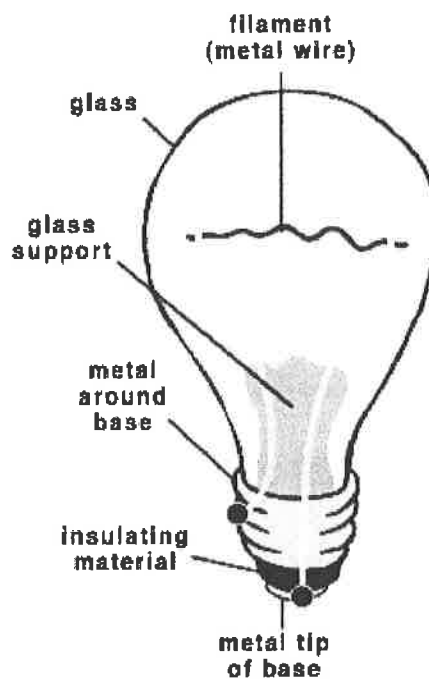
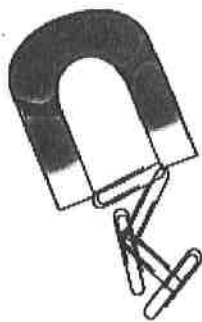


# Magnetism and Electricity



Name \_\_\_\_\_ Homeroom # \_\_\_\_\_



What I Know	What I Want to Know	What I Learned



Name: \_\_\_\_\_

Draw a picture and then write a description of what you think \_\_\_\_\_ is describing.

Write your description of the mystery object here:

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How do you think this object could be used?

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# CAUTION

Magnets should not be held near these things:

TV

VCR

microwave oven

computer

radio

loudspeakers

credit cards

wind up watches

computer discs

cassette tapes

tape recorders

telephones

answering

machines

video tapes



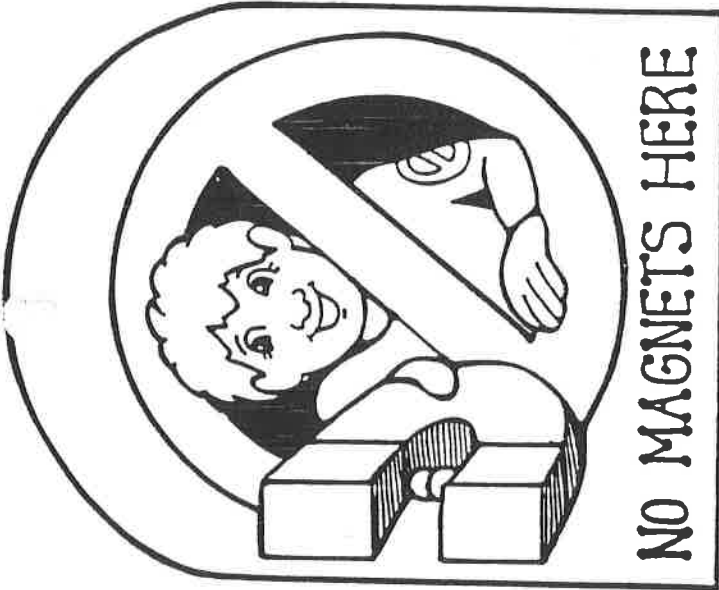




NO MAGNETS HERE



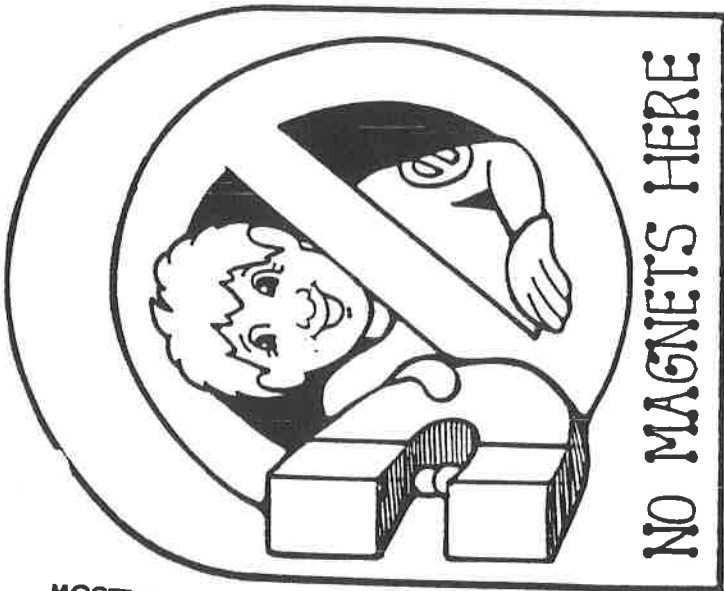
NO MAGNETS HERE



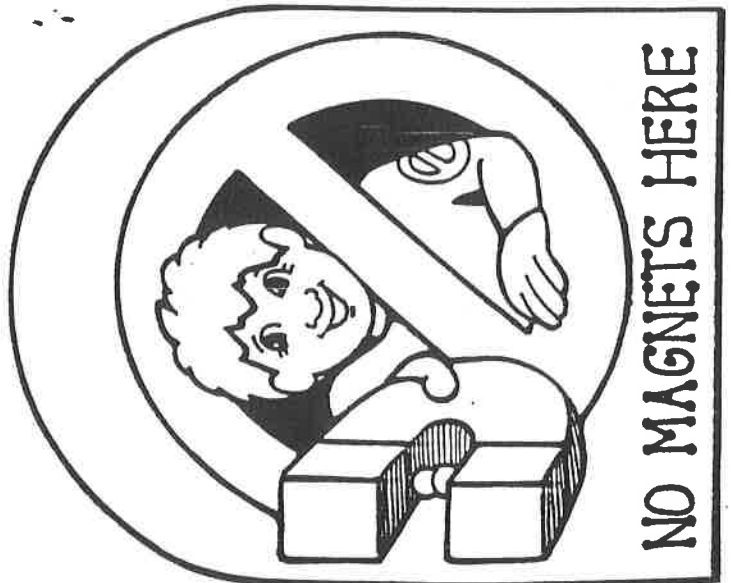
NO MAGNETS HERE



NO MAGNETS HERE



NO MAGNETS HERE



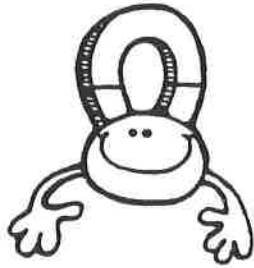
NO MAGNETS HERE



Name \_\_\_\_\_

# To what will a magnet stick?

My magnet sticks to:



My magnet does not stick to:





Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Force –

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2. Magnet –

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3. Magnetism –

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4. Attract –

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5. Repel –

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Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Temporary magnet

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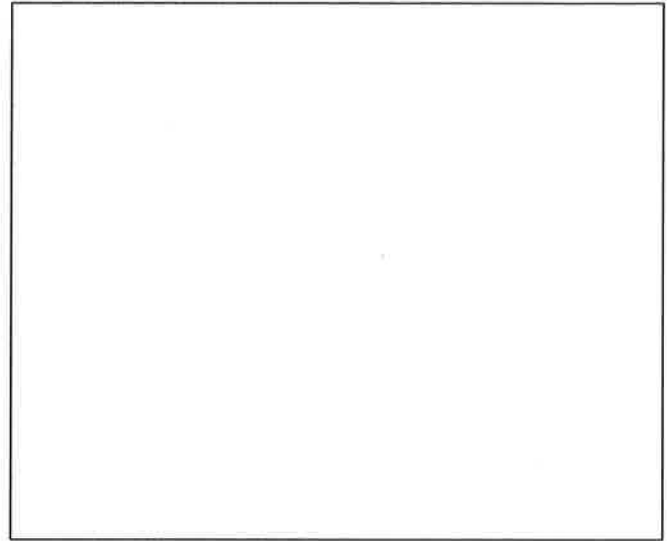
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2. Induced Magnetism

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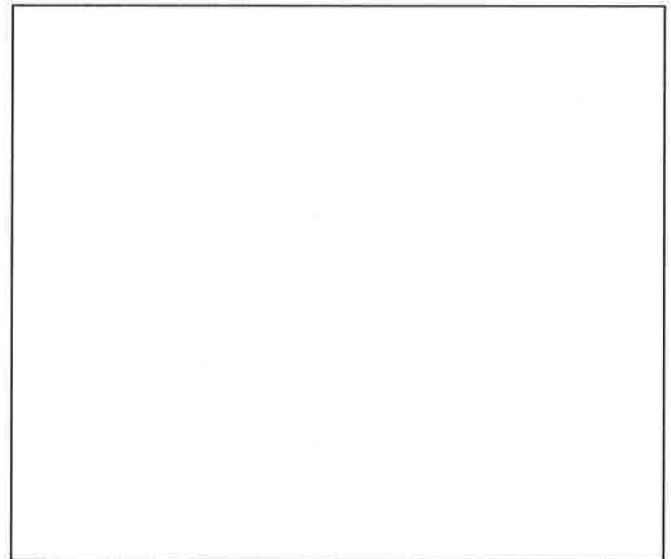
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Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Graph –

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2. Prediction –

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3. Intersection –

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4. Detector –

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Name: \_\_\_\_\_

Directions: Use your science storybooks to answer these questions.

**Magnus Gets Stuck**

1. Where does the word magnet come from?

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2. Why did Magnus' sandals get stuck on the rocks?

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3. How did Magnus figure out what part of his sandals were sticking to the rocks?

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4. What did Magnus discover?

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5. Where is Magnetite found in the U.S.?

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Name: \_\_\_\_\_

**How Magnets Interact**

1. What are the two poles of magnets? (pg. 6 top)

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2. What two poles of magnets attract to each other? (pg. 6 middle)

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3. Why is a compass needle magnetic? (pg. 6 bottom)

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4. Why does a compass tell us directions? (pg. 6 bottom)

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Name: \_\_\_\_\_

Directions: Use your science storybooks to answer these questions. You may work with your teams. Volume Level 1 ½!

**Magnificent Magnetic Models**

1. What did the ancient Egyptians and Romans use magnets for? (1<sup>st</sup> paragraph)

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2. What did it look like the iron and lodestone figures were doing in ancient Egypt? (1<sup>st</sup> paragraph)

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3. Describe what the statue of the god looked like when the Romans used magnets? (1<sup>st</sup> paragraph)

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4. Why do the film canisters dances around each other when you follow the directions for the project called Dancing Statues? (Directions for Dancing Statues)

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5. Use your own words to paraphrase step three to the project Suspended Statue. (The Suspended Statue directions)

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Name \_\_\_\_\_

Date \_\_\_\_\_

# MAGNETIC OBSERVATIONS

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## 1. How does your magnet interact with test objects?

**THINGS THAT STICK**

**THINGS THAT DON'T STICK**

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**MAGNETS ONLY STICK TO** \_\_\_\_\_

## 2. Where did you detect iron or steel in the classroom?

**THINGS MADE OF IRON OR STEEL**

**THINGS THAT ARE NOT IRON OR STEEL**

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## 3. Describe what happens when two magnets come together.

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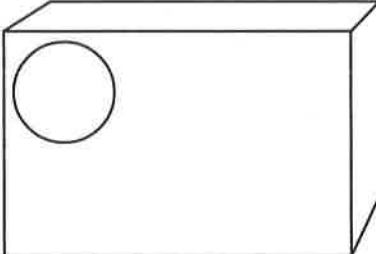
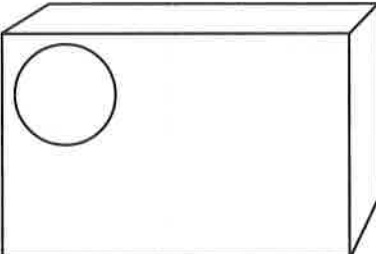
Name \_\_\_\_\_

Date \_\_\_\_\_

# DETECTING MAGNETS

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1. Draw where you found magnets in the box.
2. Explain how you know the magnets are there.
3. If you explore more boxes, record your observations on the back of this paper.

<p><b>Write the box number in the circle.</b></p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Write the box number in the circle.</b></p> 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

4. Which device worked the best for detecting magnets? Why do you think so?

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**MATH EXTENSION—PROBLEM OF THE WEEK****INVESTIGATION 1: THE FORCE****BUYING MAGNETS**

A teacher wants to set up a Magnet Exploration Center where students can find out more about magnets during their free time. She has \$50.00 to spend. She looked in the magnet section of a science catalog and found these prices.

ITEM	QUANTITY	PRICE
Large bar magnets	Set of 2	\$10.95
Small bar magnets	Each	\$2.75
Large horseshoe magnets	Each	\$7.95
Small horseshoe magnets	Each	\$4.50
Disk magnets	Set of 4	\$4.50
Lodestones	Set of 10	\$7.95

1. What materials would you recommend she buy for the Magnet Exploration Center? (Remember, she has only \$50.00 to spend.)

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2. Write a paragraph about why you chose the items you did.

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What I Know	What I Want to Know	What I Learned



Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. D-cell --

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2. Battery --

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3. Electricity source --

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4. Electricity receiver --

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5. Circuit -

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A vertical column of four empty rectangular boxes, each corresponding to one of the five science vocabulary words listed on the left. These boxes are intended for students to draw a picture illustrating the meaning of each word.



6. Filament -

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7. Components -

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Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Circuit base -

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2. Fahstock clip -

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3. Switch -

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4. Open Circuit -

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5. Closed Circuit -

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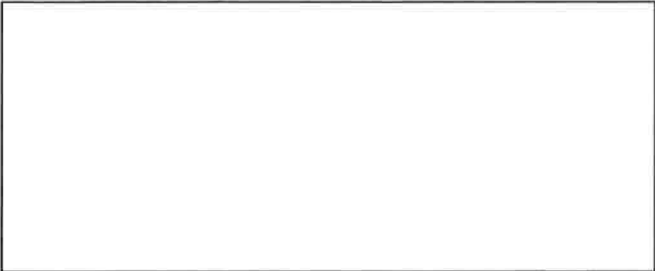

6. Schematic diagram -

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Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Conductor-

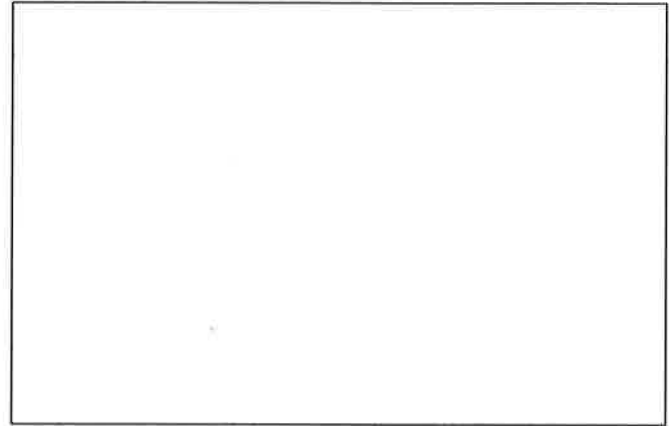
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2. Insulator -

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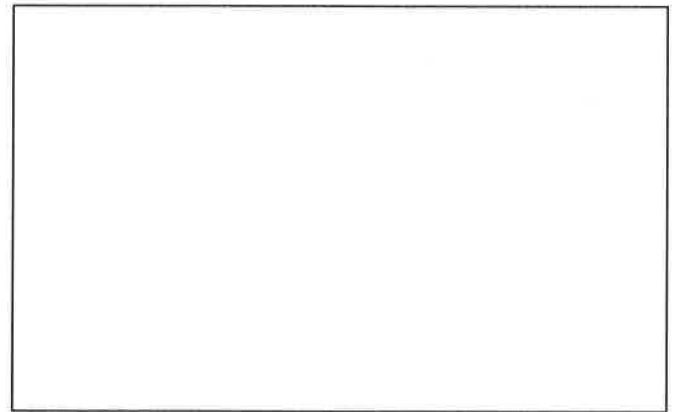
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Name: \_\_\_\_\_

Fill in the definition of each science vocabulary word. Then draw a picture to show the meaning of each word.

1. Series Circuit

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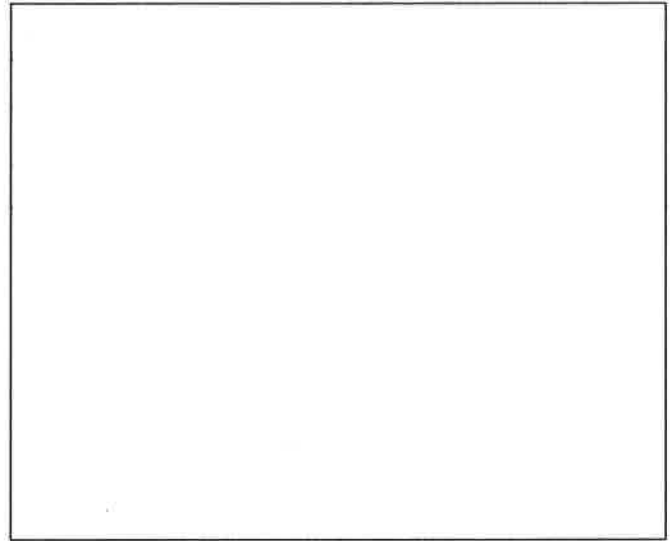
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2. Component

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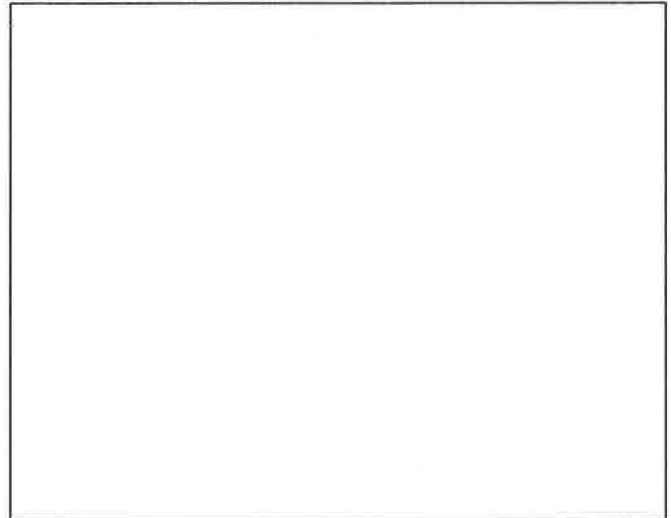
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3. Parallel Circuit -

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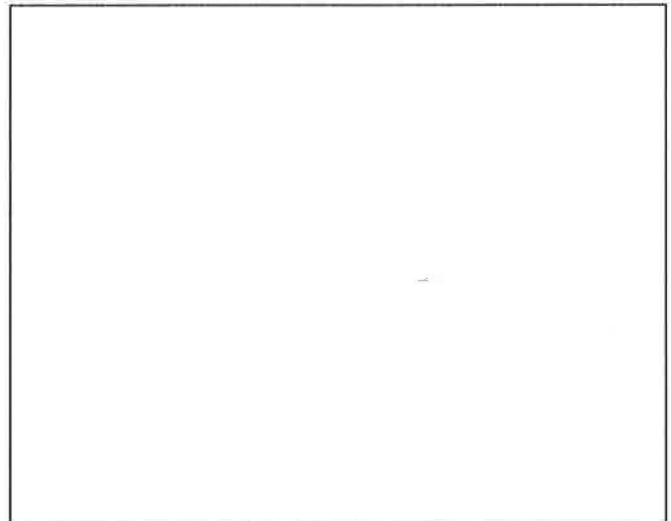
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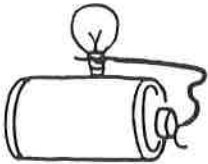


Name \_\_\_\_\_



# REPAIR MANUAL

*Tell why these circuits will not work...*



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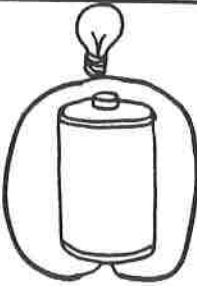


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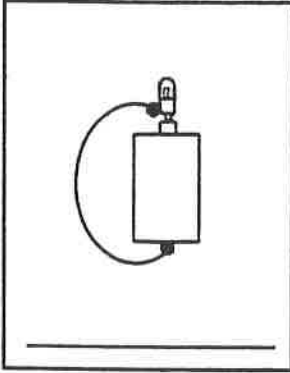
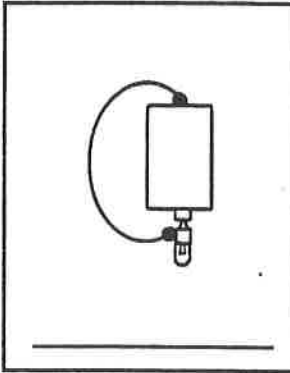
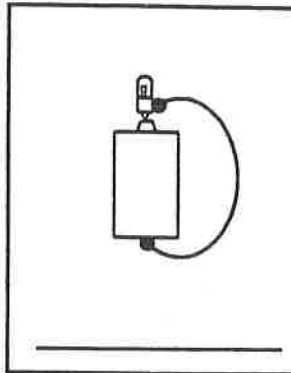
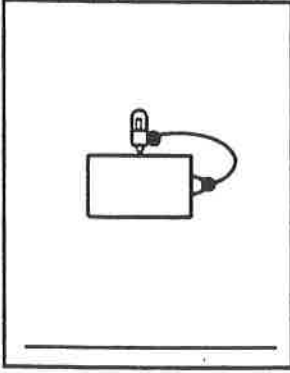
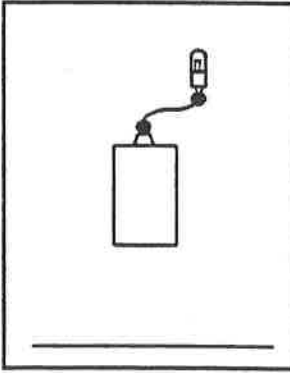
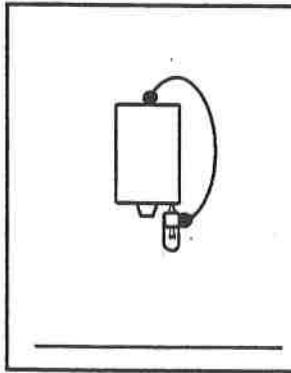
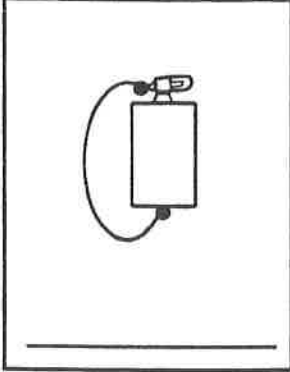
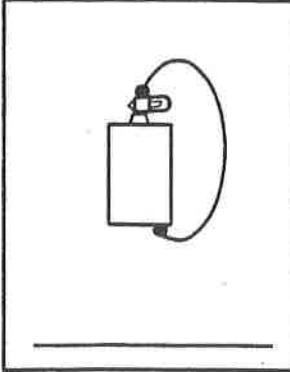
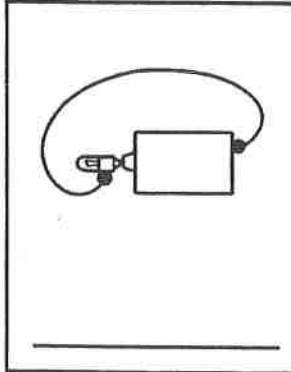


Activity Sheet 1

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

Will the bulb light or not? Below each picture, make your prediction by writing either "On" or "Off."

 _____	 _____	 _____
 _____	 _____	 _____
 _____	 _____	 _____

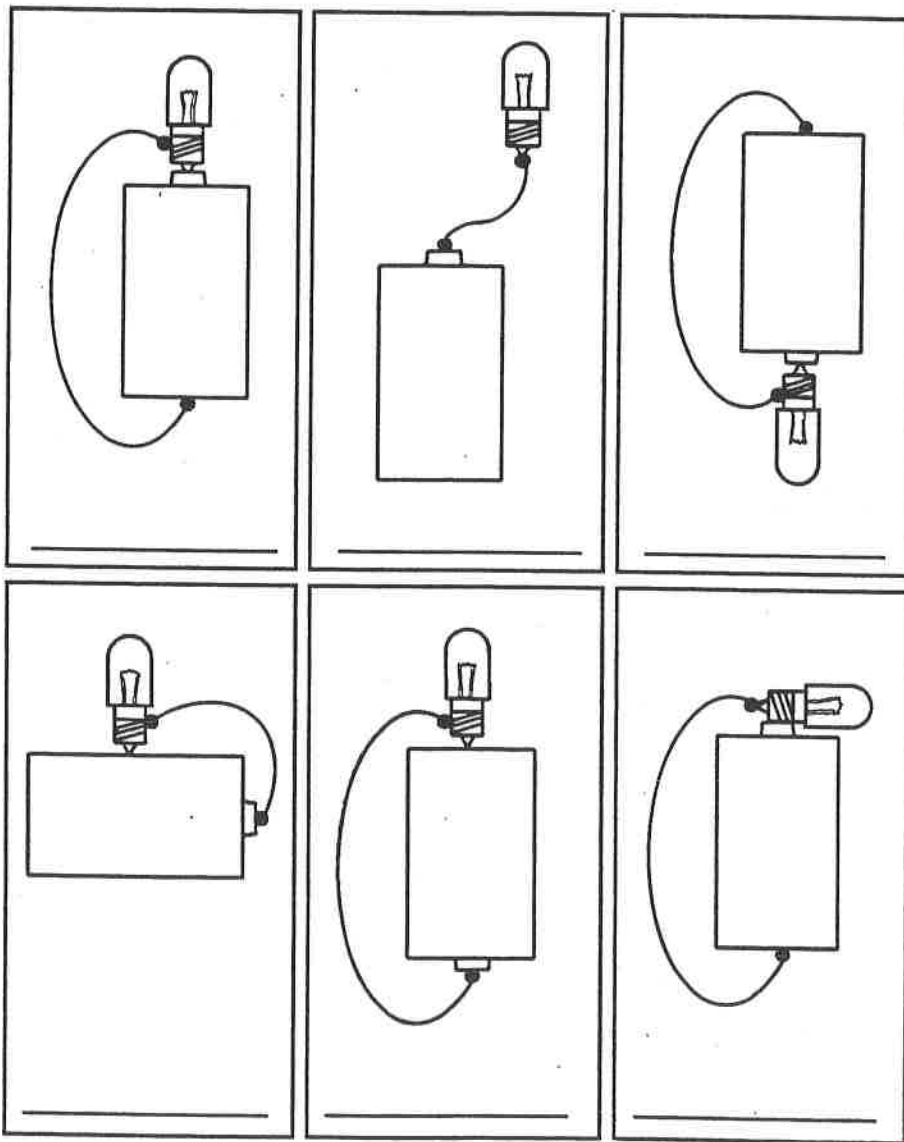


Activity Sheet 2

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

Will the bulb light? Below each picture, make your prediction by writing either "On" or "Off."





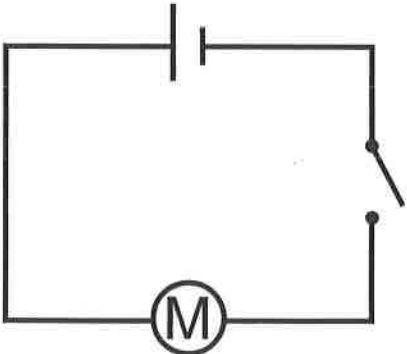








Name \_\_\_\_\_

Date \_\_\_\_\_

# DRAWINGS AND SCHEMATICS

DRAWING OF A BATTERY AND BULB CIRCUIT		SCHEMATIC DIAGRAM OF A BATTERY AND BULB CIRCUIT	
			
KEY TO SYMBOLS FOR SCHEMATIC DIAGRAMS		A SCHEMATIC DIAGRAM SHOWING A BATTERY, SWITCH, AND MOTOR	
D-CELL			
WIRES			
SWITCH			
LIGHTBULB			
MOTOR			

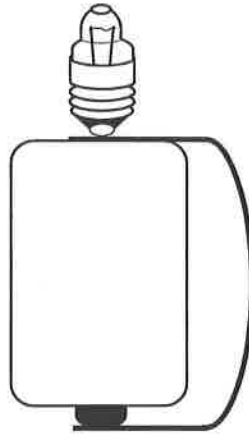


Name \_\_\_\_\_

Date \_\_\_\_\_

# RESPONSE SHEET—BULBS

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1. Look at the diagram above. Do you think the bulb will light? Why or why not?

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2. If you don't think the bulb will light, draw a picture here to show a way to light the bulb.

Name \_\_\_\_\_

Date \_\_\_\_\_

# CONDUCTORS AND INSULATORS

.....

**1. List the test objects that are conductors and insulators.**

**CONDUCTORS**

**INSULATORS**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**2. List the classroom objects that are conductors and insulators.**

**CONDUCTORS**

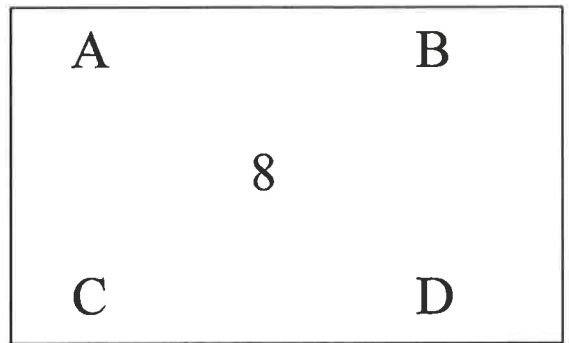
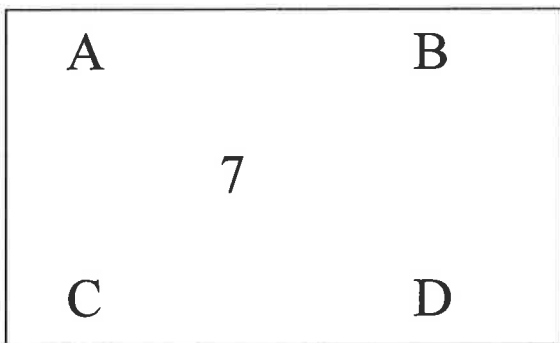
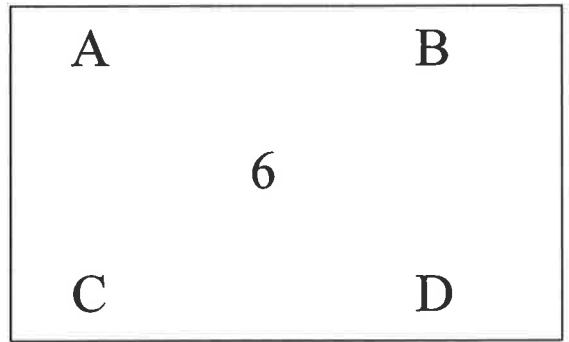
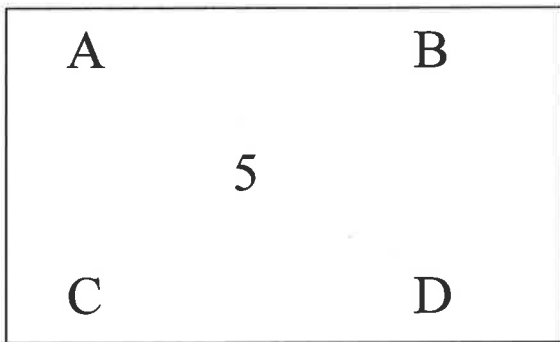
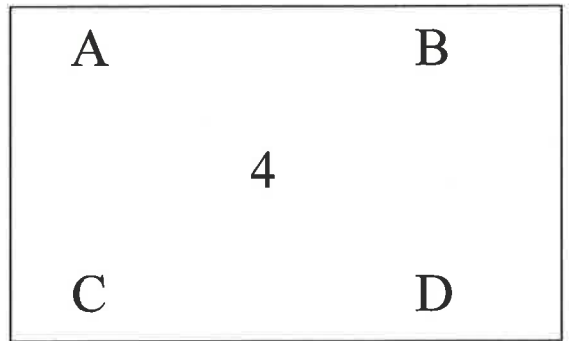
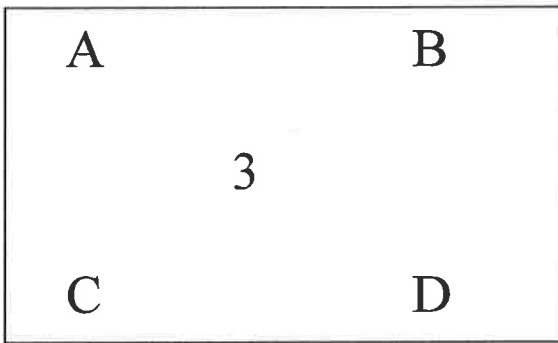
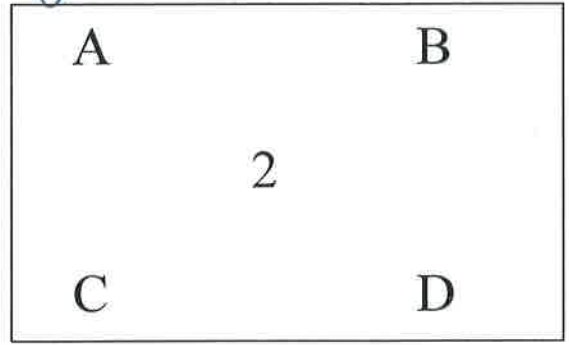
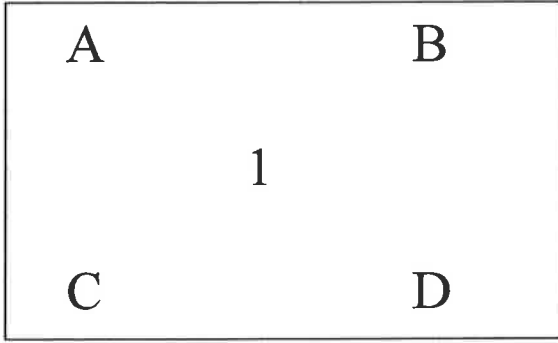
**INSULATORS**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**3. What do you notice that is similar about all the conductors? What can you say about the insulators?**

_____
_____
_____
_____
_____

# Mystery Circuits







Name \_\_\_\_\_

Date \_\_\_\_\_

## ADVANCED CONNECTIONS

.....

**1. I think I can light two bulbs with this circuit.**

**2. This is one way I made two bulbs light.**

**This is a \_\_\_\_\_ circuit.**

**3. This is how I made two bulbs shine brightly with one battery.**

**4. This is another way to make more than one bulb shine.**

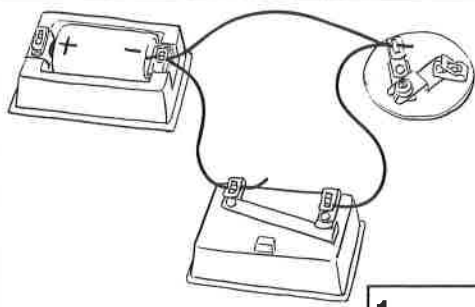
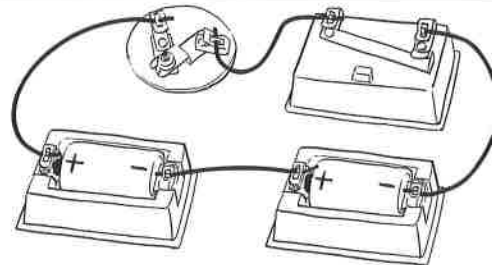
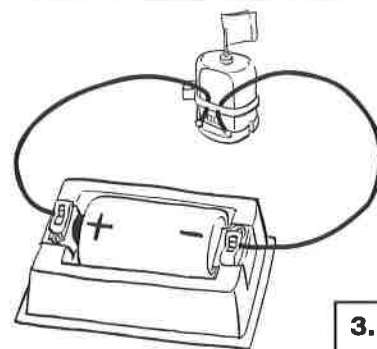
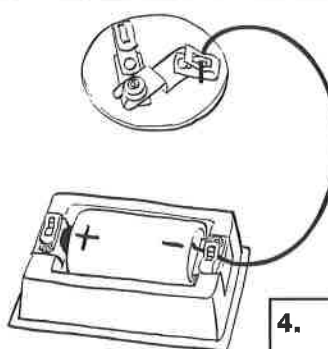
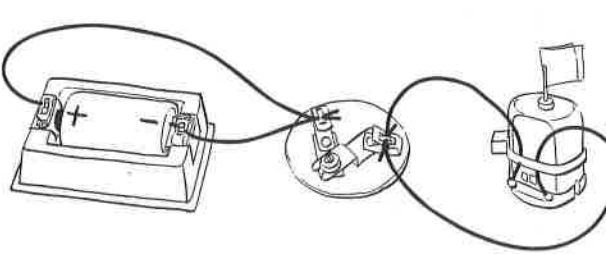
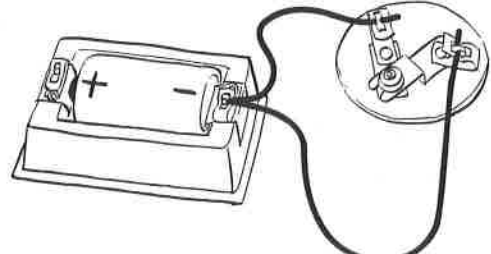
**This is a \_\_\_\_\_ circuit.**

Name \_\_\_\_\_

Date \_\_\_\_\_

# MAKING CONNECTIONS

Look at the pictures below. If the bulb will light or the motor will run, write "Yes" in the box below the circuit. Write "No" if the circuit will not make the bulb light or the motor run.

 <p>1. <input type="text"/></p>	 <p>2. <input type="text"/></p>
 <p>3. <input type="text"/></p>	 <p>4. <input type="text"/></p>
 <p>5. <input type="text"/></p>	 <p>6. <input type="text"/></p>

Choose one of the circuits above that will NOT work. Explain what you would do to fix it.

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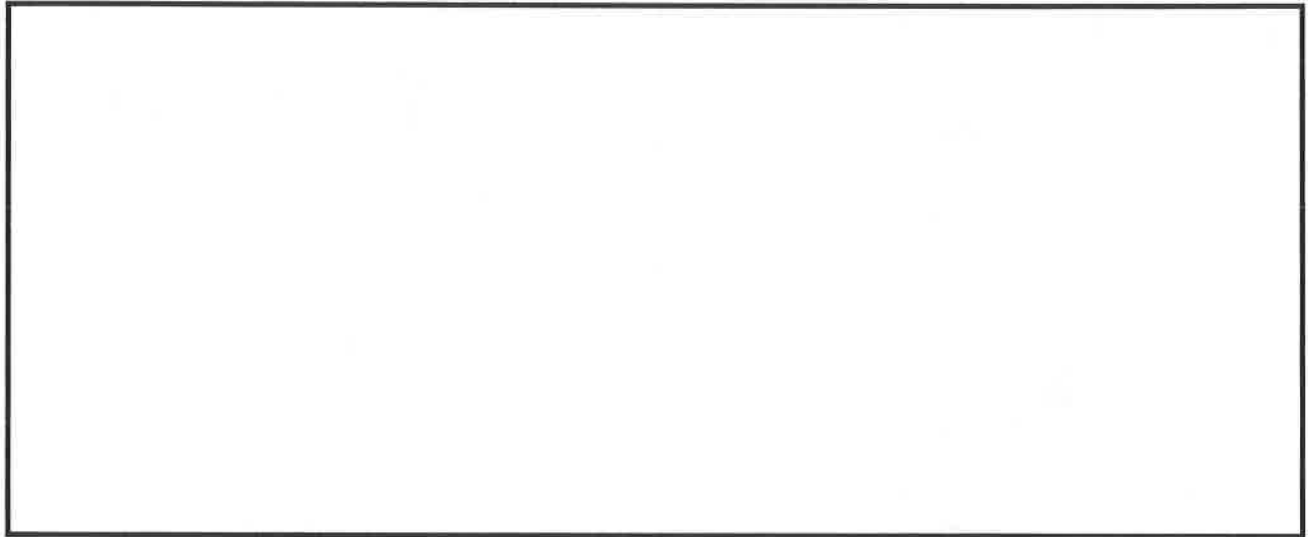
Name \_\_\_\_\_

Date \_\_\_\_\_

# MYSTERY CIRCUITS

.....

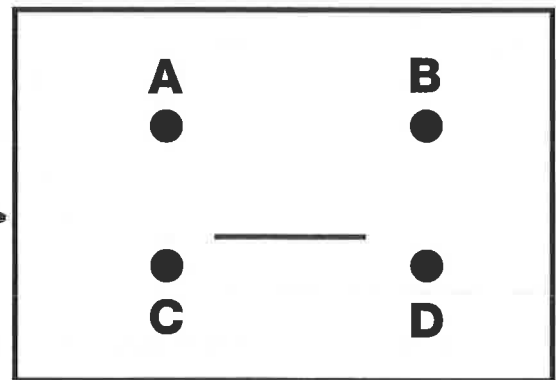
1. Use the bulb, D-cell, switch, and wires to construct an electric circuit to turn the bulb on and off.
2. Draw a schematic diagram of your circuit.



3. Find the mystery board on the table. Some of the paper fasteners on the mystery board are connected by hidden wires. Find out which paper fasteners are connected by wires.

Draw on this picture to show where the hidden wires are.

Write the number of your mystery board on the line.



Explain how you know where the wires are.

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