First Grade Science Tasks

Earth Science

S1E1.

A. Use simple weather instruments and observations to collect and chart weather data in a periodic journal throughout the year. Look for patterns.
   a. Thermometer-Temperature
   b. Wind vane- wind
   c. Rain gauge- precipitation
   d. Sky conditions—sunny, cloudy, etc.
   e. Weather events such as thunderstorms, tornados, and hurricanes

B. Read or listen to stories about the weather and relate the stories to observations.

C. Use what you know about weather patterns and how the weather changes through the year and during different seasons to compile an illustrated booklet relating changes in temperature and rainfall to seasonal changes.

D. Blow bubbles or make a pinwheel to observe the wind's direction and strength.

E. Make a weather booklet with pictures or drawings of different clouds, precipitation, and weather events.

F. Watch for rainbows. Record when and where you saw them on a class list. Note what was happening in the weather when you saw it. Read a story about rainbows to find out more about them.

G. Use the stories you write for the booklet to tell about how weather affects what people wear and what games they play.

H. Draw pictures of what to wear during different kinds of weather or match pictures of the weather with articles of clothing. (For example, wear a coat, hat and gloves when it is very cold.)

I. Scientists measure all forms of precipitation in a rain gauge. They measure sleet and snow by letting it melt and then measuring it in a rain gauge. Invite a weather person (meteorologist) to talk to the class about measuring precipitation.

J. Keep a container or rain gauge in the school yard and measure the precipitation. Keep a record to look for wettest months and driest months. Make a class graph of precipitation. Relate how plants and animals common to Georgia are affected by seasonal changes by drawing plants and animals through the year and showing how they are different in different seasons. (For example, some birds migrate, and some trees lose their leaves.)

Suggested resource: http://www.weather.com

S1E2.

A. Put some water in a sealable plastic bag. Do not fill the bag completely. Measure the weight of water before and after freezing and after melting. (Use a scale and measure using common manipulatives such as paper clips, blocks, or counters.) Compare the measurements to demonstrate the amount of water is the same. Draw how the water changes.

Weight of water in bag	Weight of water when frozen	Weight of water when melted

B. Put a rain gauge or container outside to collect precipitation. Identify forms of precipitation such as rain, snow, sleet, and hailstones as either solid (ice) or liquid (water).
C. Choose two similar containers. Mark the outside of the containers with tape or a marker. Put a measured amount of water in an open container and the same amount of water in a closed container. Observe and keep a record of measurements in chart form of the amount of water in the containers over time (evaporation). Compare changes in amounts to find out how much water evaporated.
D. Ask questions about puddles of water after a rain and make observations periodically. Draw what happens over time. Create an investigation to measure a puddle. Tell what you would do, what measurement tools you would choose, how often you would measure, and what you would learn. (Reference: Puddle Questions by Joan Westly, 1994, Creative Publications)

Physical Science

S1P1.

A. Use musical instruments to feel how vibrations produce sounds when the instruments are plucked, tapped, or when you blow into them or over them.
B. Make a tape of different school sounds. Play the tape and ask classmates to sort the sounds as loud or soft and pleasant or harsh. Make a list of sounds you like and sounds you do not like.
C. Get two pieces of string about the length of your arm. Tie each piece of string to a different side of the bottom of a coat hanger. Put the strings up to your ears so that it touches the area right in front of your ears. Have someone tap the hanger with a spoon and listen. Move the strings away from your ears and listen as someone taps on the hanger. Explain how the sounds differ.
D. Sit quietly for five minutes. List or draw all of the sounds you hear.
E. Discuss the difference between sound that is pleasant and a sound that bothers you (noise). Ask other people including adults what sounds they like and what sounds are noises to them to see if noise is the same to all people.
F. Pluck a rubber band and listen for the sound it makes. Carefully stretch the rubber band to listen to the changes in sound.
G. Pour different amounts of water in some glasses. Tap the sides of the glass and listen to the different sounds. Put the glasses in order from high sounds to low sounds. Draw a picture of the glasses and the amounts of water. Explain what you found out.
H. Make a list of loud sounds and soft sounds. Circle the ones that are not pleasant because they are too loud.
I. Drop items in a box and listen to the sounds. Have a partner drop one of the items in the box while you have your back turned or your eyes shut. See if you can recognize the item by the sound it made.
J. Discuss the importance of emergency sounds such as fire alarms, smoke detectors, and sirens and important sounds such as the loudspeaker, an alarm clock, or your teacher and parents. Make a poster of people and things that make sounds illustrating why it is important to listen for sounds to stay safe.

K. Play a game with your classmates. Have everyone close their eyes. The teacher taps someone to say hello while everyone listens. Everyone opens their eyes and tries to identify the person. The person who gets it right gets to tap the next person who says hello.
L. Hold a ticking clock over a table. See how many classmates can hear the ticking. Set the clock on the table and check to see who can hear the ticking. Have classmates lay their ear on the table that the clock is on. Discuss how the sounds are different.
M. Listen to sounds through sealed bags of air, water, or sand/soil. Explain the differences.

S1P2.

A. Put two magnets close to each other to observe how they react. Try putting the magnets near each other in various ways. Explain what you observe. If the magnets pull close to each other, they are attracted. If they push apart, they repel.
B. Put a magnet over a cup of paper clips. Record what happens.
C. Observe, predict, and record objects that can be attracted to a magnet. Record your findings in a chart.
D. Identify materials or objects (air, water, wood, paper, your hand, etc.) that do not block the magnetic force. Explain why you think the magnet's force would or would not be blocked by the material.
E. Observe and list common uses for magnets at home and at school. Sketch some of the ways people use magnets.
F. Explore how magnets can be used to make some things move without being touched. Create stick puppets by attaching magnets to craft sticks or other classroom objects. Move the stick figures by using another magnet underneath a desk, table, or shoebox. Use your stick puppet to tell others what you know about magnets.

Life Science

S1L1.

A. Plant a seed and see if you can meet its basic needs to keep it alive. Write a letter to a friend telling what you needed to do to meet the basic needs of your plant.
B. Sketch and/or use a picture of a plant and label its parts. Explain what each part does.
C. Investigate plants and their needs by comparing the health of plants under different conditions. Make a list of ways to determine if a plant is healthy and how to determine if a plant is not healthy, such as changes in its leaves, roots, stem, or flowers. Draw, measure, and record changes over time of plants in light, in dark, in a closed container, in the open air, in cold, in warmth, with water, and without water. Measure the plants periodically to note any changes. You can measure the height, number of leaves, size of leaves, number of flowers, etc. Sketch differences in appearance such as color, wilting, fallen leaves, etc. to determine if the plant is healthy or not healthy. Keep a plant journal or bulletin board display for your measurements, drawings and conclusions.
D. Write an illustrated story about how to take care of a pet. Make sure you tell about how the basic needs of the pet are met.
E. Make observations about how animals meet their needs and write stories about what you observe. Watch an animal* and keep a journal with sketches of where it lives, how it moves, what it eats, and how it gets water.
F. Read and/or listen to stories about other animals, such as animals that live in a zoo, to find out how they eat, how they move, how they get water, and what they eat.

G. Compare a fairy tale story about an animal and a science story about an animal. Tell how they are similar and how they are different.

*Animals to use for observation: spiders, birds, insects such as ants, fish, classroom pets at school, personal pets such as dogs, cats, hamsters, at home, etc.