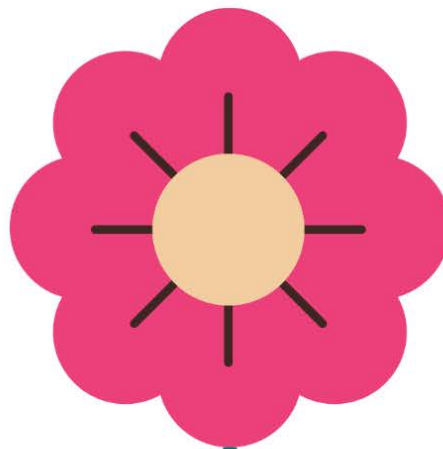
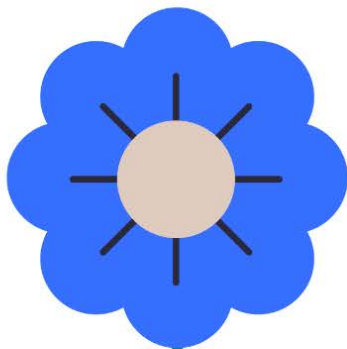


# Mini 4-H

## Bugs



**Kindergarten, 1<sup>st</sup> and 2<sup>nd</sup> Grades**

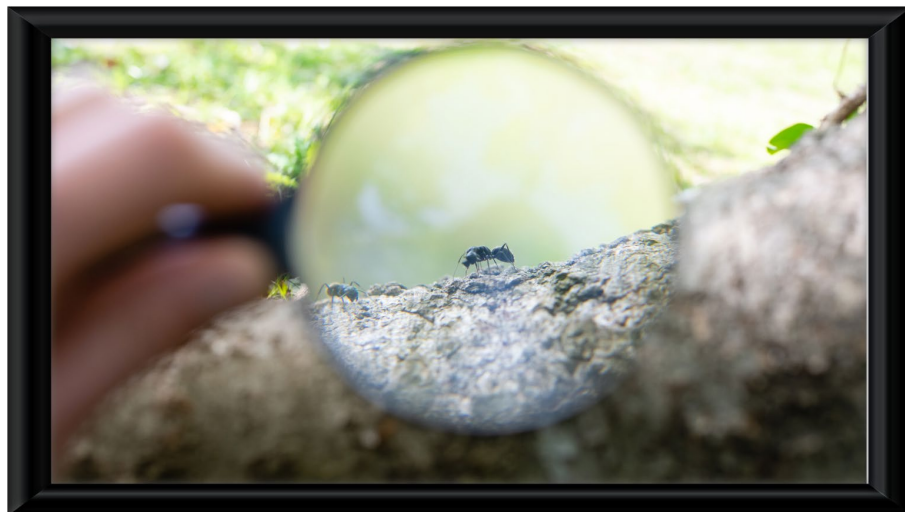
The Purdue University Cooperative Extension Service is an Affirmative Action, equal access/equal opportunity institution.



Dear Parent:

As a Mini 4-H parent, your job will be to guide and encourage your child through the activity. It is highly suggested that you do not complete the activities for them. Instead, help them, guide them, work with them, and let them do all that they possibly can. The 4-H motto is “Learn by doing” ... and is the best educational tool that we can provide for youth.

It is the policy of the Purdue Extension Service that all persons shall have equal opportunity and access to its programs and facilities without regard to race, color, age, sex, religion, handicap, or national origin.



Welcome to Mini 4-H! You are now a member of the 4-H family. Mini 4-H'ers have lots of fun. There are many activities for you to explore. You can try new things. You can share it with your friends and family.

Mom, Dad or another adult can help you with your project, and you can bring your project to the 4-H fair. Many people will be able to see what you have done. You will receive a ribbon made just for Mini 4-H.

### **Important Things to Learn**

**The 4-H Symbol:** A four leaf clover with an H in each leaf

**4-H Colors:** Green and white

**The 4-H Motto:** To make the best, better.

**The 4-H Pledge:** I pledge my *Head* for clearer thinking;  
my *Heart* for greater loyalty;  
my *Hands* for larger service;  
and my *Health* for better living  
in my club, my community,  
my country and my world.



## Mini 4-H Bugs

Did you know there are more bugs in the world than people? Bugs can usually be found anywhere you look. Most are outside but sometimes they can sneak inside too. This is usually because they are looking for warmth or food.

Bugs come in many different shapes and sizes. Some can be so small they are hard to see. If their shape and color is **camouflage**, meaning they blend into their background, they can be almost impossible to see until they move. Even the largest camouflage bug can be missed until it moves. Like a stick bug or leaf bug.



Some bugs can be so big you can see them from far away. If they have bright colors like some butterflies have, you could almost mistake them for a small bird. Did you know that bugs with bright colors are meant to scare predators away? Most predators think bright colored bugs will make them sick so they will not try to eat them. Some moths even have patterns on their wings that look like big eyes to scare predators away.

Bugs can even make noises. This can scare a predator away or to call other bugs like it. A cricket is a bug you can hear outside every summer once the sun sets.



Some bugs can release a stinky smell to keep predators away, yucky! Like a stink bug.



Did you know some bugs can fly? Like a dragonfly.

Ever seen a lightning bug glow in the summer evening? Yup, they can do that too.



There are bugs that can sting and bite, so be careful if you don't know what type of bug you find.



It's always best to leave them alone if possible. Yes, bugs can bug you, but they are amazing little critters that help us. So, before you run away from the next bug you find, stop, and watch it for a second. You might be amazed!



## What is a bug?

First, we should learn... What is a bug? Most bugs are **insects**, but not all insects are bugs. An insect has 3 body parts and 6 legs. The 3 body parts are called the **head**, **thorax**, and **abdomen**. The **head** is the first part. The head usually has the eyes, mouth, and the feelers or **antennae**. The **thorax** is the middle part of the insect where all 6 legs are attached. The **abdomen** is the very last part. The **abdomen** is like your tummy. If the insect is a female, the **abdomen** is the part of the insect that contains the eggs.

Most insects come from eggs. Some young insects, or **larva**, can look like completely different insects when they are done growing. Others can look like smaller versions of the adult insect. Insects can also change into **pupa** stage where they create a **chrysalis** or **cocoon** before they are finished growing.

So, let us think... Is an ant an insect? Yes!



What about a spider? No!

Spiders are a special class of bugs called an **arachnid**. They have 8 legs. Their body is in two parts called **cephalothorax** and **abdomen**. The **cephalothorax** is where the mouth and eyes are located. The legs are also attached to this body part. The **abdomen** is like the tummy.

## Why do we have bugs?

Now we know some of the different types of bugs. Let's learn why we have bugs. One special group of insects called **pollinators** help things grow like flowers, seeds, fruits, and vegetables. They move from plant to plant spreading pollen from flower to flower. Without their help the plant could not make the next seed. Some well-known pollinators you may see are bees, butterflies, ants, wasps, and moths. Even birds and bats are pollinators. So, next time you see a butterfly make sure to say thank you for helping your food grow.

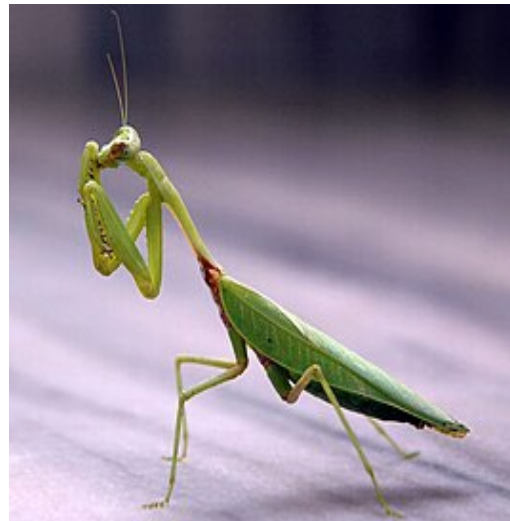


The next group of bugs help the soil. These special bugs help break down dead plant material and other things to make the soil healthy. This process makes it so plants can continue to grow in the soil. Ants, beetles, worms, and centipedes are just a few of these types of bugs. So, some bugs in the garden are a good thing.



The next group of bugs we will go over are predator bugs. These bugs might seem a bit scary, but they do an important job. These bugs hunt and eat other bugs. This helps keep the bug population under control. Spiders, assassin bugs, praying mantis, ladybugs, house centipedes, and pirate bugs are just a few bugs on this list. So, even though that spider outside your window is a little bit scary,

he plans to catch all those ants trying to sneak in.



## Have more questions?

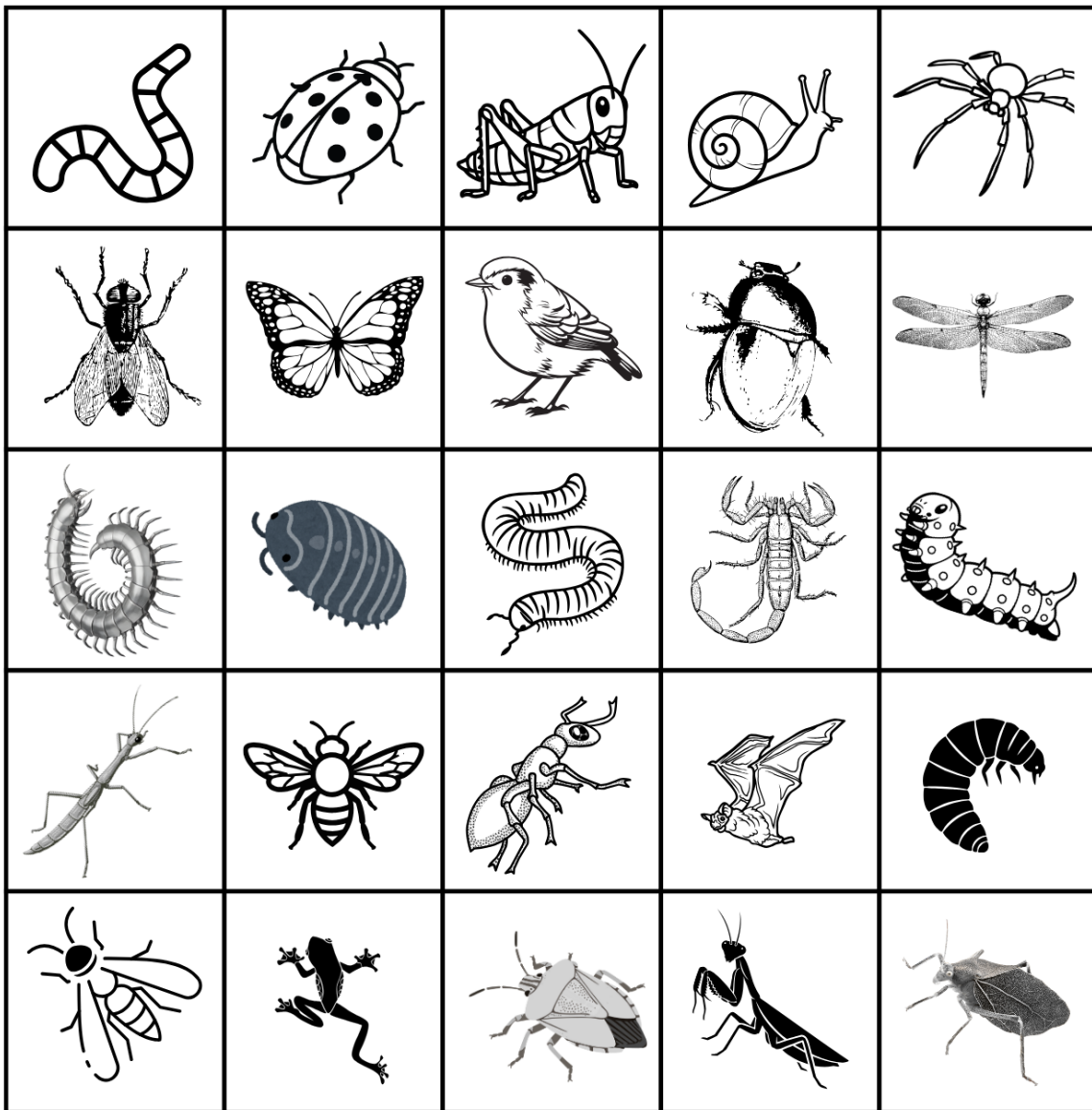
I hope you have enjoyed learning all about bugs. To dig deeper into the amazing world of bugs reach out to your local nature center. Many of these centers have information and displays on native bugs. Your local library will also be a good place to learn more. Happy bug hunting!

## What Will I Do?

To complete the project, you will create a bug to display. In this manual you will find a variety of bugs. Choose one or one similar, to color and cut out. Assemble your bug and label the body parts. Be creative! You can use brads to attach the parts together so they can move, replace legs and antennas with pipe cleaners, and even attach your bug to a toilet paper roll so it looks 3D. Your bug should not be larger than 8x10 inches. These will be hung up and displayed in a garland fashion.

# BUG OR INSECT?

An insect has 6 legs and 3 body parts.  
Look at the bugs below. Circle which  
bugs are insects.



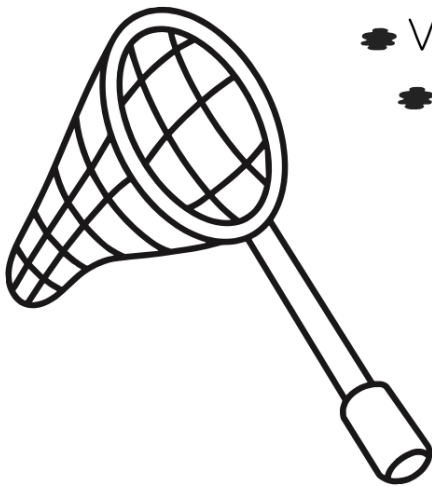


# BUG HUNT



Now we have learned all about bugs it's time to go on a bug hunt! Remember we are to look but not touch. When you find a bug ask yourself these questions. Then write it or draw it in your notebook.

Happy hunting!



- What did the bug look like?
- Where did you find it?
- What was it doing?



Things you will need:

- notebook
- pencil
- hunting area  
(Garden, park, trail, etc.)



For more fun bring a:

- bug net
- magnifying glass
- walking stick



# Coffee Filter Butterflies

## You will need:

- White coffee filters (one per butterfly)
- Markers
- Spray bottle filled with water
- Clothespins
- Pipe cleaner
- Optional: googly eyes, sparkly stickers



## Instructions:

1. Smooth a coffee filter out over a plate, pie pan, or other smooth surface that can easily be cleaned up after your craft is finished.
2. Use the markers to draw pretty patterns or designs on the coffee filter. Be sure to use lots of bright colors! This will be your butterfly's wings.
3. Using the spray bottle, mist water all over your coffee filter until it is damp but not soaked. Watch what happens to the colorful designs! (Pro tip: On a warm day, this may be fun to do outside.)
4. While you are waiting for the coffee filter to dry, it's time to decorate your clothespin. This will be the body of your butterfly.
5. Once the coffee filter is dry, scrunch it tightly together in the middle to make a butterfly shape. Secure it with the clothespin.
6. Cut a small piece of pipe cleaner to create your antennae. Fold it into a V-shape, then slide it into the clipped part of the clothespin.

## Variations:

1. Try stacking two coffee filters on top of one another in the first step; the markers should bleed through onto the bottom filter. Keep the two filters together and give your butterfly double wings!
2. Decorate the body of your butterfly with other craft items such as googly eyes, gemstones, or sparkly stickers.

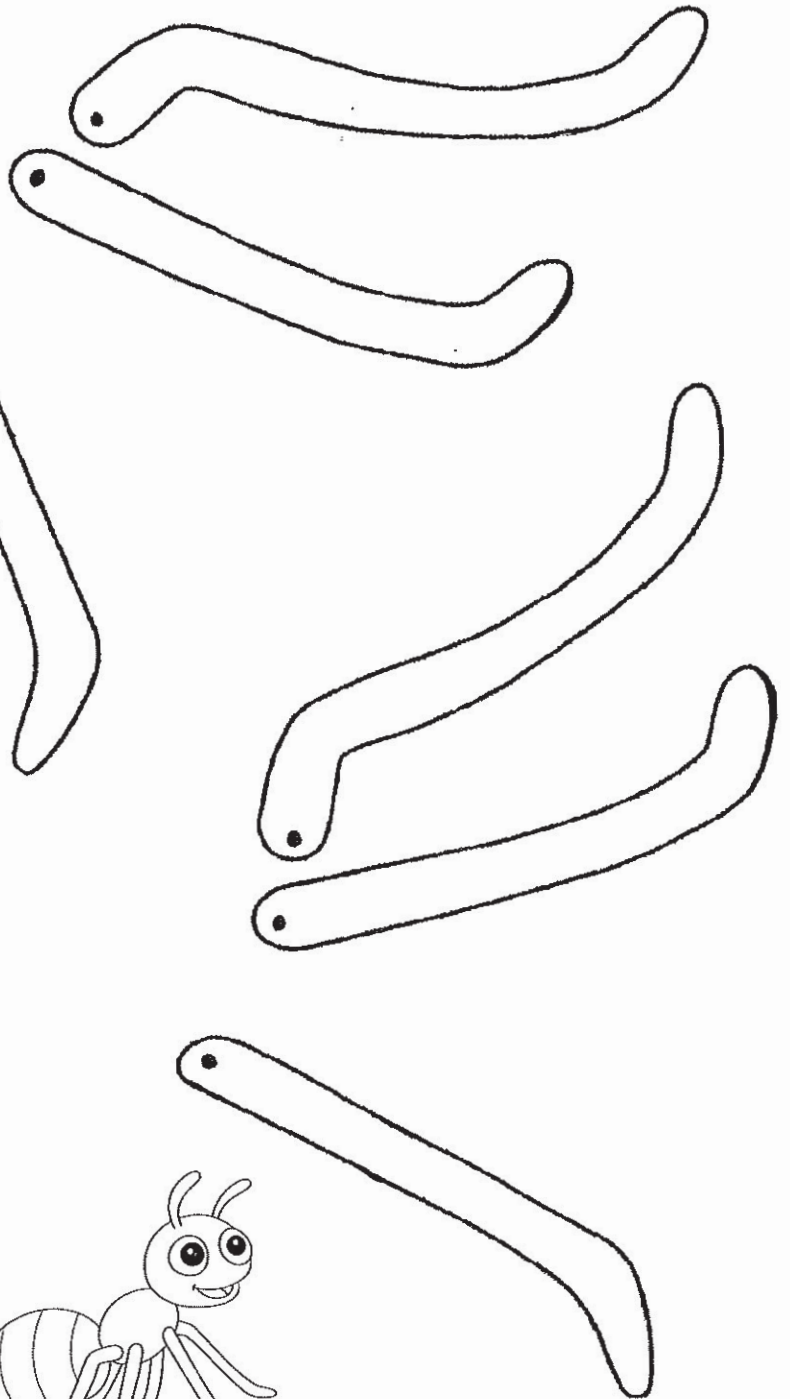
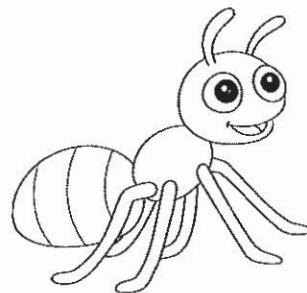
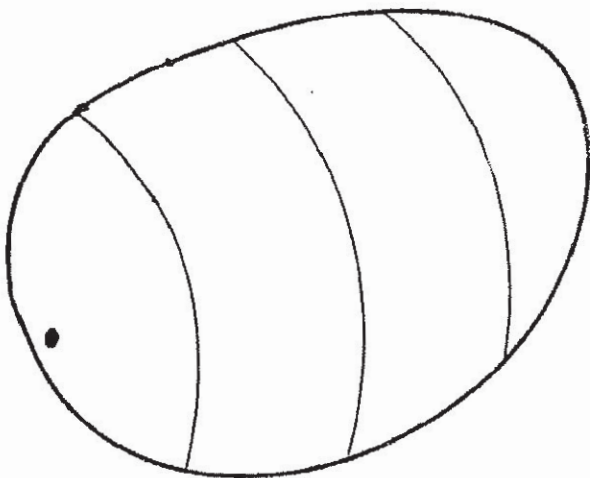
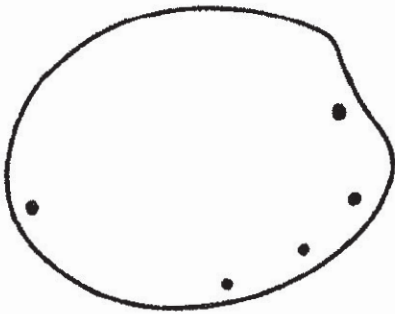
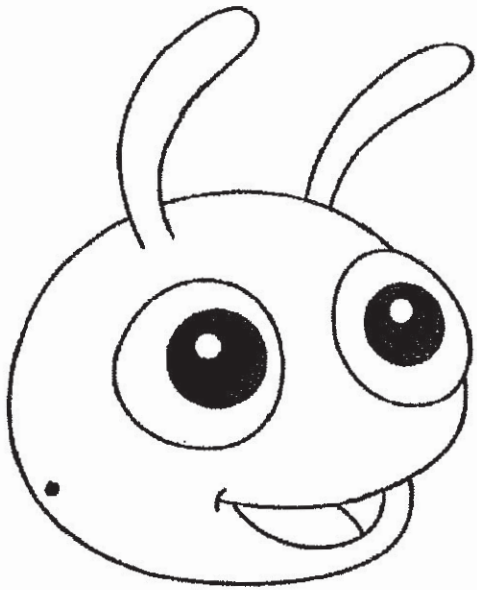
# ANT

**DIRECTIONS:**

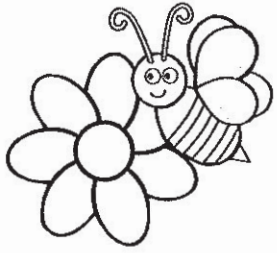
Color and cut out the ant.  
Glue body together.

**For more fun try:**

Use a hole punch to punch out the black dots. Using brads, attach together so the body can move.







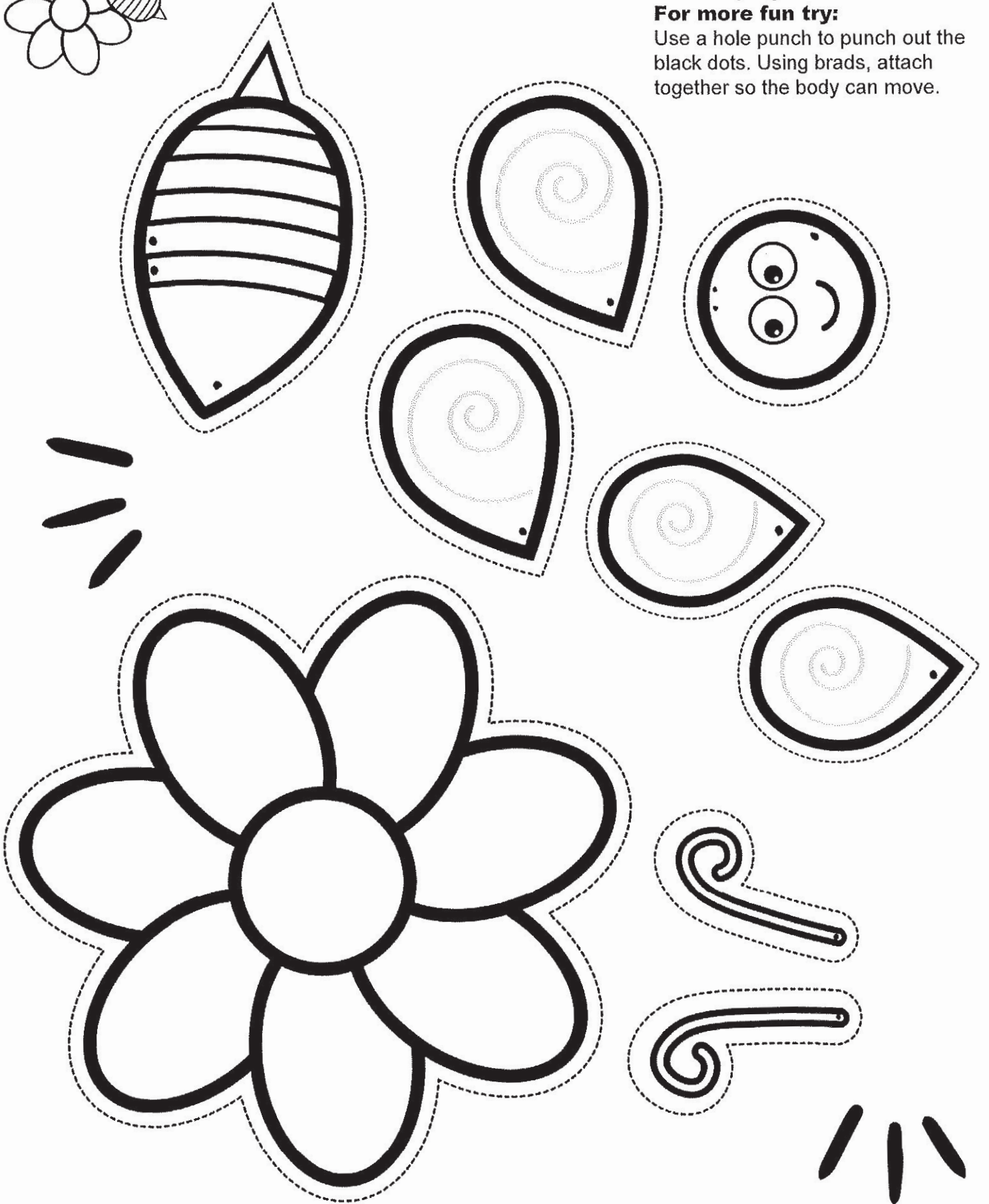
# BEE

**DIRECTIONS:**

Color and cut out the bee.  
Glue body together.

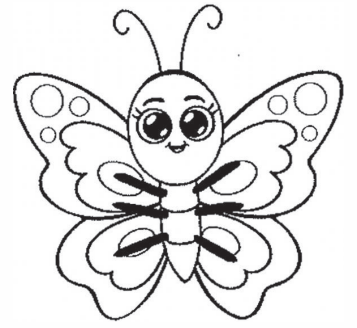
**For more fun try:**

Use a hole punch to punch out the black dots. Using brads, attach together so the body can move.





# BUTTERFLY

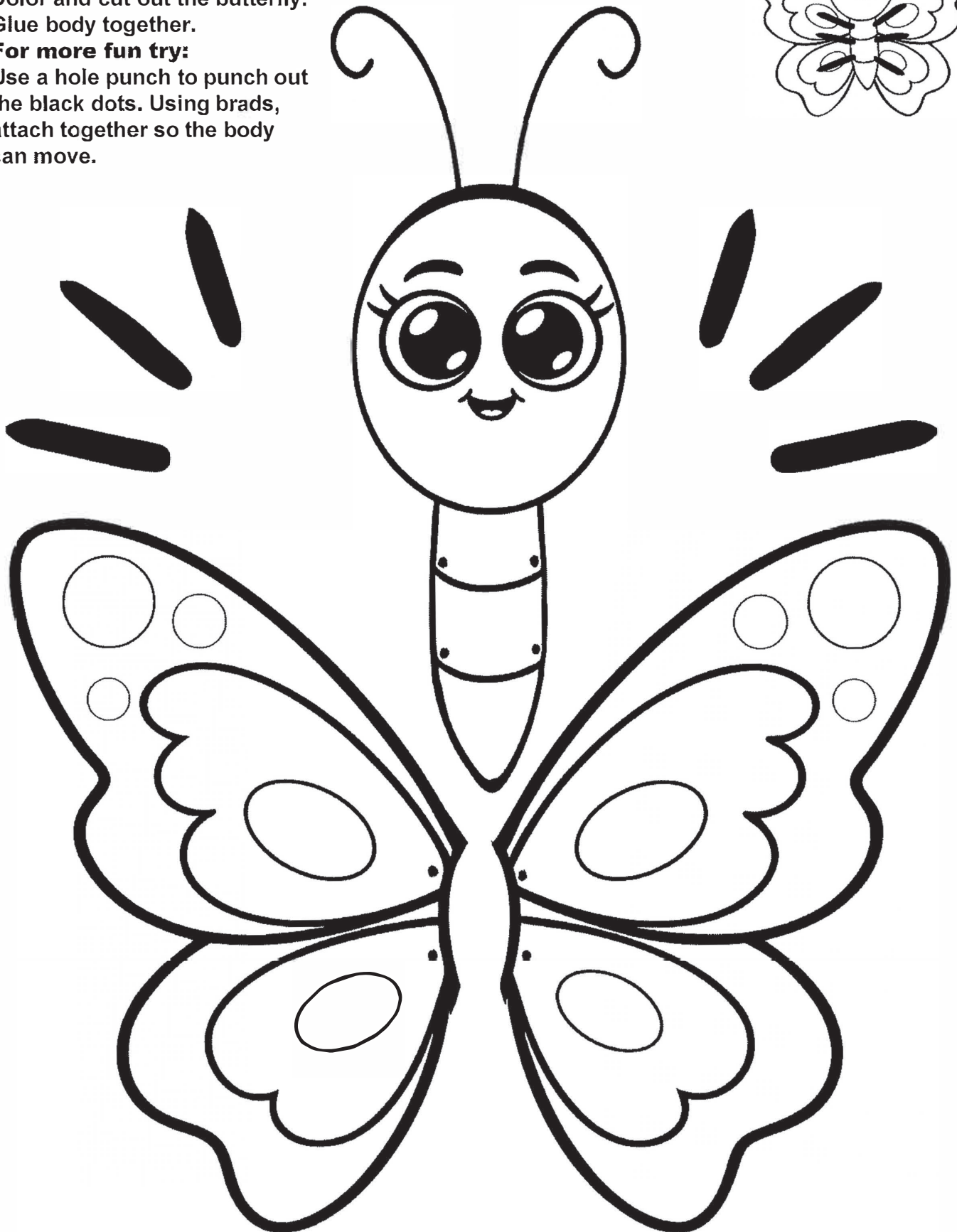


**DIRECTIONS:**

Color and cut out the butterfly.  
Glue body together.

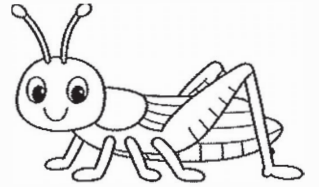
**For more fun try:**

Use a hole punch to punch out  
the black dots. Using brads,  
attach together so the body  
can move.





# GRASSHOPPER

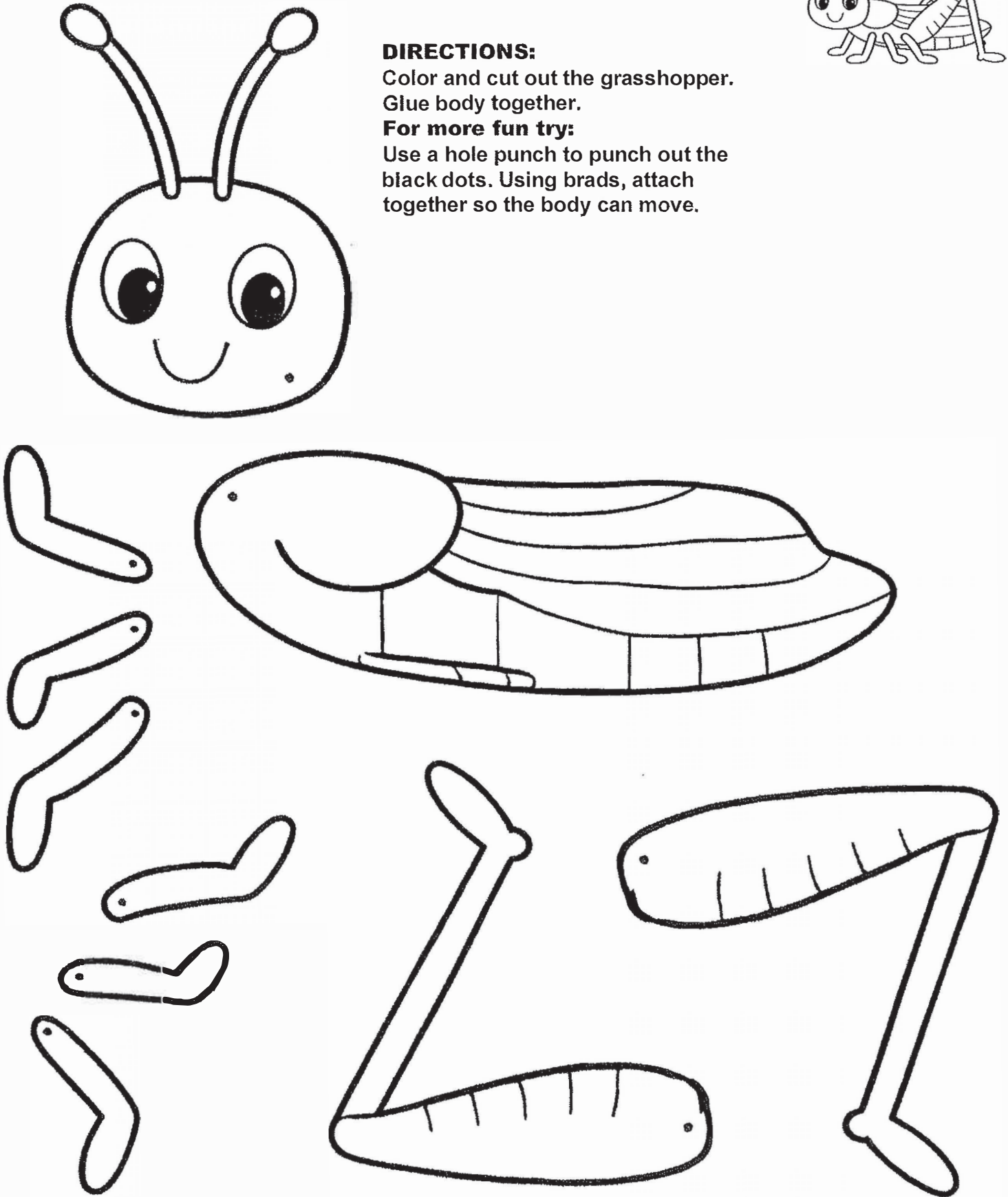


## DIRECTIONS:

Color and cut out the grasshopper.  
Glue body together.

## For more fun try:

Use a hole punch to punch out the  
black dots. Using brads, attach  
together so the body can move.





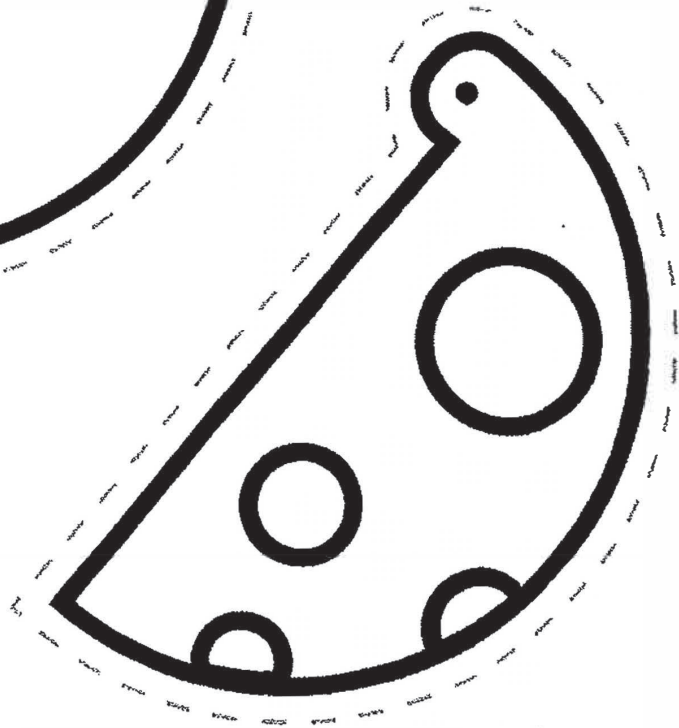
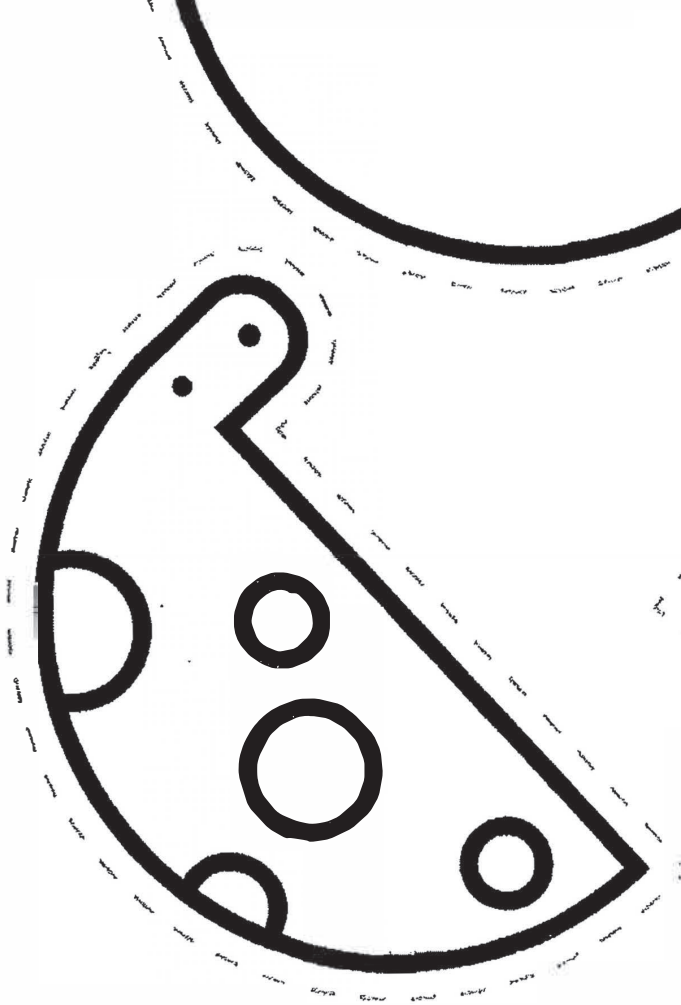
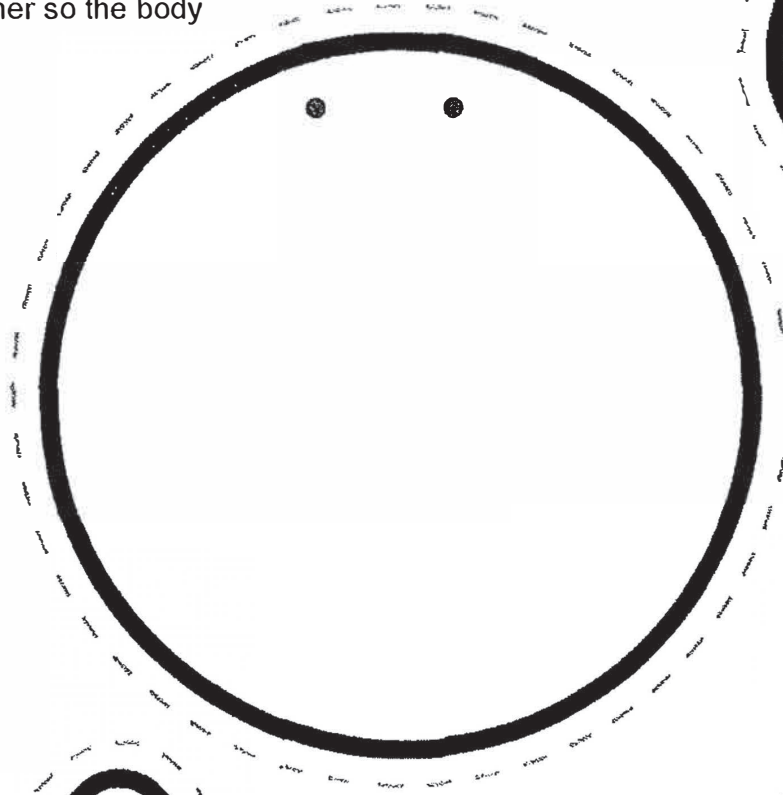
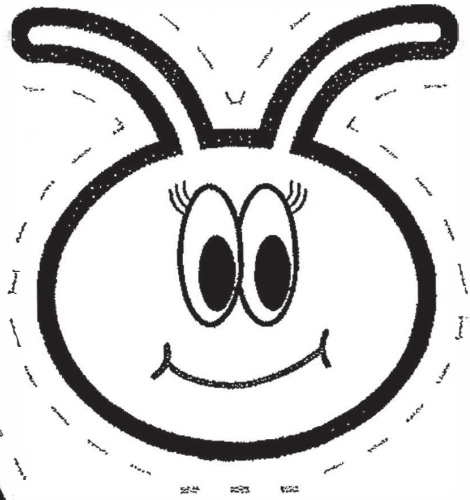
# LADYBUG

**DIRECTIONS:**

Color and cut out the ladybug.  
Glue body together.

**For more fun try:**

Use a hole punch to punch out  
the black dots. Using brads,  
attach together so the body  
can move.





# SPIDER

**DIRECTIONS:**

Color and cut out the spider.  
Glue body together.

**For more fun try:**

Use a hole punch to punch out the  
black dots. Using brads, attach  
together so the body can move.

