

Science/3rd Grade
Quarter 1
Remote Learning
Practice and Enrichment Packet



ANSWER KEY



Inquiry Activity

How do you describe objects?

You will be describing an object, and your classmate will guess which object you described.

Materials

classroom objects

hand lens

Make a Prediction What words are used to describe objects?

Sample answer: I use words like small, large, color, shape.

Carry Out an Investigation

- 1 With a partner, take turns secretly choosing an object in the classroom.
- 2 Choose an object in the classroom that you can see but your partner can't. Have your partner ask up to five questions about its properties. Each question must only have a "yes" or "no" answer.
- 3 **Record Data** Use the table below to help you.

Guess From Properties		
Property	Question	Yes or No

Communicate Information

1. What object did your partner choose?

Answers will vary depending on object
chosen.

2. What words were used to describe the object?

Answers will vary depending on object
chosen. Should include color, size, shape.

3. Construct an Explanation How did asking questions about the properties of the object help you to identify it?

Sample answer: The answers to the questions helped describe the object.



Inquiry Activity

How Can Matter Change?

You will compare and contrast the properties of a solid, liquid, and gas.

Make a Prediction How do flour and baking soda change when each is mixed with vinegar?

Sample answer: Baking soda and vinegar make a chemical change. Flour and vinegar do not.

Materials

- safety goggles
- funnel
- measuring cups and spoons
- flour
- balloon
- vinegar
- plastic bottles
- baking soda

Carry Out an Investigation

BE CAREFUL Wear safety goggles to protect your eyes.

- 1 List the properties of the flour, baking soda, and vinegar in the table.
- 2 Use a funnel to put 2 tablespoons of flour in one balloon.
- 3 Add 50 milliliters of vinegar to a plastic bottle.
- 4 Carefully, put the balloon over the bottle's opening without letting any flour fall into the bottle.
- 5 Raise the balloon so the flour goes into the bottle.

- 6 **Record Data** Record the properties of each object in the table below.

	Observations
Flour alone	
Baking soda alone	
Vinegar alone	
Flour and vinegar	
Baking soda and vinegar	

- 7 Repeat steps 2-6 using the second balloon, plastic bottle, and baking soda instead of flour.

Communicate Information

3. **Draw Conclusions** Did your results match your prediction? Explain your answer.

Sample answer: Yes, the baking soda and vinegar reacted and made the balloon inflate. The flour fell into the vinegar with no change.

4. What do you think caused the differences in the balloons?

Sample answer: A chemical change occurred between the vinegar and the baking soda. No chemical change occurred between the vinegar and the flour.



Inquiry Activity

Comparing Solids, Liquids, and Gases

You will compare and contrast the properties of a solid, liquid, and gas.

Make a Prediction How do you know if something is a solid or a liquid?

Sample answer: If the object changes shape.

Materials

- safety goggles
- 3 resealable plastic bags
- water
- rock

Carry Out an Investigation

BE CAREFUL Wear safety goggles to protect your eyes

- 1 Seal all but one inch of an empty bag. Blow into it and quickly seal the bag.
- 2 Fill the second bag with water and seal the bag.
- 3 Place a rock in the third bag and seal it.
- 4 **Record Data** Record the properties of each object in the table below.

Property	Air	Water	Rock
Size			
Shape			
Volume			
Hardness			
Texture			
Color			

- 5 **Analyze Data** What happened when you squeezed each bag?

Sample answer: The air and liquid change shape in the bags when squeezed; the rock does not change shape when its bag is squeezed.

- 6 Carefully open each bag over the sink and hold it upright.

Communicate Information

3. What is one similarity between solids and liquids?

Sample answer: They both have a definite volume.

4. What is one similarity between liquids and gases?

Sample answer: They both do not have a definite shape.

5. What is one difference between the three objects?

Sample answer: All three objects looked different. Gases cannot always be seen, liquid changes shape, and solids do not change shape.

Inquiry Activity

Investigate With Magnets

What effect do magnets have on different objects?

Make a Prediction Which objects will be pulled to a magnet?

Sample answer: Paper clips and some metal objects will be pulled to the magnet.

Carry Out an Investigation

BE CAREFUL Don't place science materials in your mouth.

- 1 Lay out the items you are going to test on a flat surface.
- 2 Test each item by touching it with the magnet.
- 3 **Record Data** List each item in the table below. Tell if it was pulled to the magnet.

Materials

- magnet
- various classroom objects
- pennies
- paper clips
- pencils
- crayons
- plastic spoons

Item	Pulled or Not Pulled by Magnet

Communicate Information

1. Analyze Data Describe the findings from your data table.

Sample answer: Plastic and pennies were not pulled to the magnet. Paper clips were pulled.

2. Construct an Explanation How did your observations compare to your prediction?

Sample answer: My observations proved that pennies, which are made of metal, are not pulled to a magnet, but paper clips are.



Inquiry Activity

Make an Electromagnet

You will construct an electromagnet and consider how to make it stronger.

Close Reading Read this section from the *Science Handbook*. Use this information to write a hypothesis.

When you wrap a wire into a loop, you increase the strength of the magnetic field. Many loops together can make a coil. The magnetism from each loop adds up to make the coil a stronger electromagnet.

Materials

- D-cell battery
- 1 iron nail
- 1 battery holder
- 1 40-centimeter long piece of insulated wire
- paper clips

Write a Hypothesis If the wire is wrapped more times around the nail,
 then the magnetic force will be stronger
 because the magnetic field will be larger.

Carry Out an Investigation

BE CAREFUL Wire may become warm in this activity.

- 1 Wind 40 centimeters of insulated wire around an iron nail twenty times. Start at one end of the nail with the insulated wire. Leave at least 4 centimeters of wire at the starting end.
- 2 Place the D-cell battery into the battery holder.
- 3 Attach the ends of the insulated wire into the clips on each end of the battery holder.
- 4 Use the nail as a magnet and see how many paper clips you can pick up. Record the results in the table.
- 5 Repeat the procedure. Wind the wire around the nail ten more times.
- 6 Repeat the procedure, winding the wire, ten more times.

7 Record Data

Strength of Electromagnet	
Number of Times Wire Is Wound Around Nail	Number of Paper Clips
20	
30	
40	

Communicate Information**Crosscutting Concepts****Cause and Effect**

3. How did the number of times the wire was wound affect the number of paper clips picked up?

Sample answer: When the wire was wrapped more times, more paper clips were picked up.

4. **Construct an Explanation** Was your hypothesis proved?

Sample answer: Yes. I said that the more the wire was wrapped around the nail, the stronger the magnetic force would be.



Inquiry Activity

Distance and the Pull of a Magnet

Materials

- ruler
- 2 bar magnets

You will measure the distance between magnets and observe the attraction.

Write a Hypothesis If I put the magnets farther apart,
then they will not have as much attraction
because the magnetism will be less.

Carry Out an Investigation

- 1 Place the ruler on a flat table or desktop.
- 2 Put the north end of one bar magnet and the south end of another magnet at the 15-centimeter mark of the ruler.
- 3 **Record Data** Create a table to record your observations.
- 4 Leave the bar magnet with the north end at the 15-centimeter mark. Move the other magnet to the 17-centimeter mark. Repeat step 3. Try another distance.

Communicate Information

6. Summarize your observations.

Sample answer: The closer the magnets
were, the stronger the attraction was.

7. **Construct an Explanation** Was your hypothesis supported by your observations?

Sample answer: Yes. When the magnets
were 4 centimeters apart, they were
less attracted to each other than at
1 centimeter apart.

Glue your table here.