**from *Ants* in Animal Architects: How Insects Build Their Amazing Homes  
Wright Robinson**

1 Ants are known as social insects. Every ant is a member of a well-organized colony, and none of these insects lives alone. Although some species live in colonies with only 10 to 15 members, other species may live in colonies with more than 1 million ants!

2 Within an ant colony, there are three classes of ants—queens, males, and workers. The queens are the only female ants that are able to lay eggs, and they continue to lay eggs for as long as they live. The males' only job is to mate with the queens. A short time after mating, the male ants die. Most of the ants we see are female workers. Their job is to care for the queen, raise the young, find food, enlarge the nest, and defend the nest against invaders. After mating, a young queen begins looking for a place to live. She either joins an existing colony or she starts a colony of her own. To start a colony, the female must build a small nest in which to lay her first batch of tiny eggs. The queen cares for her young until they become adults, at which time they take their places as worker ants within the colony.

**Giant Anthills**

3 In forests throughout much of Europe and Asia, colonies of red wood ants build huge dome-shaped homes that are sometimes more than 6 feet (2 meters) high. These enormous anthills are impressive enough on the outside—but this is only the "upstairs" section of the ants' home. Red wood ants also build thousands of tunnels and rooms in the soil below the anthill. The "downstairs" section of the nest may extend as deep under the ground as the top of the anthill stands above it.

4 A large wood ant nest may have more than 1 million workers and several hundred queens living inside. When the nest becomes too crowded, some of the queens leave, each taking several thousand workers with her. These small groups of ants do not travel far, however, before the workers begin building their queens' new homes.

5 A colony of red wood ants often builds its nest in a rotten tree stump. The workers can easily dig tunnels and build rooms in the soft wood. If they cannot find an old, rotting stump, however, the workers tunnel into the soil. They dig several small holes by carrying tiny clumps of dirt to the surface of the ground in their jaws. The workers then tunnel through the soil to connect the holes and create underground passageways. They add rooms to their nest by enlarging sections of the tunnels. Soon, the colony has a small new home.

6 Once the colony is safe within its new nest, the workers conceal all the "door" openings that lead into it to protect themselves from enemies. They pile pieces of leaves, grasses, pine needles, mosses, twigs, and other vegetation on top of the openings. As more and more material is added to the pile, the anthill gradually grows higher. Many of the workers do not carry their loads all the way to the top. Instead, they drop them along the sides, which makes the pile rounded or dome-shaped. Because of its shape, this type of anthill is often called a mound nest.

7 The wood ant architects also add rooms and passageways within the mound. As the mound becomes larger, more and more rooms and tunnels are added.

8 Even though the doors to the nest are safely concealed under vegetation, the ants can move in and out of the mound through small openings in the surface. Workers pass through these hard-to-find doors to gather more building materials and food for the ants inside the nest.

9 While some ants are building the mound higher, others are making the nest below ground larger, too. The workers build new rooms and tunnels, gather food, and take care of the young ants. The queen continues laying eggs. When the eggs hatch and more workers join the colony, the nest is made larger.

10 The red wood ants' nest is a busy place. Each day, workers are busy carrying pieces of grass, leaves, tiny twigs, and other materials from inside the mound to the outside. To us, this may seem like a waste of time, but it is not. Because of the warm temperature and the moist air created by the breathing of thousands of ants, the building materials that are deep within the mound become damp. If these damp materials were not brought to the surface to dry in the sun, they would become covered with molds and rot away. The molds would quickly destroy the mound of vegetation, and the wood ants' home would be ruined. Because of the ants' hard work, some mounds have lasted for more than sixty years!

11 The temperature within one of these large ant homes is about 77° Fahrenheit (25° Centigrade) most of the time. During the day, the mound is warmed by the sun. If, however, more heat is needed deep within the nest, hundreds or thousands of ants come out of the mound and stand in the sun warming their bodies. When they crawl back inside, they carry a little heat with them, and other ants go out to soak up more heat from the sun. At night, when temperature outside the nest drops, the ants keep the heat inside their home by blocking the doors or entrance holes that lead from the nest. During very cold winter months, the ants move into the deepest parts of their underground home, where the temperatures are the warmest. There, the colony can survive until spring.

12 The shape and design of the red wood ants' mound also helps to keep the ants dry. Because of the mound's steep slope, rainwater rolls off quickly. Although the warmth of the sun soaks into the mound, falling rain cannot seep through the tightly packed bits of vegetation

From "Ants" in Animal Architects: How Insects Build Their Amazing Homes by W. Wright Robinson. Copyright © 1990 by Blackbirch Press, Inc. Used by permission of Blackbirch Press, an imprint Thomson Gale, a part of The Thomson Corporation

**Use *from Ants in Animal Architects: How Insects Build Their Amazing Homes* to answer questions 1-5**

1. Based on the sentence below from paragraph 3, what does the figurative language tell the reader about the ants’ home?

*“These enormous anthills are impressive enough on the outside-but this is only the ‘upstairs’ section of the ants’ home*.”

A. The ants’ home is only above ground.

B. The ants have more home than just the ‘upstairs’.

C. The ants sleep in the top of the cone.

D. The ants’ home has an attic.

2. What is the central idea of paragraphs 1 and paragraph 2?

A. Every ant has a specific role to play in a colony.

B. Ants are very social.

C. Ants live in colonies that contain a queen and a small nest.

D. A new colony begins when a queen builds a nest and lays her first eggs.

3. Based on the information in paragraph 4, what can you infer about queen ants?

A. They are very important to the colony

B. They live longer than other ants

C. They build a new colony each spring

D. They rely on other queens for food

4. How is the queen’s purpose different from the female workers’ purposes?

A. The queen cares for the males, while the female workers protect the queen.

B. The queen dies shortly after starting a colony, and the female workers care for the young.

C. The queen finds food, but the female workers make the nest larger.

D. The queen lays eggs, while the female workers protect the nest against invaders.

5. Which of the following best matches the meaning of the word *conceal* as used in paragraph 6?

A. suppress

B. cover

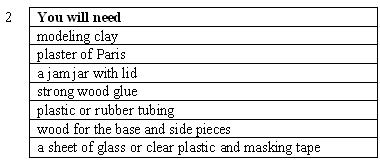
C. arrange

D. move

**Ant Colony**

**Liz Wyse**

1 Like bees, ants are social insects, living together in colonies. Different ants have different jobs. The queen lays the eggs. Male ants, or drones, mate with the queen. All the other female ants are the workers: they take care of the grubs, build the nest, gather food, and keep the nest clean.



**Make It Work!**

3 You can make your own ant colony and observe the way ants live at close quarters.

4  **1** First, you should find some ants. The spring months are a good time for collecting them, because they become more active as the weather gets warmer. They usually live hidden under stones or in decaying wood. When you have found a nest, scoop up a few ants, along with some soil, and put them in a collecting jar covered with gauze.

5  **2** Ask an adult to help you cut four side pieces and glue them to the board. Make sure the pieces all fit tightly so the ants cannot escape, but make one side piece slightly too short, so that there is a small gap at one corner.

6  **3** Mold the modeling clay to make a pattern of walls and chambers on the base. Make the walls about 1 inch thick

7  **4** Mix some plaster of Paris with water in an old jug and pour the liquid into the spaces between the modeling clay walls.

8  **5** Leave the plaster of Paris for 24 hours to set. Then pull out the modeling clay walls, making a network of plaster rooms. Add a thin layer of sand or soil to the base of your box.

9  **6** Put some leaves and soil inside the jar.

10  **7** Ask an adult to help you pierce a small hole in the jam jar lid, and fit the plastic tube through the hole. Seal the hole with modeling clay.

11  **8** Put the other end of the plastic tube through the gap in the side pieces, and seal it with modeling clay too.

12  **9** Make a box lid from a sheet of clear plastic or glass. Stick masking tape around all the edges. Now you are ready to put the ants into the box.

13  **10**Watch the ants scurry up the plastic tube and bring tiny pieces of food back into the colony. Ants are more active in the dark, so cover the glass with a cloth, leave the ant colony for a while, and when you come back, you will find a hive of activity!

"Ant Colony," *from Make it Work! Insects* by Wendy Baker and Andrew Haslam. Copyright © 1993 Two-Can Publishing Ltd. Reprinted by permission of Two-Can Publishing Ltd.

**Use *Ant Colony* to answer questions 6-10.**

6. Which sentence is the best summary of the first paragraph?

A. Ants are like bees because both species live in colonies.

B. The queen ant is the most important ant in a colony of drone ants.

C. In the colony, males mate with the queen ant, and females perform work-

related tasks.

D. Female worker ants provide food, shelter, and cleanliness for the colony.

7. What inference can be made about step 1 from the passage?

A. You will find ants under stones and decaying wood.

B. Winter is the best time to find ants.

C. Ants will be unable to escape if you use modeling clay.

D. Making your own colony is unnecessary if you don’t have ants.

8. According to paragraph 3, which of the following is the best meaning of the word *quarters*?

A. four equal parts of a whole

B. form of U.S. currency

C. specified area for living

D. permanently positioned

9. Which evidence best supports the inference that making your own colony will take some time?

A. “Leave the plaster of Paris for 24 hours to set.

B. “First, you should find some ants.”

C. “Make the walls about an inch thick.”

D. “Ask an adult to help you cut four side pieces and glue them to the board.”

10. According to the selection, how does warm weather affect one’s ability to collect ants?

A. The queen is gone from the nest.

B. Ants are more active.

C. New eggs are ready to hatch.

D. Ants live underground in tunnels.

**from The Confidence Game  
Pat Carr**

1 The early skies were still gray when I arrived at the Riverdale pool for the warm-up session. The other swimmers were screeching greetings at each other like a flock of gulls. I jumped into the water to cut off the sound and mechanically began my stroke.

2 Half an hour later, I shuddered as the public address system squealed. The meet was about to start. After climbing out of the pool, I quickly searched the heat sheet for my name. Disappointed, I saw that I had just missed making it into the last, and fastest, qualifying heat. Angela's name, of course, was there. She'd taken my place just as she had at the trials.

3 Better not to think about Angela at all, I told myself, recalling Coach's words. Better to concentrate on my own race. Carefully, I went over Coach's instructions in my mind, shutting out the milling crowd around me, swimming my race perfectly, over and over again in my head, always perfectly.

4 "Would you like an orange?"

5 Without looking I knew whose voice it was. "It's good for quick energy," continued Angela, holding the orange out to me.

6 "No thanks," I said. "I've got all I need." I saw that she was about to sit down next to me, so I added, "I don't like to talk before a race."

7 She nodded sympathetically. "I get uptight, too. The butterflies are free," she said with a nervous laugh.

8 For a moment I felt a little better toward her, knowing that she had the jitters, too. Then I remembered that she didn't have to worry.

9 "You'll be an easy winner," I said.

10 "You never know," she replied uncertainly.

11 My heat was called. Up on the blocks I willed my muscles into obedience, alert for the starter's commands. At the gun, I cut into the top of the water smoothly.

12 I swam exactly as I had been imagining it before the race, acting out the pictures in my mind. I felt the water stream past me, smooth, steady and swift. When I finished, I was certain I had done my best in that heat.

13 Overwhelmed by exhaustion, I sat on the deck for several minutes, eyes closed, totally spent. I knew I was missing Angela's heat, but I was too tired to care.

14 The sound of the announcer's voice was like a crackling firecracker of hope bursting through my fatigue. Then I heard my name. I'd made it!

15 I also heard Angela's name, but it was several minutes before I realized that my name had been called last. That meant my time had been better. Figuring there must have been a mistake I checked the official postings, but there were our times with mine four seconds faster.

16 Heading for the gym, where all the swimmers rest and wait for the heats to be called, I saw Angela sitting with her back against the wall alone. Her shoulders were rounded in a slump.

17 It could be me, I whispered to myself, remembering what it feels like to mess up a race. There's no worse anger than the kind you feel toward yourself when you've ruined something you care about. I knew how she felt, and I also knew there was no way I could make up for the way I had acted. But I just had to try.

18 "I don't talk before races, but I do talk after them. Sometimes it helps," I said, knowing Angela had every right to tell me to go drown myself.

19 "Talk if you want to," she murmured.

20 "Well, I will, but I was hoping you'd talk, too."

21 She hesitated, and I saw her trying to swallow. "I will as soon as I'm sure I'm not going to cry," she whispered.

22 So I babbled on for a few minutes about the meet, some of the other swimmers, the team standings, anything. I knew it didn't matter what I said as long as I kept talking.

23 All at once, Angela interrupted my opinion of the snack bar's hamburgers. "I do this all the time," she burst out. "I do great at workouts, then comes a meet, and something happens; I just can't do it."

24 "Maybe you don't know how to play the confidence game," I said. She looked at me suspiciously, but I went on. "How do you psych yourself up for a race?"

25 "I don't exactly." She was twisting the ends of the towel into tiny corkscrews. "I just try to block it out, not think about it."

26 "What about during a race?"

27 "I concentrate on not making mistakes."

28 "Very negative methods," I commented.

29 "What do you mean?"

30 "Well, take my positive approach. First, I think about all the good things I've done in previous races. Then I plan my upcoming race carefully, going over each detail in my mind, picturing myself the perfect swimmer. Then when I'm in the water, I tell myself to do it again, only this time for real."

31 "And you win," Angela added with a smile. Now I really felt badly, remembering how I had acted when Angela had done better than I in workouts.

32 "Listen, I have an idea," I said. Maybe I could make it up to her. "You swim faster than me, right?" Angela looked doubtful.

33 "Yes, you do, that's an objective fact," I insisted. "Now my idea is that you use me as a pacer in the backstroke final this afternoon."

34 At first Angela wasn't sure, but I soon had her convinced, and we were planning our strategy when Coach showed up.

35 "What's going on here?" He gave me an accusing look.

36 "We've got it all settled," Angela spoke up. "Tobi and I are going to be a team from now on."

37 "All right!" he said, giving us a smile usually reserved for winners.

38 As Angela and I sat together on the ready bench, I had conflicting thoughts about helping her. What was I doing anyway? Handing her my relay position on a silver platter, that's what.

39 I hadn't time to get worked up over it, though, because the whistle blew, and we stepped up to the blocks. At the sound of the gun I was into the water with barely a splash, skimming the surface like a water bug.

40 As I reached the wall, I pretended all my strength was in my legs as I flipped and pushed off. Pull hard, hard, hard, I told myself, muscles aching from the effort. Then on the last lap, I concentrated on a single word. Win! I shot through the water and strained for the finish.

41 Immediately, I looked to Angela's lane. She was there, but it was too close to tell who had won. She gave me the thumbs up sign, and I returned it.

42 I stared at the electronic scoreboard. Usually it didn't take long for the times to appear, but now it remained blank for so long I was beginning to worry that a fuse had blown.

43 Please, please let me be the winner, I whispered over and over. Finally, the winning times flashed on. I blinked away the chlorine haze, or maybe tears. Angela had won. I managed to give her a congratulatory hug.

44 "I couldn't have done it without you, Tobi," she bubbled.

45 "You did it, girls!" Coach couldn't keep himself from shouting, he was so excited. "You've just raced yourself to the Nationals!"

46 I had never felt so left out, so disappointed in my whole life. "Well, at least Angela has," I said, struggling to smile.

47 Coach looked startled. "And you did, too, Tobi."

48 What was he talking about? "I saw that Angela won the place on our relay team."

49 "That's right, but you missed something. You both swam so fast that you made qualifying times for the individual backstroke event!"

50 I was stunned. I had concentrated so hard on the relay place I hadn't even thought about the individual events.

51 "So you'll both go to the Nationals!" Coach couldn't resist doing a couple of dance steps, and I was so ecstatic, I joined him. But a wet concrete swim deck is not an ideal dance floor.

52 "Look out!" yelled Angela, as we just missed falling into the water. "I don't want my partner to break a leg. We've got a long way to go before the 1980 Olympics."

53 "What?" I gasped.

54 "Just doing some positive mental rehearsing," she grinned.

55 "A little confidence sure goes a long way," I retorted.

56 Still, maybe that is something to think about!

From "The Confidence Game" by Pat Carr is reprinted from Young Miss, copyright © 1977 by Parent's Magazine Enterprises.

**Use *from The Confidence Game* to answer questions 11-20.**

11.What is the meaning of *heat* as used in paragraph 2?

A. Round of a competition

B. Stress of a situation

C. Transfer of energy

D. Degree of warmth

12. Which word best describes the mood in the first paragraph?

A. Calming

B. Frightening

C. Hectic

D. Joyful

13. Which inference best describes Angela?

A. Shy toward her teammates

B. Unsure of what she wants to achieve

C. Bossy toward most other swimmers

D. Afraid to show self-confidence

14. Which statement best characterizes Tobi’s and Angela’s thoughts about the race in paragraphs 25–30?

A. Tobi takes a positive approach, but Angela takes a negative one.

B. Both girls forget to concentrate on swimming smoothly.

C. Tobi thinks about Angela's winning, and Angela thinks about Tobi's winning.

D. Both girls review all of the details of the heat mentally.

15. Which statement is the best summary of how Tobi prepares for a race?

A. She imagines the race and acts out the pictures in her mind.

B. She spends time at the pool after school, talking to the coach.

C. She works with the relay team an extra hour every day.

D. She goes to the pool on Saturdays when no one else is there.

16. In paragraph 11, which sense does the phrase *I cut into the top of the water* appeal to?

A. Touch

B. Sight

C. Smell

D. Taste

17. Which statement best shows how Tobi’s feelings about Angela change by the end of the story?

A. Tobi is jealous of Angela, but through teamwork, she becomes friendly toward her.

B. She wants to help Angela and forgives her for always winning.

C. Tobi is angry with Angela and forgives her for always winning.

D. She is excited about Angela's win, but she chooses not to swim with her again.

18. What inference can be made about Tobi’s feelings in paragraph 31?

A. She is angry toward Angela.

B. She is sorry about being rude to Angela.

C. She is scared of competing with Angela.

D. She is happy about beating Angela.

19. How does the simile in paragraph 14 foreshadow Tobi’s future?

A. It is used to show Tobi will not qualify for Nationals.

B. It proves Tobi can be successful, which she duplicates later.

C. It shows how Angela failed to qualify for the relay team.

D. It predicts Angela’s victory over Tobi.

20. Which statement best summarizes the theme of this selection?

A. Surprising things happen when we help others.

B. Being confident is more important than being nice.

C. Swimming competitively makes girls become friends.

D. Helping others only hurts yourself.

**Use from *Ants* in Animal Architects: How Insects Build Their Amazing Homes and Ant Colony to answer question 21.**

21. Constructed Response

Describe life inside an ant colony. Make sure to include a summary of the duties of the queens, drones, and workers in an ant colony. Use information from both “from Ants” and “Ant Colony” to support your response.

**Use *from The Confidence Game* to answer question 22.**

22. Constructed Response

The interaction between Tobi and Angela is important to the story. In your opinion did Angela’s interaction with Tobi help her overcome obstacles in the selection? Support your claim with details from the text giving at least 3 reasons with elaboration.