3rd Grade Science

Quarter 1

Remote Learning

Practice and Enrichment Packet

Hello SCS Family,

This resource packet was designed to provide students with activities which can be completed at home independently or with the guidance and supervision of family members or other adults. The activities are aligned to the TN Academic Standards for Science and will provide additional practice opportunities for students to develop and demonstrate their knowledge and understanding.

A suggested pacing guide is included; however, students can complete the activities in any order over the course of several days. Below is a table of contents which lists each activity.

Activity	Page Number	Suggested Pacing
How Do You Describe Objects?	3-5	Weeks 1-2
How Can Matter Change?	6-9	Week 3-4
Comparing Solids, Liquids, and Gases	10-12	Week 5-6
Investigate with Magnets	13-15	Week 7
Make an Electromagnet	16-18	Week 8
Distance and the Pull of a Magnet	19-20	Week 9

3rd Grade Science Activity: How Do You Describe Objects?	
Estimated Time	20 minutes
Grade Level Standard(s)	3.PS1.1: Describe the properties of solids, liquids, and gases and identify that matter is made up of particles too small to be seen.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Household items, hand lens, a partner
Essential Question	What is matter?
Learning Outcome	Students will be able to define matter and compare and contrast various properties.
Purpose	This activity will help students describe observable properties of an object. They will then infer the identity of another object from its listed properties.

Name_____ Date _____ EXPLORE

Inquiry Activity

How do you describe objects?

Materials

- ☐ classroom objects
- ☐ hand lens

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

Make a Prediction What words are used to describe objects?

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**

EXPLORE Name_____ Date _____

Communicate Information

1. What object did your partner choose?

2. What words were used to describe the object?

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

3rd Grade Science Activity: How Can Matter Change?	
Estimated Time	30 minutes
Grade Level Standard(s)	3.PS1.2: Differentiate between changes caused by heating or cooling that can be reversed and that cannot.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	See below.
Essential Question	How are the three states of matter alike and different?
Learning Outcome	Students will be able to investigate ways to change matter and determine that some changes can be reversed and other cannot.
Purpose	This activity helps students observe a chemical change. They will observe production of a gas, which is one example of evidence that a chemical change has occurred.

EXPLAIN

Name_____ Date _____

Inquiry Activity

How Can MatterChange?

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?

_____

_____

_____

_____

_____

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.

Name _____ Date _____ EXPLAIN

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.

_____

_____

_____

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

3rd Grade Science Activity: Comparing Solids, Liquids, and Gases	
Estimated Time	20 minutes
Grade Level Standard(s)	3.PS1.3: Describe and compare the physical properties of matter including color, texture, shape, length, mass, temperature, volume, state, hardness, and flexibility.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	See below.
Essential Question	What is matter?
Learning Outcome	Students will be able to define matter and compare and contrast various properties.
Purpose	Students will observe the properties of a solid, a liquid, and a gas.

EXPLAIN Name_____ Date _____

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?

_____

_____

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			

Name_____ Date _____ EXPLAIN

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

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

Communicate Information

3. What is one similarity between solids and liquids?

4. What is one similarity between liquids and gases?

5. What is one difference between the three objects?

3rd Grade Science Activity: Investigate with Magnets	
Estimated Time	30 minutes
Grade Level Standard(s)	3.PS2.1: Explain the cause and effect relationship of magnets.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	See below.
Essential Question	How do magnets affect other objects?
Learning Outcome	Students will be able to investigate how magnets can cause changes to other objects.
Purpose	Students will experiment to find out which classroom objects are pulled to a magnet.

Name_____ Date _____ EXPLORE

Inquiry Activity

Investigate With Magnets

What effect do magnets have on different objects?

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

_____

_____

_____

Materials

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

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.

Item	Pulled or Not Pulled by Magnet

EXPLORE Name_____ Date _____

Communicate Information

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

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

3rd Grade Science Activity:	
Estimated Time	30 minutes
Grade Level Standard(s)	3.PS2.2 Solve a problem by applying the use of the interactions between two magnets. 3.ETS1.1 Design a solution to a real-world problem that includes specified criteria for constraints. 3.ETS1.2 Apply evidence or research to support a design solution. 3.ETS2.1 Identify and demonstrate how technology can be used for different purposes.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	See below.
Essential Question	How can you use a magnet to solve a problem?
Learning Outcome	Students will be able to apply their knowledge of magnets to solve a problem.
Purpose	Students will build an electromagnet and test it to determine the effect of wrapping wire more times around the nail.

EXPLAIN Name_____ Date _____

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.

Write a Hypothesis If _____

_____

Materials

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

then _____

because _____

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.

Name_____ Date _____ EXPLAIN

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?

4. Construct an Explanation Was your hypothesis proved?

3rd Grade Science Activity: Distance and the Pull of a Magnet	
Estimated Time	20 minutes
Grade Level Standard(s)	3.PS3.3: Evaluate how magnets cause changes in the motion and position of objects, even when the objects are not touching the magnet.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	ruler, 2 magnets, glue
Essential Question	How do magnets affect other objects?
Learning Outcome	Students will be able to investigate how magnets can cause changes to other objects.
Purpose	Students will vary the distance between the opposite poles of two magnets to observe how distance affects attractive force.

Name_____ Date _____ EXPLAIN

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 _____

then _____

because _____

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.

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

Glue your table here.