quite loud. When a whole brood sings at the same time, the large chorus can sound like a roar.

Female cicadas stay busy laying their eggs in trees. A single Brood II female can produce as many as 600 eggs. Once the eggs drop to the ground, young cicadas, known as nymphs, are born. Soon after, the baby nymphs return to deep within the earth for nourishment. They dig as far as two-feet deep, and stay underground until they are almost mature enough to mate.

Brood II and Brood X cicadas keep growing beneath the earth until the spring of their 17th year. Then they start to crawl back to the surface. To prepare for their return, the nymphs build small cones, like tunnels, that stick above the soil. Soon after they reach the surface, the nymphs split their skin and become adults, ready to mate. But shortly after reproducing, they die. Their young dig back into the earth, only to emerge once more in another 17 years. So the cycle repeats again and again.

In 1970, cicadas from Brood X invaded Princeton, New Jersey. When the famous songwriter Bob Dylan was awarded a special degree at Princeton University, the bugs were so noisy the musician wrote a song about them. Since he thought he was hearing locusts, he called the song "Day of the Locusts." Here are some of the words to the song:

*As I stepped to the stage to pick up my degree
And the locusts sang off in the distance
Yeah the locusts sang such a sweet melody*

Brood X last appeared in Princeton during 2004. So they will again emerge in 2021. Brood X is found in American states including Illinois, Michigan, New York, and Georgia. Cicadas have "a tendency to be homebodies and do not travel far beyond the region in which they come out," said Princeton Ecology Professor, Henry Horn.

Most cicadas on the East Coast belong to Brood II. They live in an area that stretches from Connecticut in the North, down to North Carolina in the South. Brood II last appeared in 1996. In northern states such as New Jersey, this happens around early June when the temperature warms up to about 64 degrees. Once the nymphs crawl out above ground, they find a leaf on which to perch. Then they transform and turn into winged adults capable of flying around and reproducing.

Cicadas don't eat leaves the way that some insects like locusts and grasshoppers do. In fact, in some ways they actually help plant life. That's because after the females lay their eggs in trees and shrubs, many weak twigs and branches fall off. The extra weight from cicada eggs actually helps to remove weak or dead tree limbs. This results in stronger and healthier trees and shrubs.

The insects help nature in other ways too. When they tunnel up to the earth's surface, the soil is turned over and gets more air. And once they die, their decomposing bodies enrich the soil. They are also an important link on the food chain. They provide food to other animals like birds, squirrels, raccoons, possums, and other insects. However, eating cicadas can be dangerous to pets like dogs and cats. Although household pets may find them tasty, their hard exterior can cause choking. Pesticides are another problem. Animals can be poisoned after eating cicadas that have been sprayed with chemicals.

Name: _____ Date: _____

1. Where do cicadas spend most of their lives?

- A** in trees
- B** on the ground
- C** underground
- D** in bushes

2. Which of the following shows the correct sequence of events in cicadas' lives as described in the passage?

- A** Next generation hatches; young cicadas emerge from underground; adults mate and lay eggs; nymphs transform into winged adults; adults die.
- B** Young cicadas emerge from underground; nymphs transform into winged adults; adults mate and lay eggs; adults die; next generation hatches.
- C** Nymphs transform into winged adults; adults mate and lay eggs; next generation hatches; young cicadas emerge from underground; adults die.
- D** Adults die; next generation hatches; adults mate and lay eggs; young cicadas emerge from underground; nymphs transform into winged adults.

3. Cicadas help make trees stronger and healthier. What evidence from the passage best supports this statement?

- A** "The extra weight from cicada eggs actually helps to remove weak or dead tree limbs."
- B** "Once the young cicadas, called nymphs, crawl out above ground, they find a leaf on which to perch."
- C** "Cicadas don't eat leaves the way that some insects like locusts and grasshoppers do."
- D** "They provide food to other animals like birds, squirrels, raccoons, possums, and other insects."

4. Which of the following conclusions about cicada broods is supported by the passage?

- A** All cicada broods emerge from the ground at the same time.
- B** We cannot accurately predict when a cicada brood will emerge.
- C** Broods on a 13-year cycle are larger than broods on a 17-year cycle.
- D** Different broods on 17-year cycles can emerge at different times.

5. What is this passage mostly about?

- A cicada broods around the world
- B how cicadas help plant life
- C the life cycle of cicadas
- D Bob Dylan's "Day of the Locusts"

6. Read the following sentences: "Soon after they reach the surface, the nymphs split their skin and become adults, ready to mate. But shortly after reproducing, they die. Their young dig back into the earth, only to **emerge** once more in another 17 years."

What does "**emerge**" mean?

- A grow bigger
- B transform
- C hide under
- D come out

7. Choose the answer that best completes the sentence below.

Male cicadas call out to female cicadas to attract a mate, and each male tries to call louder than the next. _____, a brood of cicadas can be extremely noisy.

- A As a result
- B Although
- C For example
- D Previously

8. How long is the life cycle of Brood X?

9. Explain how cicadas help the soil throughout their life cycle.

10. Explain whether cicadas are helpful or harmful to other animals. Use details from the passage to support your answer.

Teacher Guide & Answers

Passage Reading Level: Lexile 880

1. Where do cicadas spend most of their lives?

- A in trees
- B on the ground
- C underground**
- D in bushes

2. Which of the following shows the correct sequence of events in cicadas' lives as described in the passage?

- A Next generation hatches; young cicadas emerge from underground; adults mate and lay eggs; nymphs transform into winged adults; adults die.
- B Young cicadas emerge from underground; nymphs transform into winged adults; adults mate and lay eggs; adults die; next generation hatches.**
- C Nymphs transform into winged adults; adults mate and lay eggs; next generation hatches; young cicadas emerge from underground; adults die.
- D Adults die; next generation hatches; adults mate and lay eggs; young cicadas emerge from underground; nymphs transform into winged adults.

3. Cicadas help make trees stronger and healthier. What evidence from the passage best supports this statement?

- A "The extra weight from cicada eggs actually helps to remove weak or dead tree limbs."**
- B "Once the young cicadas, called nymphs, crawl out above ground, they find a leaf on which to perch."
- C "Cicadas don't eat leaves the way that some insects like locusts and grasshoppers do."
- D "They provide food to other animals like birds, squirrels, raccoons, possums, and other insects."

4. Which of the following conclusions about cicada broods is supported by the passage?

- A All cicada broods emerge from the ground at the same time.
- B We cannot accurately predict when a cicada brood will emerge.
- C Broods on a 13-year cycle are larger than broods on a 17-year cycle.
- D Different broods on 17-year cycles can emerge at different times.**

5. What is this passage mostly about?

- A cicada broods around the world
- B how cicadas help plant life
- C the life cycle of cicadas**
- D Bob Dylan's "Day of the Locusts"

6. Read the following sentences: "Soon after they reach the surface, the nymphs split their skin and become adults, ready to mate. But shortly after reproducing, they die. Their young dig back into the earth, only to **emerge** once more in another 17 years."

What does "**emerge**" mean?

- A grow bigger
- B transform
- C hide under
- D **come out**

7. Choose the answer that best completes the sentence below.

Male cicadas call out to female cicadas to attract a mate, and each male tries to call louder than the next. _____, a brood of cicadas can be extremely noisy.

- A **As a result**
- B Although
- C For example
- D Previously

8. How long is the life cycle of Brood X?

Suggested answer: The life cycle of Brood X is 17 years.

9. Explain how cicadas help the soil throughout their life cycle.

Suggested answer: Cicadas help the soil when they tunnel up to the earth's surface, as this turns over the soil and allows the soil to get more air. When cicadas die, their decomposing bodies enrich the soil.

10. Explain whether cicadas are helpful or harmful to other animals. Use details from the passage to support your answer.

Suggested answer: Answers may vary and should be supported by the passage.

- Cicadas are helpful to other animals because they provide a source of food for birds, squirrels, raccoons, possums, and other insects.
- Cicadas are harmful to other animals because their hard exteriors can choke household pets who try to eat them. Cicadas can also harm animals if they have been sprayed with pesticides, which can poison the animals that eat cicadas.