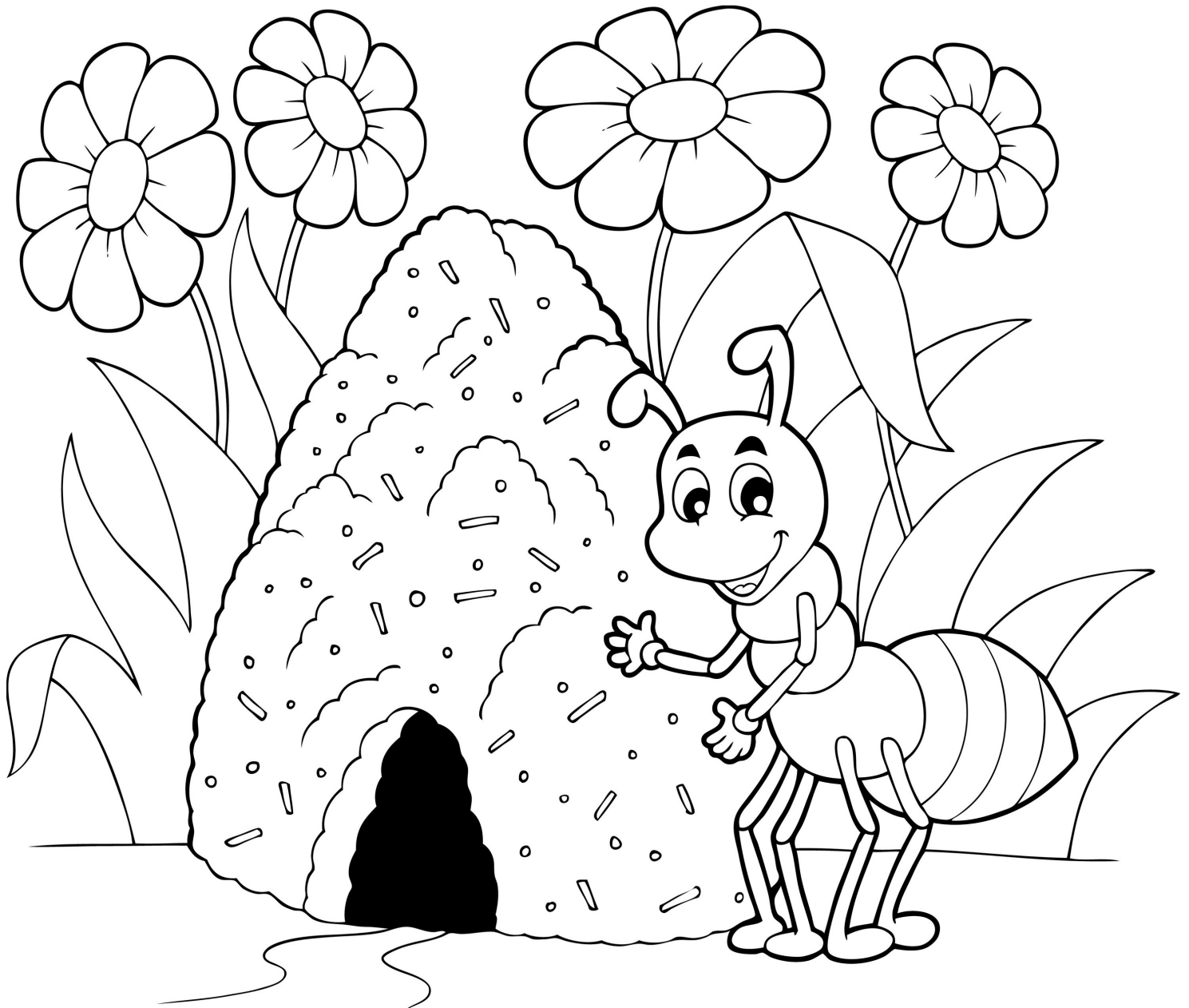
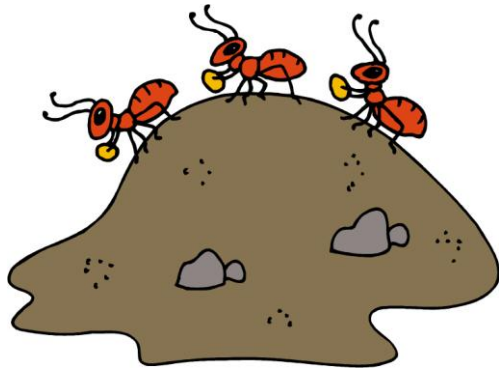


Ant Lapbook



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Ant Lapbook

study by Brandy Shutt
and Lynn Pitts

Classification: *Ant Classification*

Kingdom: Animalia

Phylum: Arthropoda

Class: Insecta

Order: Hymenoptera

Suborder: Apocrita

Family: Formicidae

Anatomy: *Ant Anatomy, Fun Facts, Ant Brains, Matchbooks, Run Ant Run, Let's Take a Ride*

Ants are usually 2-7mm long, with the exception of the carpenter ant which can stretch from 2cm up to an inch!

Being an insect, ants have three parts; the head, thorax, and abdomen or (head, trunk, and metasoma). Each part contains more important parts for the functionality of this fascinating insect:

Head

Feelers or Antennae - the better to touch and smell with

Pinchers - the better to carry, dig, defend and eat with (an ant squeezes its food with its pinchers to get the juice because it cannot chew).

Compound eyes - the better to see many of the same thing with
Brain - the better to process with (40,000 ant brains are about the size of 1 human brain, 1 ant brain has the processing power of a Macintosh11 computer, and ants have the largest brain among all insects).

Thorax

6 legs with a sharp claw on each end - these make me an insect and help me climb better and run fast (if a human were an ant he/she could run as fast as a race horse).

Abdomen

Poison sac

Stinger - the common Black Ants and wood Ants have formic acid instead (some birds will put these ants in their feathers to ward off parasites).

2 stomachs - one for me and one for the colony.

Who's Who? *Who's Who in the Ant Colony Side by Side*

Queen Ant- Queen ant lays all the eggs and is the mother. Young queens have wings but old queens do not. All have large abdomen's to produce eggs. Some can lay millions of eggs per year.

Male Ants- All males have wings and can be seen for only a few weeks in the summer. They mate with the queen and do no work in the colony.

Worker Ants- All female, but do not lay eggs. They are the smallest ants, they do all the chores: clean the nest, gather food, and defend the colony.]

Worker Jobs: *Heigh-ho! Its Off to Work We Go!*

Workers have many different jobs to do. They begin their work by cleaning themselves. A couple days later they start sharing food and licking each other.

Here are a some of the different jobs done by the worker ants.

Queen Tender: Young ants help the queen deliver her eggs by grabbing the eggs with their mandibles.

Nurse Ant: Young ants lick larvae so they do not dry out, and feed them so they grow.

Tunnel Diggers: Young ants dig tunnels for traffic and new chambers to store eggs and larvae and food.

Guard: These ants stand near the entrance of the nest, blocking strange ants from entering.

Foragers: The oldest ants search for food. Most foragers search within 50 feet of the nest, but if food is scarce, they may travel thousands of feet.

How an Ant Colony Starts: *The Beginning of an Ant Colony T-book*

1) After hot summer rain, a young queen takes off on her mating flight. She flies into a cloud of male ants and mates in the air.

2) Afterward, all the males die, and the queen returns to the earth. She breaks her wings off by rubbing them on the ground.

3) Then she digs a hole in the soft, moist earth and starts laying eggs. She will never leave the nest again.

4) During the next 3 months, the eggs develop through four stages: egg, larva, pupa, and adult ant.

5) After they have hatched, the first workers assume the duties of the colony-- searching for food and protecting the queen.

Life Cycle: *Life Cycle Wheel*

Egg- queen ants lay tiny oval shaped eggs

Larva- worm like larva grow and grow causing their skin to shed; they don't have eyes or legs

Pupa- once the larva reaches a certain size, it spins a cocoon and pupates; during the time in the cocoon, the ant's body changes to adult form

Adult- the pupa emerges into an adult

Life Expectancy: *Queen vs. Worker book*

A worker ant generally lives 45-60 days. However, the queen can live up to 10 or 20 years!

Ant Talk: *Ant Talk Shutterflap*

Ants express themselves by using these senses.

TOUCH: Ants tap one another with their antennae to announce the discovery of food and to ask for food.

SMELL: They emit pheromones that other ants smell through their antennae. This warns them of danger, says hello, or helps others to work harder.

SOUND: When they are trapped, they rub the joint between their waist and abdomen to make a squeaky sound that other ants hear through their legs.

TASTE: They exchange food with other ants mouth to mouth. This sharing of nutrition and chemicals says, "We're Family!"

Fun Facts: *Fun Facts: I've Got the Power*

- If a man were an ant he could run as fast as a racehorse, which is approximately 40mph
- There are over 10,000 known species of ants
- If a worker ant finds food it leaves a trail of scent
- An ant has two stomachs one for him and one for the colony
- Some worker ants even have the job of taking out the trash (removing it from the nest)
- In the night ants put the eggs deeper into their nests
- Ants can lift 20-50 times their own weight

Different Kinds of Ants: *Types of Ants, Fun Facts, Matchbooks*

KIND	FACT	DIET	HABITAT
Leafcutter	<ul style="list-style-type: none"> -largest ants in their area, the queen can be as large as a mouse -they make their own antibiotics! 	<ul style="list-style-type: none"> -they use leaves as compost to grow a special fungus to eat 	<ul style="list-style-type: none"> -Central and South America -nests can be 30' wide and 20' deep -can be 2-3 million in one colony
Army	<ul style="list-style-type: none"> -queen ant can lay up to 4 million eggs in 1 month -they forage for prey -they have a hierarchy: queens (eggs), workers (sterile females), and soldiers (defense) -up to 700,000 in a colony 	<ul style="list-style-type: none"> -they can kill and eat up to 100,000 animals in one day -lizards, snakes, chickens, pigs, goats, scorpions, birds, and insects 	<ul style="list-style-type: none"> -South America -their nests are made up of Army Ants! -they use jaws & claws to connect and make walls -these temporary nests are necessary because they are nomadic
Carpenter	<ul style="list-style-type: none"> -each worker ant varies in size within the same colony -they do not eat wood -can stretch up to 1" 	<ul style="list-style-type: none"> -living and dead insects, meats, fats, sweets of all kinds 	<ul style="list-style-type: none"> -indigenous to many parts of the world -live/dead damp wood is where they nest (trees, houses, etc.)
Slave Maker	<ul style="list-style-type: none"> -queen ant will either fake her death or charge right in to kill the queen of another colony -the goal of all types of slave maker ants is to get someone else to do the work 	<ul style="list-style-type: none"> -regular ant diet: insects and such 	<ul style="list-style-type: none"> -warm climate -the nest of another colony
Harvester	<ul style="list-style-type: none"> -unlike most ants they can chew -can have a harmful sting -can be confused with the fire ant 	<ul style="list-style-type: none"> -seeds and dead insects 	<ul style="list-style-type: none"> -southwest USA -grassland, ornamental turf -they make a clearing of about 3'-6' circle of no vegetation
Fire	<ul style="list-style-type: none"> -they have venom -they bite just to hold on then they sting -they are attracted to electrical currents and have been known to short out appliances. 	<ul style="list-style-type: none"> -feed on young plants, seeds and sometimes crickets 	<ul style="list-style-type: none"> -indigenous to many parts of the world -large mounds in open areas -under brick, rocks or logs along highways, river banks, ponds or lawns

The Ant Year: *A Year in the Life of an Ant*

April – open nest

May – time to mate and lay eggs

June – larvae grows and grows

August – work, work, work

November through March – hibernation

Copy Work: *Copywork Simple Fold*

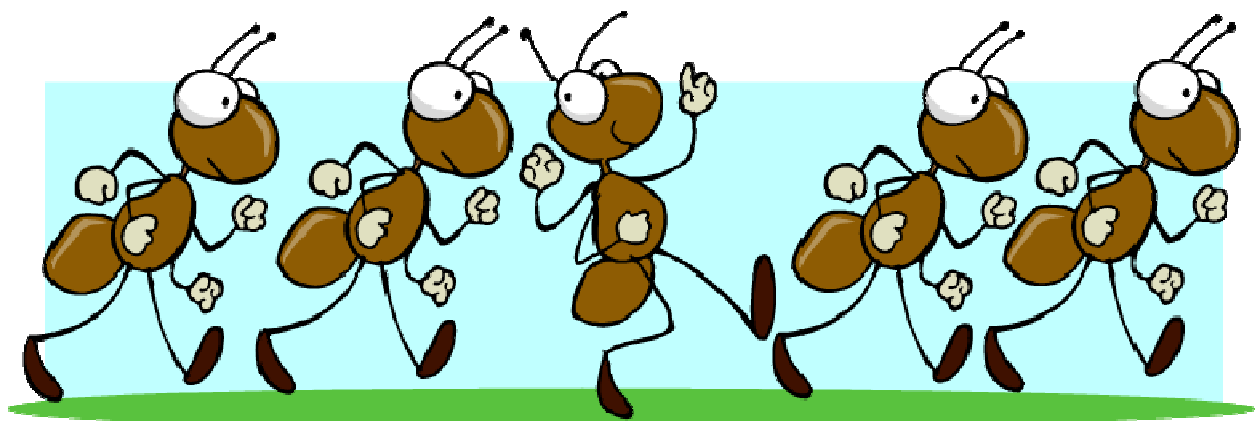
(Proverbs 6:6)

“Go to the ant, you sluggard; consider its ways and be wise!”

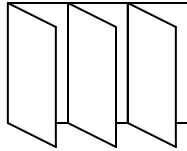
Ant Lapbook



WHO'S WHO in the ant COLONY?



Cut out each shape (cut along the dark black lines; do not cut any gray lines). Fold each book in half on the gray line (three small books and one large book). Glue the back sides of the small books into the inside of your large book.



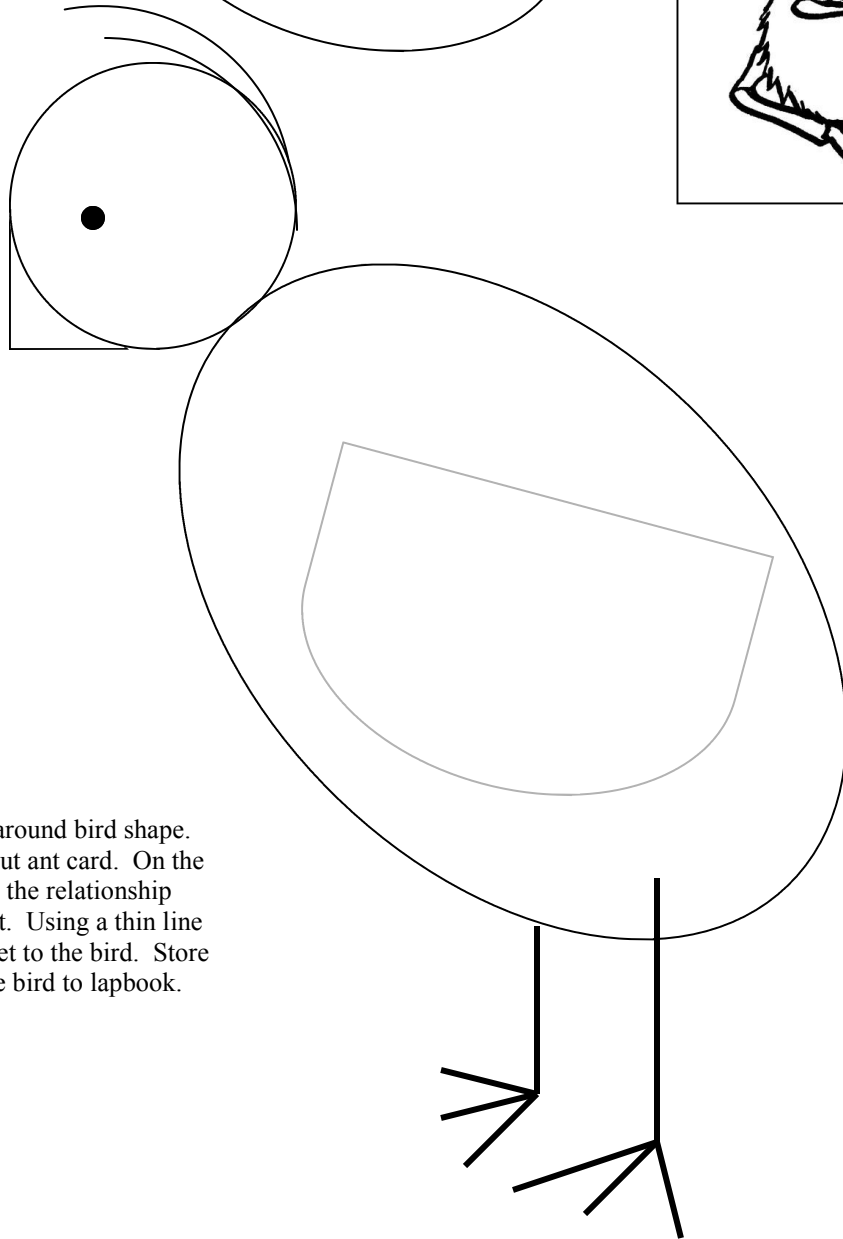
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worker

queen

male

Let's Take
a Ride



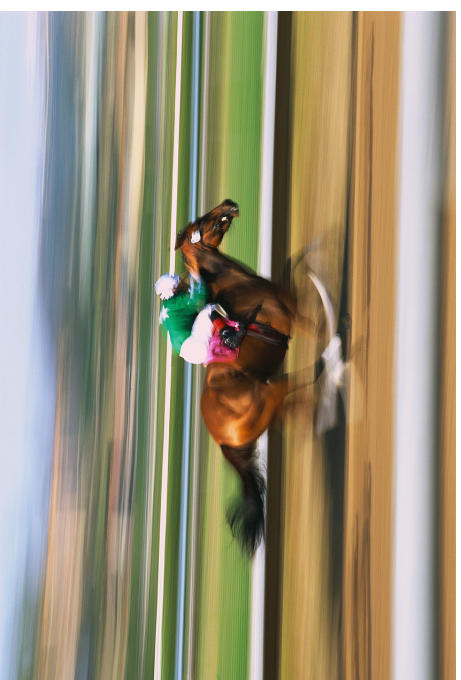
Color bird, if desired. Cut around bird shape. Cut out wing pocket. Cut out ant card. On the back of the ant card explain the relationship between the bird and the ant. Using a thin line of glue, glue the wing/pocket to the bird. Store ant card in the pocket. Glue bird to lapbook.

Cut L-shape out as ONE piece. Fold the top of the L shape down. Fold the right rectangle in over the existing flap.

*If I were an ant,
I could run as fast as.....*



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Cut out book as one piece. Fold left side in. Fold right side in. Open book. Cut on dotted line to form two flaps. Refold book.

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I Could Lift...

Could Lift...

I've Got the Power!

50 X's

I've Got the Power!

Cut out shapes on solid black lines; you will have a total of two pieces when finished. Write the correct ant job title on each section. Glue two strips as indicated. Fold on dotted lines like an accordion (back and forth, back and forth).

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Young ants dig tunnels for traffic and new chambers to store eggs and larvae and food.

Young ants lick larvae so they do not dry out; they also help larvae grow by feeding them.

Young ants help the queen deliver her eggs by grabbing the eggs with their mandibles.



Workers have many different jobs to do. They begin their work by cleaning themselves. A couple days later they start sharing food and licking each other.



**HEIGH-HO!
IT'S OFF
TO WORK
WE GO!**



The oldest ants search for food. Most foragers search within 50 feet of the nest. If food is scarce, they may travel thousands of feet.

These ants stand near the entrance, blocking strange ants from entering.

Glue to the back end of the first strip.

Date: _____

Time: _____

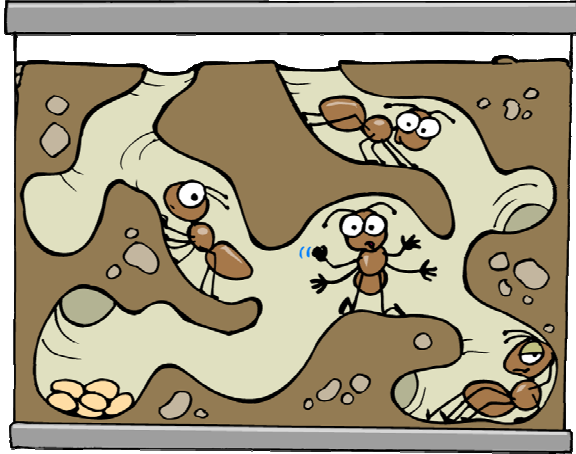
Activity:

Date: _____

Time: _____

Activity:

Ant Farm Observations



Date: _____

Time: _____

Activity:

Cut out each piece. Have your student fill out information each time she observes her ant farm. Stack together with cover on top and staple on the top left corner.

Date: _____

Time: _____

Activity:

Date: _____

Time: _____

Activity:

Date: _____

Time: _____

Activity:

Date: _____

Time: _____

Activity:

Cut book out as one piece. Fold in thirds with cover on top. Cut and paste pictures one insect per section. Let your student label insects.

The eight legged jumping spider is not an ant. They appear to have antenna, however they are actually legs.



The termite is not an ant. The size and shape are similar, however the termite is a relative of the cockroach.



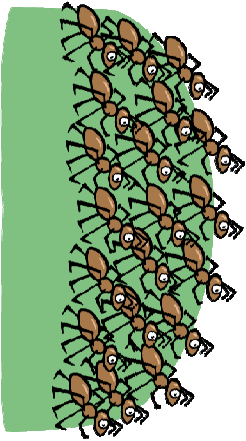
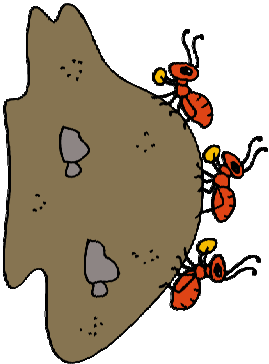
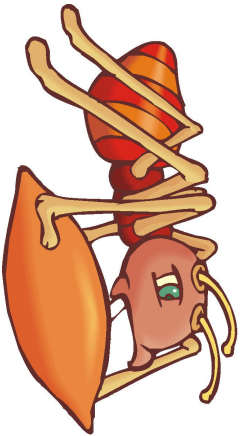
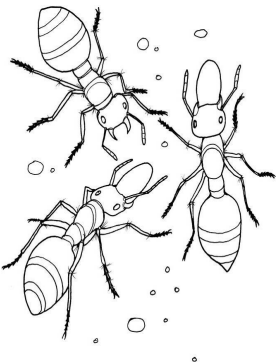
The velvet ant is not an ant. It is actually a type a wasp and relative of an ant. It is hairy, too.



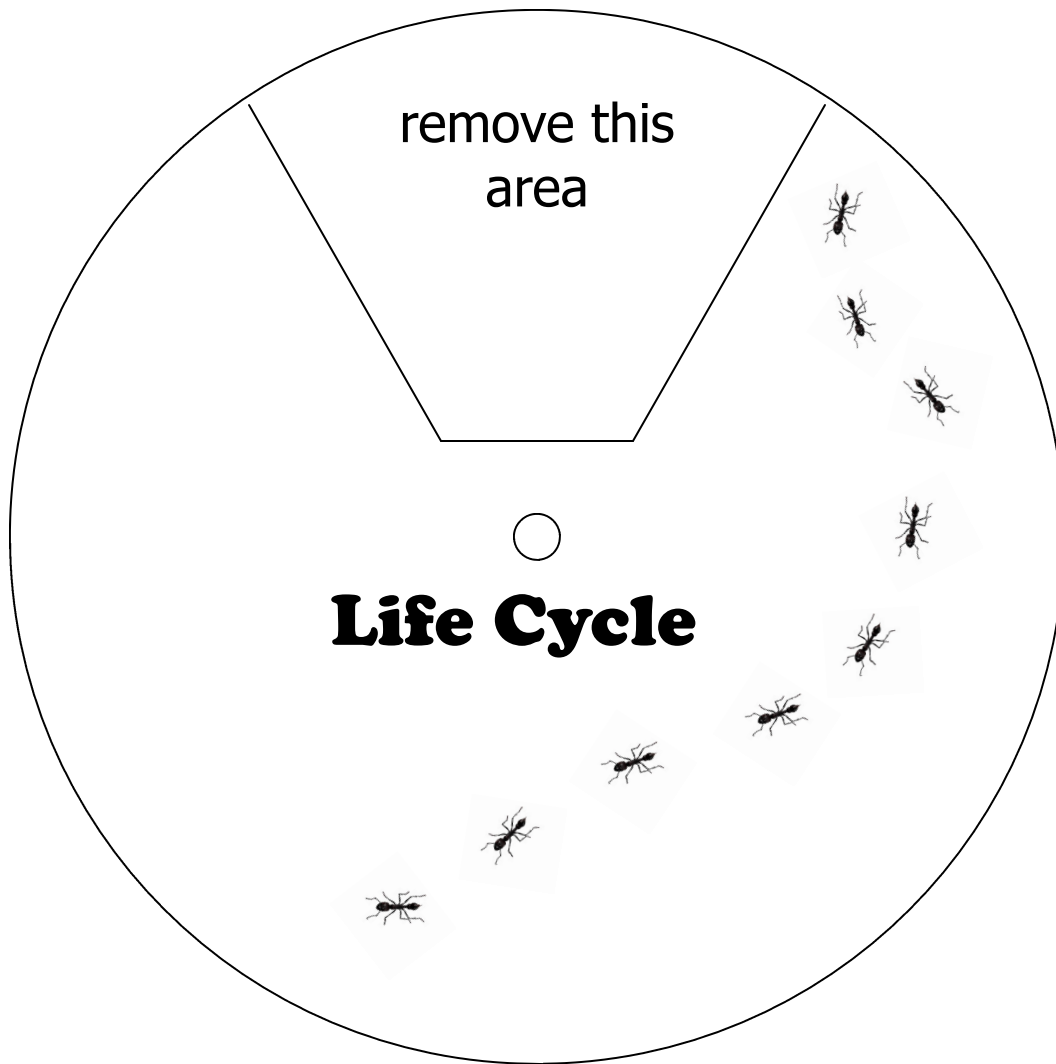
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LOOK AGAIN

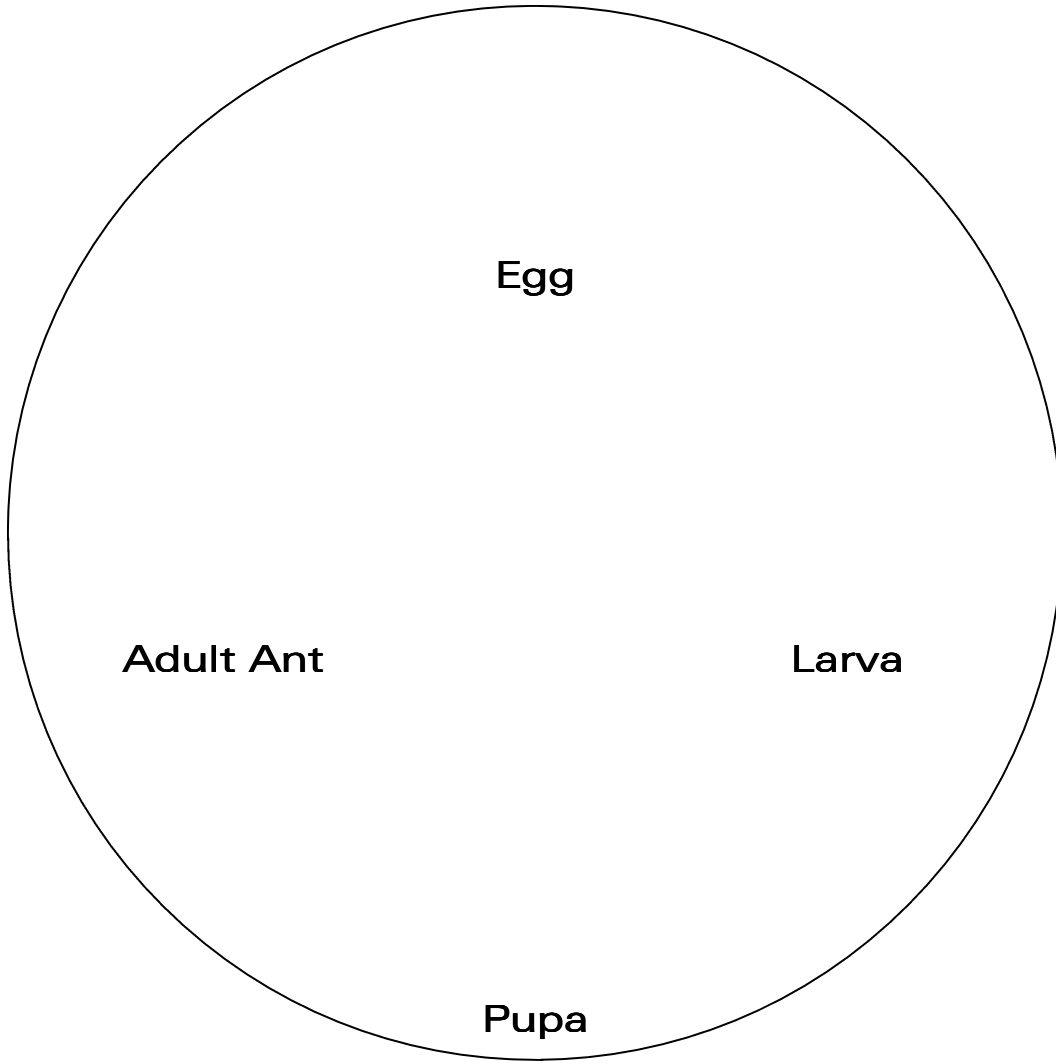


How many species of ants are there?	How do the ants find their food?	The SQUEEZE diet	What purpose do the antennas have?
			

Cut on solid black lines. Fold books (four total) matchbook style. Write appropriate information inside each book.

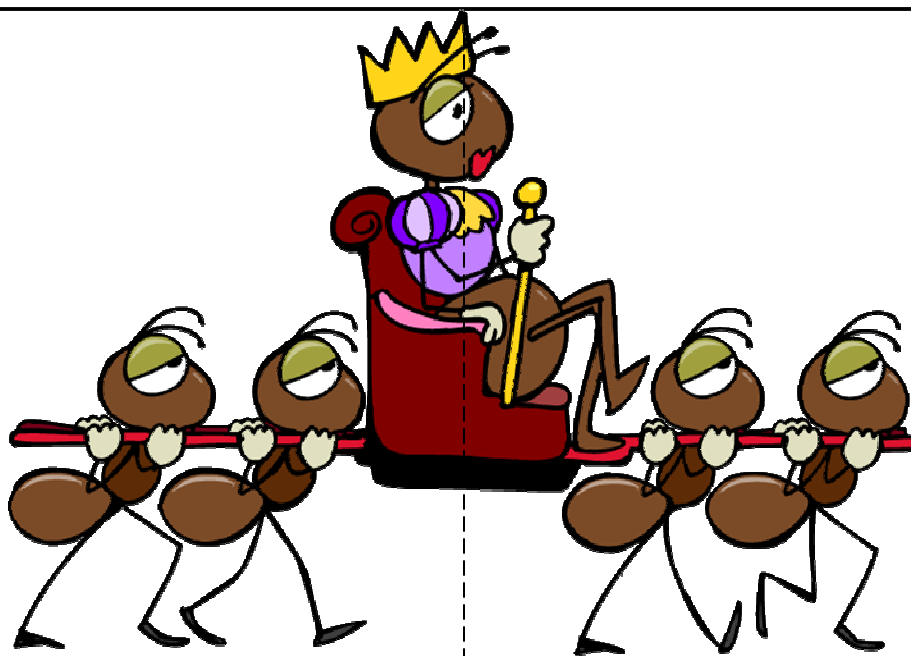


Cut out wheels. Cut away the extra area on the cover wheel (where indicated). Let your student cut/paste the pictures into the right sequence. Attach wheels together using a brass fastener.



How long does a
worker live?

How long does the
queen live?



FACT:

DIET:

HABITAT OR HOME:

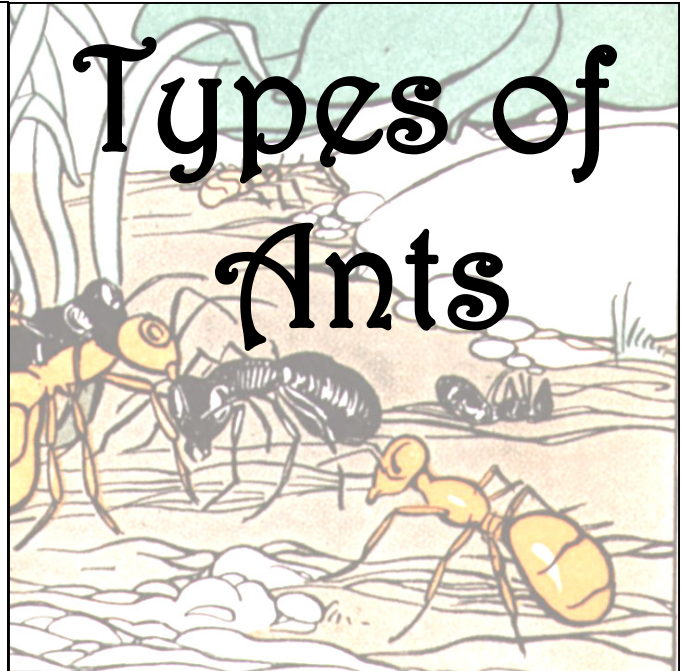
Leafcutter

FACT:

DIET:

HABITAT OR HOME:

Army



Cut on solid black lines. Stack book together.
Your student will have six tabs to flip through
(two at the top, two on the side, and two on the
bottom).

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Slave-maker

FACT:

DIET:

HABITAT OR HOME:

FACT:

DIET:

HABITAT OR HOME:

Carpenter

Harvester

FACT:

DIET:

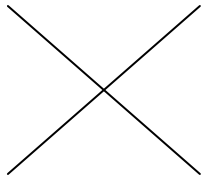
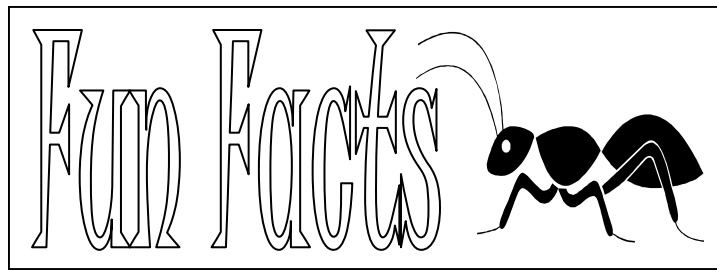
HABITAT OR HOME:

FACT:

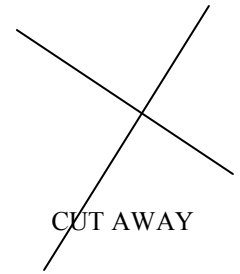
DIET:

HABITAT OR HOME:

Fire



CUT AWAY



CUT AWAY

BACK

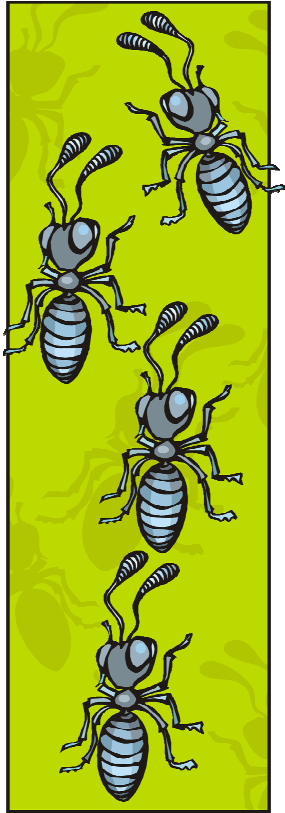
How many
Army ants are
in a colony?

How long can
a carpenter
ant stretch?

What do they
do with their
rubbish?

Which ants do
not sting?

Print page. Cut on solid lines; fold on dotted lines. Cut and paste title to the front.

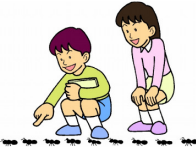


Proverbs 6:6

Copywork

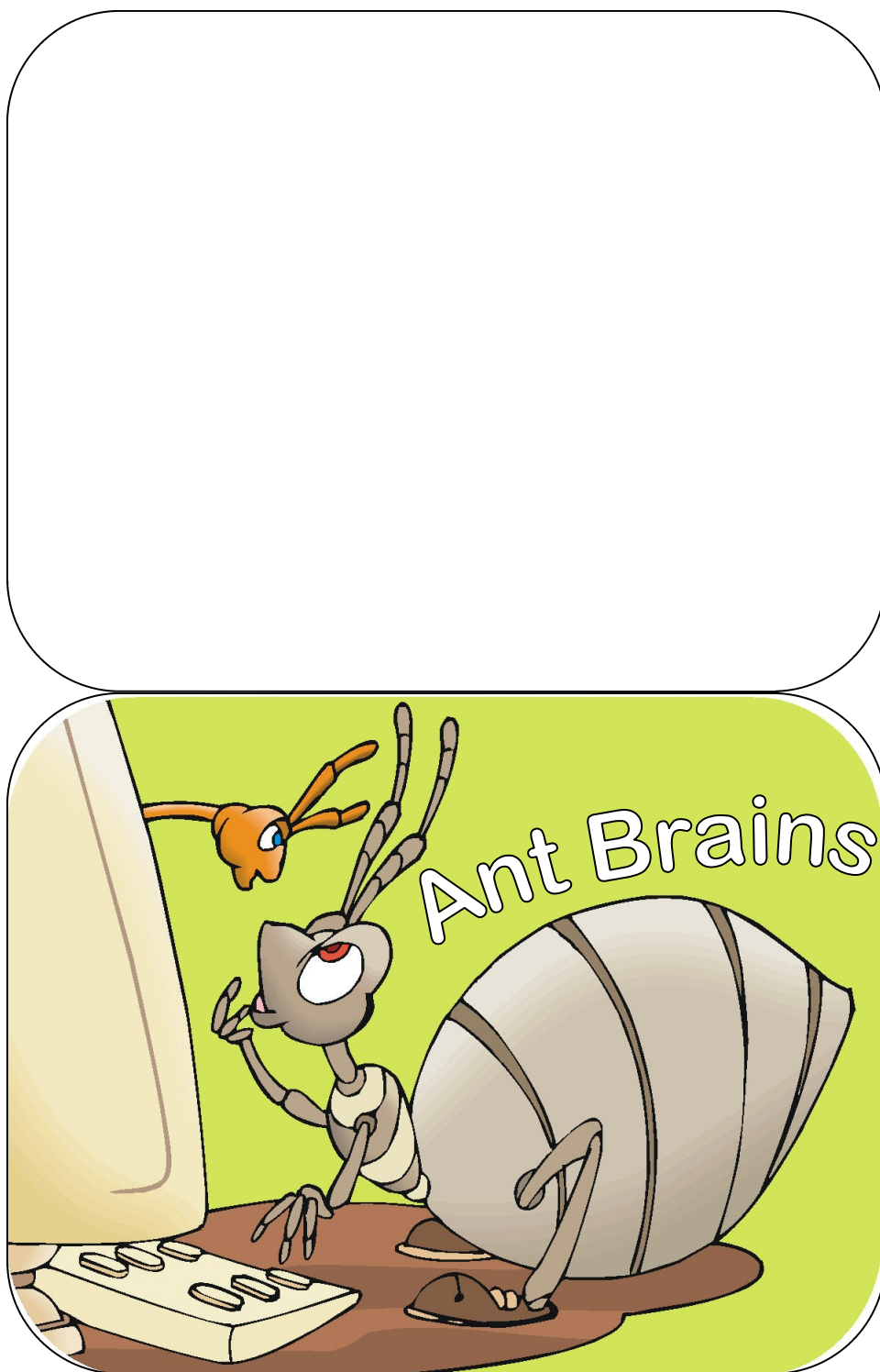
Cut out all pages on solid lines. Stack with cover on top and staple on left.

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	<h1>Ant Classification</h1>
Kingdom	

Family

Cut out book as one piece. Fold in half. Write about an ant's brain.



**THE
BEGINNING
OF AN ANT
COLONY**

1



2



3



4



5



Cut out as one piece. Paste information from next page on correct sections.

Fold left side in. Fold right side in. Fold bottom up. Fold top down.

Cut out cover piece (The Beginning...) and paste to the front of the book.

After hot summer rain, a young queen takes off on her mating flight. She flies into a cloud of male ants and mates in the air.	Afterward, all the males die, and the queen returns to the earth. She breaks her wings off by rubbing them on the ground.	Then she digs a hole in the soft, moist earth and starts laying eggs. She will never leave the nest again.
During the next 3 months, the eggs develop through four stages: egg, larva, pupa, and adult ant.	After they have hatched, the first workers assume the duties of the colony-- searching for food and protecting the queen.	



Predators!



It's a dangerous world!

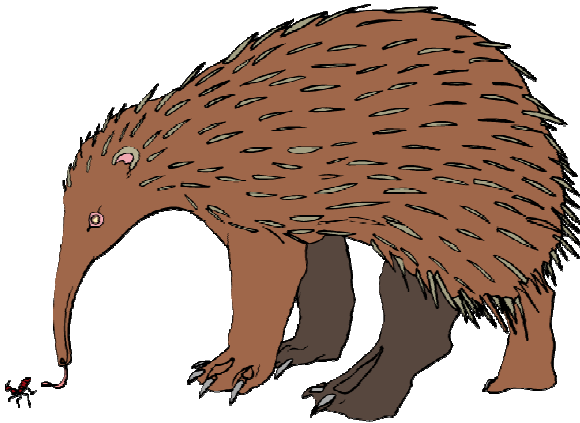
Woodpecker

REMOVE THIS AREA (Cut away so you have just a tab left)

Armadillo

REMOVE THIS AREA

Anteater	
Ant Lion	REMOVE THIS AREA
Horned Lizard	REMOVE



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Cut the strips along the solid outer lines. If there is a rectangle piece in the right corner of the strip, cut it off as indicated (remove this area). Stack your strips in order with cover on top and staple where indicated.

Glue pictures to appropriate pages

Cut out book as one piece. Fold left side in. Fold right side in. Open book.
Cut on dotted lines to form five flaps. Refold book.

April

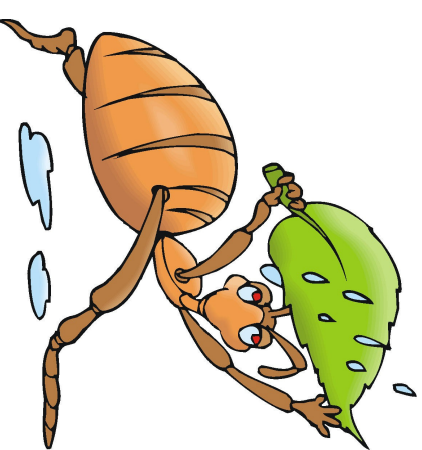
May

June

August

November to March

A Year in the Life of an Ant



Ant Talk

fold

Cut away

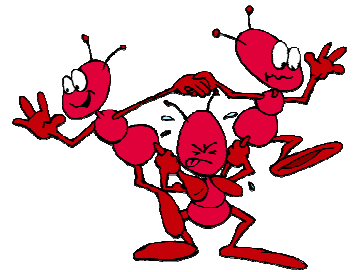
Cut away

Touch



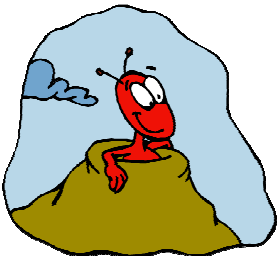
back

Smell



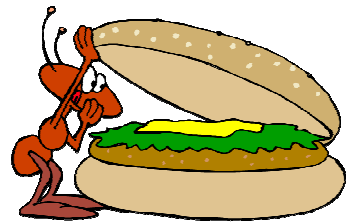
fold

Sound



back

Taste

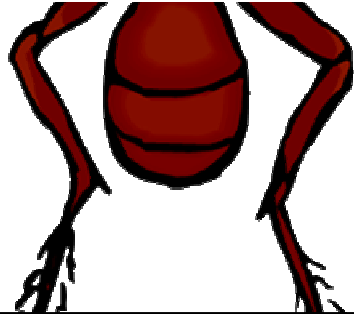


Ants express themselves
by using these senses.

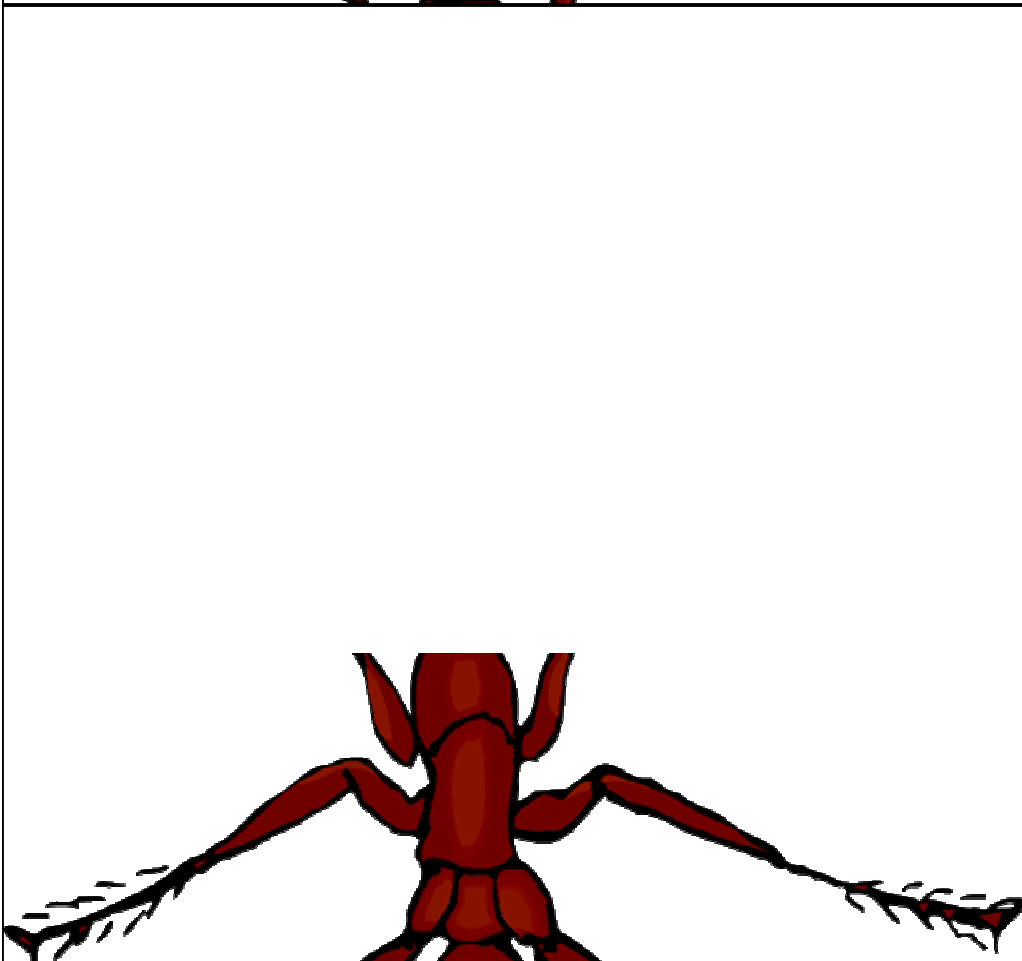
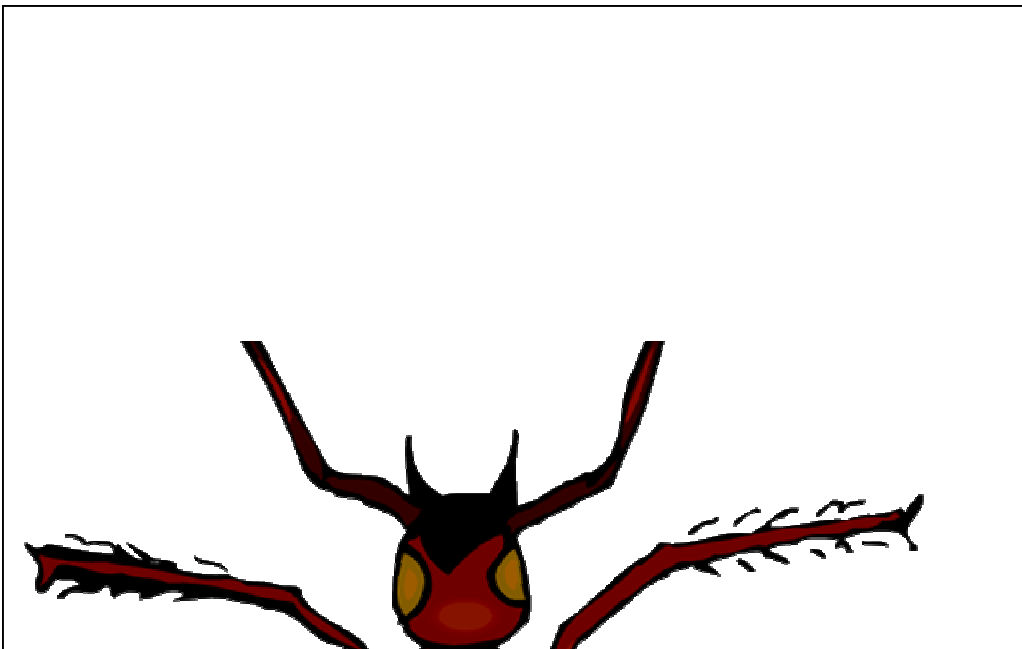
Ants tap one another with their antennae to announce the discovery of food and to ask for food.	When they are trapped, they rub the joint between their waist and abdomen to make a squeaky sound that other ants hear through their legs.	They emit pheromones that other ants smell through their antennae. This warns of danger, says hello, or helps others to work harder.	They exchange food with other ants mouth to mouth. This sharing of nutrition and chemicals says, "We're Family!"
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Cut out book on previous page as one piece (cutting away areas as indicated). Fold side flaps to the front. Fold top flap down. Paste information under the appropriate flaps.

Ant Anatomy



Cut out rectangles. Stack together (smallest to largest) with cover on top and staple.



What kind of eyes do ants have?

How many stomachs do ants have?

What are their stomach's used for?

What is the name of their hard outer shell? _____

How many legs do ants have? _____

How many antenna do ants have? _____



Write the moral of Aesop's Fable, The Ant and the Grasshopper on the inside of the book.

The Ant and the Grasshopper

