ELEMENTARY SCIENCE PROGRAM
MATH, SCIENCE & TECHNOLOGY EDUCATION

A Collection of Learning Experiences

PHYSICAL SCIENCE

Physical Science Student Activity Book

Name_____

This learning experience activity book is yours to keep. Please put your name on it now. This activity book should contain your observations of and results from your experiments.

When performing experiments, ask your teacher for any additional materials you may need.

TABLE OF CONTENTS

Activity Sheet for L.E. #2 - Solids vs. Liquid vs. Gases 2

Activity Sheet for L.E. #3 - Melting: Changing From A Solid To Liquid.....3

Activity Sheet for L.E. #4 - Evaporation.....4

Activity Sheet for L.E. #6 - Liquid to Solid 5

Activity Sheet for L.E. #7 - Magnets Galore 6

Physical Science Student Assessment 7-9

Glossary.....10-11

Activity Sheet for Learning Experience #2 **Name**_____

SOLIDS VS. LIQUIDS VS. GASES

Cut out 15 circles out of construction paper. Each circle is to show a molecule. Paste the circles in each square to show what the molecules look like in a solid, liquid, and gas.

Solid

Liquid

Gas

Activity Sheet for Learning Experience #3 **Name_____**

MELTING: CHANGING FROM A SOLID TO LIQUID

Place your pie tin with an ice cube inside it somewhere in your classroom. Place your thermometer next to your pie tin. Check your ice cube about every 10 minutes and write down the time and temperature and what you observe about the ice cube.

Time	Temperature	Observations

Activity Sheet for Learning Experience #4 **Name**_____

EVAPORATION

Location of plate _____

Temperature _____

Time placed at location _____

Approximate time when water completely evaporated _____

Describe in words or pictures what you observed when checked on the evaporation of your 20 drops of water.

1st observation	2nd observation
3rd observation	4th observation
5th observation	6th observation

Activity Sheet for Learning Experience #6 **Name**_____

LIQUID TO SOLID

Describe an experience when you observed a liquid change to a solid. Draw a picture of your experience to go with your story in the box below. Share your experience with your class.

Activity Sheet for Learning Experience #7 Name_____

MAGNETS GALORE

Predict if the objects below will be attracted to a magnet. Record your prediction on the chart by placing an "X" in the box. Test each item and record the actual results on the chart by placing an "X" in the correct box.

Objects	Prediction – Is this object attracted to a magnet?		Actual Results	
	Yes	No	Yes	No
1. Penny				
2. Iron Nail				
3. Aluminum Nail				
4. Marble				
5. Paper Clip				
6. Styrofoam Ball				

I could use a magnet:

_____

_____

_____

_____

Name: _____ Date: _____
Physical Science Student Assessment

Directions: Read the question carefully and answer based on your knowledge about physical science. Circle the correct answer.

1. Matter is made up of tiny particles. Sometimes they are close together. Sometimes they are far apart. These particles are called _____.

2. What form of matter has a shape of its own? _____

3. Which is a unit for measuring temperature?
   A. Inches
   B. Celsius
   C. Liters
   D. Grams

4. When a liquid is heated and turned into a gas, we call this:
   A. Freezing
   B. Melting
   C. Evaporation
   D. Poles

5. This word describes two magnets that join together:
   A. Repel
   B. Iron
   C. Attract
   D. Nail

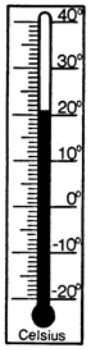
6. Fill in the chart below. First name the three forms of matter. Write one word in each box on the dotted lines.

----------	----------	----------

7. Now write the names of these items on the chart under the correct form of matter:

water	snow
pencil	milk
ice	helium
air	rock
honey	butter

8. Use the thermometer to measure the temperature in the picture. What is the temperature in Celsius? _____



9. Explain what might happen to the water in the cup if you put it in the freezer overnight. What would happen to the temperature? Would there be a change in the state of matter?

_____
_____
_____
_____
_____
_____

10. Why does a person's hand become cooler when they hold a snowball without a glove or mitten on?

A. The hand is colder than the snowball.
B. The snowball is warmer than the hand.
C. Heat is taken away from the snowball.
D. Heat leaves the hand and goes to the snowball.

11. The same snowball left in a warm room overnight is likely to change from…

A. Liquid to a solid, and then to a gas
B. Liquid to a gas, and then to a solid
C. Solid to a liquid, and then to a gas
D. Solid to a gas, and then to a liquid

12. Joe is conducting an experiment to find out which room in his house is the warmest. To collect this information, Joe should use:

A. A thermometer
B. A balance
C. An eyedropper
D. A ruler

GLOSSARY

Alike:	in the same manner or form.
Attract:	to cause to join together or unite.
Boiling point:	the temperature at which a liquid changes to a gaseous state.
Celsius:	a temperature scale in which 0° is the freezing point of water to 100° is the boiling point of water.
Condensation:	the process of changing from a gas to a liquid because heat is removed.
Definite:	clearly determined, having fixed limits.
Different:	differing in character or quality.
Drying:	not containing water.
Evaporate:	the process of changing from a liquid to a gas due to heat gain.
Fair test:	to contact a scientific test where there are specific items that remain the same (constant).
Freezing:	to become hardened because of loss of heat.
Freezing point:	temperature at which a liquid changes into a solid 0°.
Gas:	a state of matter that has no definite shape and takes up no definite amount of space, must be moving to be felt, and takes the shape and size of its containers.
Graduated cylinder:	a container with marked measurements used to find the volume of liquids.
Liquid:	state of matter that has no definite shape, takes the shape of the container, feels wet, and takes up a definite amount of space.
Magnet:	an object that possesses the property of attracting iron, cobalt, nickel, or steel.
Mass:	the amount of matter in an object (grams).
Matter:	anything that has mass and takes up space.

Melting:	change from a solid state to a liquid state due to heat loss.
Melting point:	the temperature at which a solid changes to a liquid state (water 0°C)
Metal:	a substance that has a luster, is a good conductor of heat and electricity, and can be pounded into shapes.
Molecule:	neutral particle formed by atoms.
Poles:	the ends of a magnet, north and south poles.
Predict:	to make an educated guess.
Repel:	to force back.
Shape:	outline of a surface.
Solid:	state of matter that has a definite shape and takes up a definite space, each solid has a different feel to it.
Solidifying:	to make or become solid.
Space:	unlimited area in which all objects are contained.
Steam:	an invisible gas or vapor produced when water boils.
Temperature:	measure of warmth or coldness of an object.
Thermometer:	an instrument used to measure temperature.
Volume:	the amount of space occupied by an object.
Water vapor:	water in a gaseous state.