

## What fun facts do you know about ants?

Spark curiosity in kids of all ages with this introductory activity. Students can't resist reaching into the mouth of an ant to pull out a mystery fact. Pass the box around and allow each student to share an interesting tidbit with the class. Or, use the box throughout your teaching unit as a treat.

## Materials

paper cutouts (head, antennae, mandibles)  
fact strips (advanced or simplified)  
shoebox  
metal brads  
tape or glue  
scissors

## How to build your ant fact box:

1. Print and cut out the head, antennae, and mandibles.
2. Hold the shoebox lid vertical and cut a hole for the mouth that is wider than your fist.
3. Use tape or glue to stick the head cutout above the mouth.
4. Attach the antennae and the mandibles to the head by lining up the red circles and poking a brad straight through all three parts.
5. Print either the advanced or simplified version of the ant facts.
6. Cut the ant facts into strips of paper, fold lightly, and place in the shoebox.
7. Close the lid, place upright, and voila!



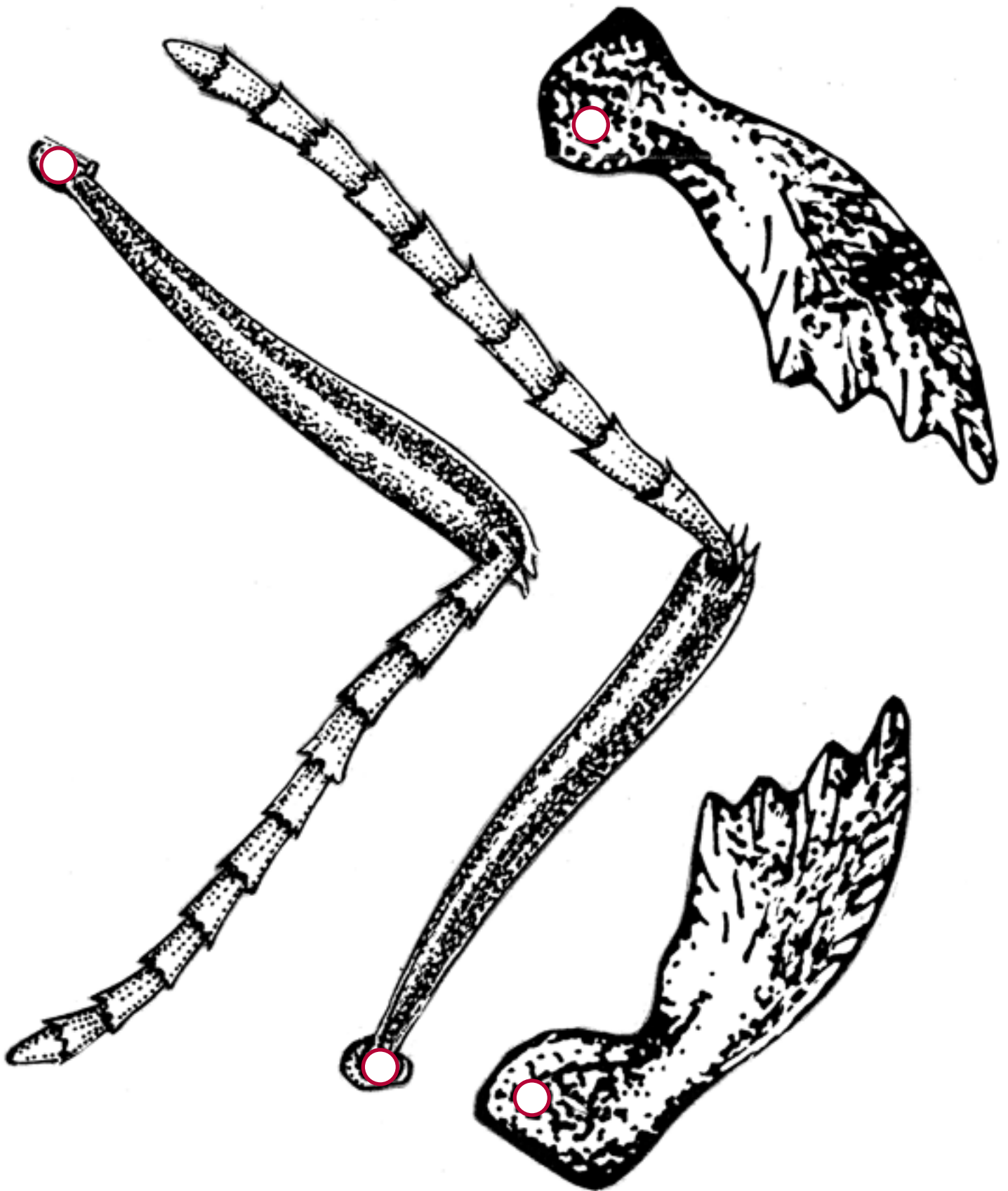
# Paper Cutouts

Head



## Paper Cutouts

Antennae and mandibles



## Fact Strips

Advanced Version, page 1 of 3

Ants depend upon a complex social structure for survival. An individual ant cannot survive without its colony.

Ants have lived on the Earth for more than 100 million years and are found in almost every terrestrial habitat. They are most abundant in tropical ecosystems.

Ants evolved from wasps.

Ants smell with their antennae. They use their antennae to pick up scents in the air, stroke other ants, tap the ground, and examine pieces of food.

Ants can hear with their legs. Organs on the legs, antenna, thorax and head respond to sound vibrations moving through the ground.

Ants communicate by touch. Tapping, stroking and dancing deliver simple messages.

Ants are near-sighted. Their compound eyes are made of tiny lenses that easily detect movement, but they can only see images clearly when they look at things close-up.

Ants defend their homes by biting, stinging, or spraying intruders with chemicals.

Ants "talk" with chemicals. They have 10 - 20 chemical "words," which allow them to identify ants from their own species, to attract other ants to sources of food, and to raise an alarm call in case of danger.

Some ants build mounds with a longer southern slope to increase solar energy collection. The slopes are so consistently oriented that for centuries they were used as compasses by people in the Alps.

Some workers are responsible for nest hygiene. They move pupae covers, remnants of foraged insects and dead ants to refuse piles far from the nest.

## Fact Strips

Advanced Version, page 2 of 3

Ants make antibiotics. A “metapleural” gland, unique to ants, secretes an antibiotic that prevents bacteria and fungi from invading and infecting the colony.

Ants can walk upside down. Each foot has two hooked claws, which dig into surfaces and let ants climb trees and walk on the undersides of leaves.

Ants are very neat and clean. Their mouths have combs to clean their front legs and their front legs have combs to clean their back legs and antennae.

Ants have social stomachs. They store liquid food in an expandable pouch called a crop. Food is often regurgitated from the crop and shared with nestmates. A worker can induce a nest mate to provide liquid food by touching the other ant’s head using its foreleg.

Ants make high-pitched sounds by rubbing a thin scraper on their waist against ridges on their abdomen. This type of communication is called stridulation, and it is barely audible to humans.

An ant’s skeleton is on the outside. A hard, shell-like covering protects the internal organs and supports muscles.

Ants do not have lungs. Air tubes branch out to all parts of the body. Oxygen enters and CO<sub>2</sub> exits through tiny openings on the sides of the body.

Ants have tiny brains. A nerve cord connects the brain to the thorax and abdomen. From the cord, nerves branch out to the entire body.

Ants have simple hearts, which consist of a tube that runs from the head to the end of the abdomen. Muscles force colorless blood forward in the tube where it empties out near the brain.

When an ant dies it simply falls over. Nest mates ignore it until decomposition begins. Then they pick it up, carry it out of the nest and drop it on a refuse pile.

## Fact Strips

Advanced Version, page 3 of 3

An ant's worst enemy is another ant. They are aggressive and attack other ant colonies. In most cases, ants from different colonies, even within the same species, treat each other as enemies.

Some ant colonies have huge wars in which thousands of ants rip one another to pieces. The winners invade the defeated colony and carry off the young to eat. An ant's jaws are used to hold the legs or antennae of an enemy ant while nest mates tear the victim apart.

Some ants don't have stingers. They may spray poison from the tip of the gaster or release an insect-repelling substance that is thick and gluey.

Ants are strong. They can carry food 5x greater than their own weight or drag prey items 25x heavier.

Ants like hot and humid climates. They function poorly below 68°F (20°C) and not at all below 50°F (10°C).

Most colonies have one queen, but some species have multiple queens.

Worker ants are all female. They do all the jobs necessary to keep a colony alive except egg laying. Workers may live from less than one year to more than five years.

Male ants don't do any work in the colony. They live a short time and their only function is to mate with young queens.

The colony is organized vertically within a nest by age and life stage. Younger ants are found at the bottom of the nest, taking care of the queen and her brood. Older ants take care of food stores and expand upper chambers, while the oldest ants are sent out of the nest to forage for food.

Individual workers only live a short time, but a single colony can survive up to 30 years as long as its queen is alive and laying eggs.

## Fact Strips

Simplified Version, page 1 of 2

An individual ant cannot survive without its colony.

Ants have lived on the Earth for more than 100 million years.

Ants are related to wasps.

Ants live in organized communities called colonies.

Ants smell with their antennae.

Ants can hear with their legs.

Ants are near-sighted.

Ants can bite, sting, and spray their enemies with chemicals.

Ants can walk upside down.

Ants are very neat and clean.

## Fact Strips

Simplified Version, page 2 of 2

Ants do not have lungs, and they have tiny brains.

An ant's worst enemy is another ant. Some ant colonies have huge wars in which thousands of ants rip one another to pieces.

Ants are strong. They can carry food 5 times greater than their own weight or drag items 25 times heavier.

Ants like hot and humid climates, like the tropics.

Worker ants are all female.

Male ants don't do any work in the colony. They live a short time and their only job is to mate with young queens.

When an ant dies it simply falls over. The other ants ignore it until it starts to rot. Then they pick it up, and carry it out of the nest.