

# Six-Legged Friends

Name \_\_\_\_\_

The largest group of animals belongs to the group called invertebrates—or animals without backbones. This large group is the **insect** group.

Insects are easy to tell apart from other animals. Adult insects have three body parts and six legs. The first body part is the **head**. On the head are the mouth, eyes, and antennae. The second body part is the **thorax**. On it are the legs and wings. The third part is the **abdomen**. On it are small openings for breathing.



Color the body parts of the insect above. head—red, thorax—yellow, abdomen—blue

Draw an insect below. Make your insect a one-of-a-kind. Be sure it has the correct number of body parts, legs, wings, and antennae. Fill in the information.

Insect's name \_\_\_\_\_

Length \_\_\_\_\_

Where found \_\_\_\_\_

Food \_\_\_\_\_

Warning: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

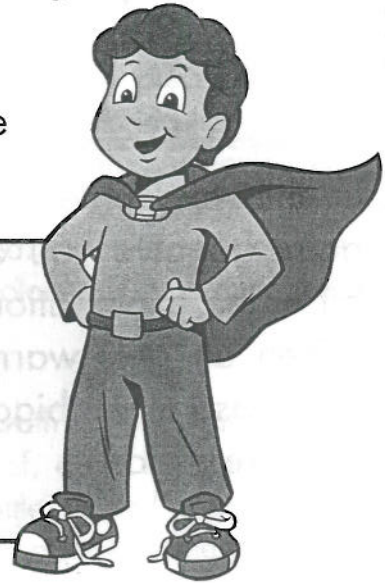
## Find Out

Many people think that spiders are insects. Spiders and insects are alike in many ways, but spiders are not insects. Find out how the two are different.

# Experiment #13: Bending Light

Explanation on page 30

You don't need the strength of a superhero to make light bend... it happens all the time!

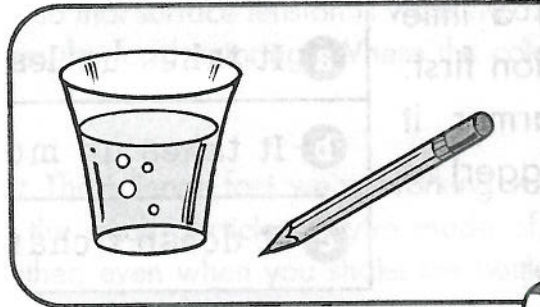


### What you need:

- Glass or clear cup
- Water
- Pencil

### Result Timing:

- 1 minute

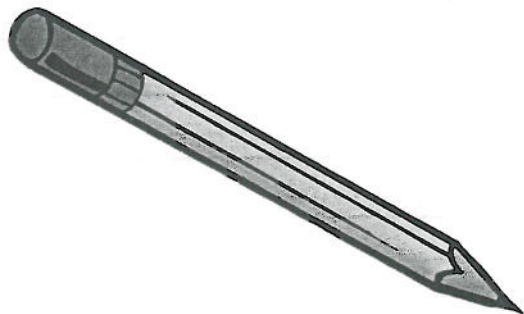


### Directions: .....

1. Fill the glass  $\frac{3}{4}$  full with water.
2. Put the pencil in the glass. Hold the pencil straight up and down.
3. Look through the side of the glass. Draw a picture of the pencil.
4. Let the pencil lean against the side of the glass on a slant.
5. Look through the side of the glass. Does the pencil look different than before? Draw a picture of what the pencil looks like now.

Draw the pencil held straight in the glass.

Draw the pencil leaning in the glass.



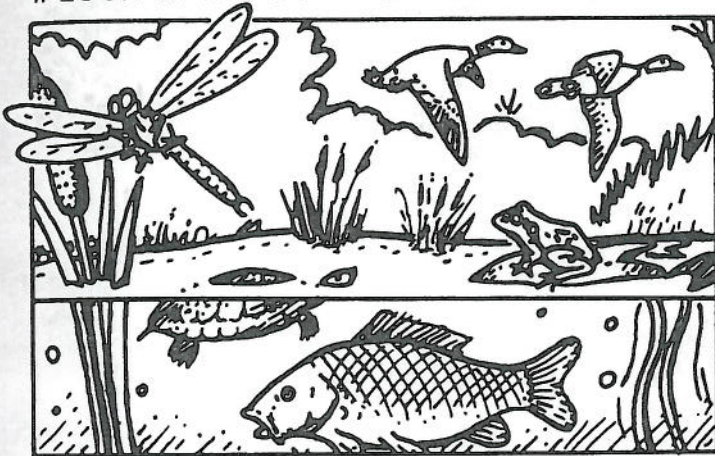
# One Happy Community

Name \_\_\_\_\_

Most animals are more comfortable living with certain other animals and plants. This special group of plants and animals that live together is called a **community**.

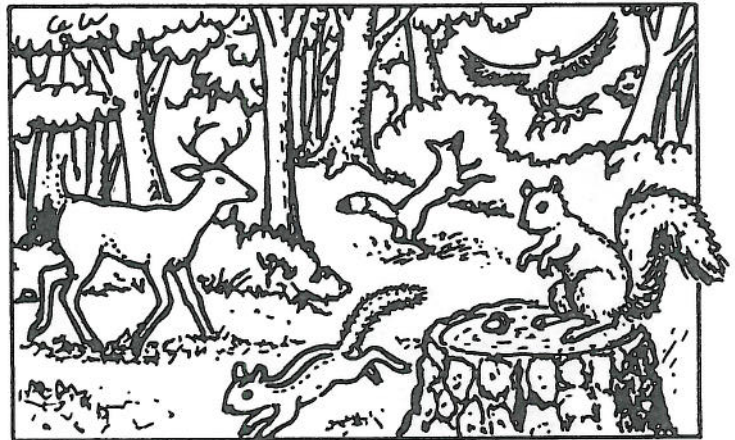
There are many kinds of communities. Some animals live in a forest community or a pond community. Others live in a desert, seashore, or grassland community.

1. Look at the communities below and list the animals in each.



Pond Community

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



Forest Community

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

2. Why do you think the animals live together in the pond community?

\_\_\_\_\_

3. Why do you think the animals live together in the forest community?

\_\_\_\_\_

4. Some animals may live in more than one kind of a community. Name an animal that lives in both a pond and forest community. \_\_\_\_\_

\_\_\_\_\_

## Something Special

**Backyard Community**—Your backyard can be a community of many kinds of animals. Make a list of the animals that visit or live in your backyard. Don't forget those tiny critters you can't easily see.

# Experiment #14: Water Magnifying Glass

Explanation on page 30

Do you know what a *magnifying glass* is? A magnifying glass uses a curved piece of glass called a *lens* to make things look larger than they are. A magnifying glass works because light bends when it moves from the air through the glass lens. What is it called when light bends like this? \_\_\_\_\_

(Hint: Read the explanation for Experiment #13 "Bending Light".)

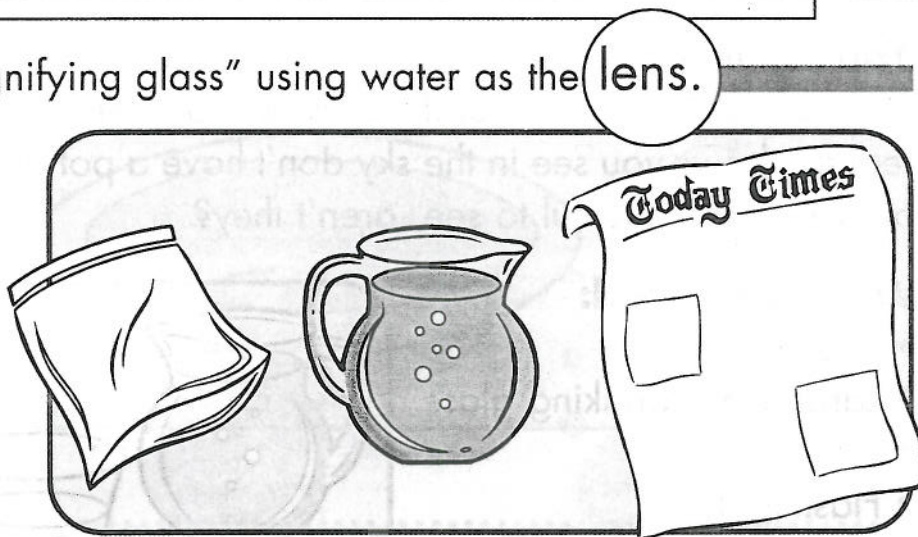
Unscramble the letters to see if you are right.

**I O R R N E F C A T** \_\_\_\_\_

Let's make our own "magnifying glass" using water as the **lens**.

### What you need:

- Small clear plastic bag  
(a sandwich bag works well)
- Water
- Page of writing  
(from a newspaper or magazine)



### Result Timing:

- 1 minute

### Directions:

1. Write some of the words from the newspaper or magazine page. Be sure to make them the size you see.
2. Pour a spoonful of water into the corner of the plastic bag.
3. Carefully hold the water-filled corner of the plastic bag over the piece of newspaper text. Look through the water at the words on the page. Write the words the size they now look when you view them through the water.

Write the words with no lens.

Write the words as they appear through the water lens.

# On the Move

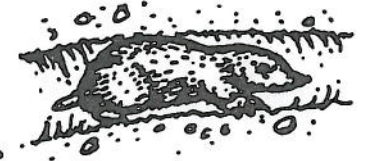
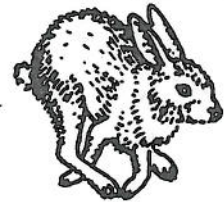
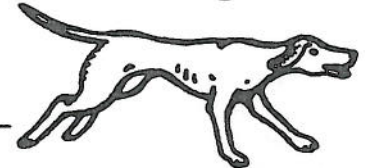
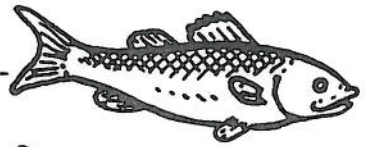
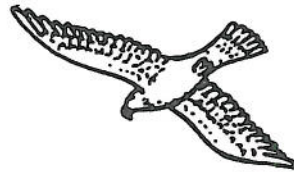
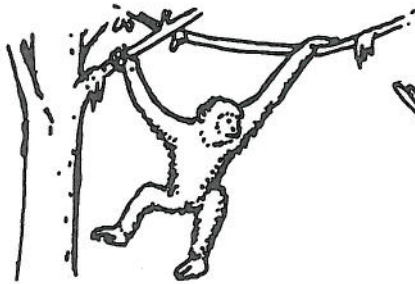
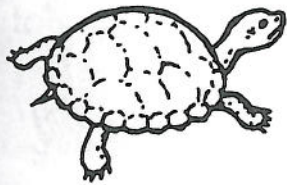
Name \_\_\_\_\_

Animals are always moving. They travel to different places to find food, shelter, or escape from their enemies.

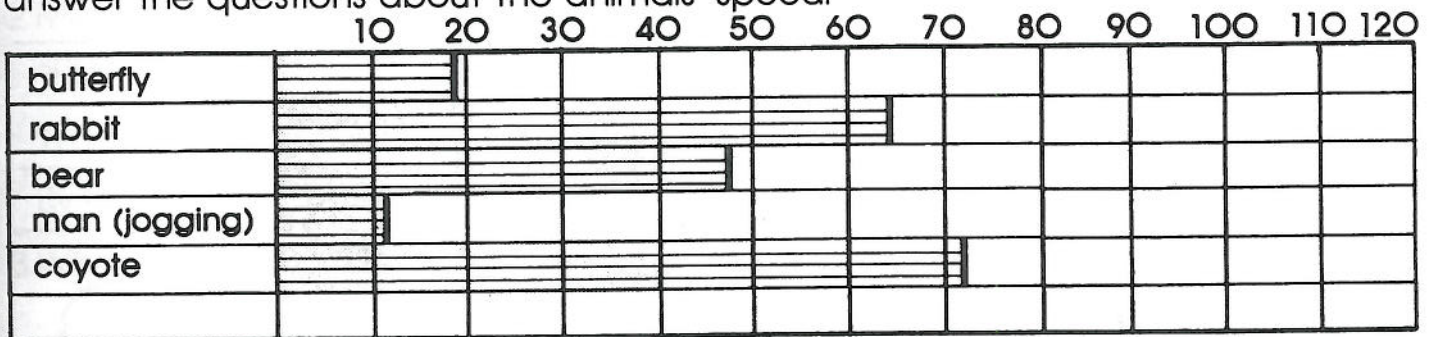
Animals move in many ways. They travel by:

walking	swinging
running	flying
hopping	digging
swimming	

Use the list of movements to tell how these animals are moving.



Many animals use their speed to escape from their enemies. Use the graph to answer the questions about the animals' speed.



- How fast can a rabbit run? \_\_\_\_\_
- How fast is a coyote? \_\_\_\_\_
- Could a coyote run down and catch a rabbit? \_\_\_\_\_
- Could a bear run down and catch a rabbit? \_\_\_\_\_
- What is the slowest animal on the chart? \_\_\_\_\_

## Fun Fact

The cheetah is the fastest mammal on Earth. It can run at speeds up to 112 km per hour. Complete the chart above by writing the cheetah's name and speed on the graph.

# Science Answer Key

## On the Move

Name \_\_\_\_\_

Animals are always moving. They travel to different places to find food, shelter, or escape from their enemies.



Animals move in many ways. They

- travel by
- walking
  - swinging
  - running
  - flying
  - hopping
  - digging
  - swimming



Use the list of movements to tell how these animals are moving.



walking swinging flying digging

Many animals use their speed to escape from their enemies. Use the graph to answer the questions about the animals' speed.

	10	20	30	40	50	60	70	80	90	100	110	120
butterfly												
rabbit												
bear												
man (jogging)												
coyote												

- How fast can a rabbit run? 64 km/hour
- How fast is a coyote? 72 km/hour
- Could a coyote run down and catch a rabbit? yes
- Could a bear run down and catch a rabbit? no
- What is the slowest animal on the chart? man

### Fun Fact

The cheetah is the fastest mammal on Earth. It can run at speeds up to 112 km per hour. Complete the chart above by writing the cheetah's name and speed on the graph.

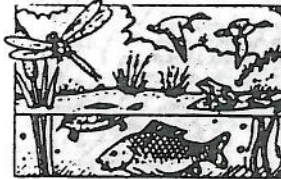
## One Happy Community

Name \_\_\_\_\_

Most animals are more comfortable living with certain other animals and plants. This special group of plants and animals that live together is called a community.

There are many kinds of communities. Some animals live in a forest community or a pond community. Others live in a desert, seashore, or grassland community.

1 Look at the communities below and list the animals in each.



Pond Community



Forest Community

- |                  |                   |
|------------------|-------------------|
| 1 <u>fish</u>    | 1 <u>deer</u>     |
| 2 <u>turtle</u>  | 2 <u>chipmunk</u> |
| 3 <u>firefly</u> | 3 <u>squirrel</u> |
| 4 <u>duck</u>    | 4 <u>fox</u>      |
| 5 <u>frog</u>    | 5 <u>owl</u>      |

- Why do you think the animals live together in the pond community?  
\_\_\_\_\_
- Why do you think the animals live together in the forest community?  
\_\_\_\_\_
- Some animals may live in more than one kind of a community. Name an animal that lives in both a pond and forest community.  
deer raccoon

### Something Special!

**Backyard Community**—Your backyard can be a community of many kinds of animals. Make a list of the animals that visit or live in your backyard. Don't forget those tiny critters you can't easily see.