



## Gulfport School District Science Instructional Strategies



Check Grade Level K X 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 6 \_\_\_ 7 \_\_\_ 8 \_\_\_ 9 \_\_\_ 10 \_\_\_ 11 \_\_\_ 12 \_\_\_

**Competency:** 1 Ask questions and find answers by scientific investigation.

**Objective(s):** b Compare, sort, and group objects according to size, shape, color and texture. (DOK 2)

**Vocabulary:** size, shape, color, texture, compare, sort

**Teaching Strategy(ies):**

1. TTW pass out a bucket of various shaped objects that are of different size, color, and texture. TTW model comparing and sorting.
2. Students will sort the objects first by color, second by size, third by shape, and last by texture. Students will compare the objects by attributes.
3. Students can go on a nature walk to collect at least six leaves each.
4. Once in the classroom, students will compare and sort leaves by size, shape, color, and texture. Students can pick their favorite leaf to do a rubbing.

**Materials:** bucket; buttons, teddy bear counters, attribute blocks, felt squares, cotton balls, bouncy balls, etc.; leaves; bags; crayons; paper

**Competency:** 1 Ask questions and find answers by scientific investigation.

**Objective(s):** c Identify simple tools (rulers, thermometers, scales, and hand lenses) used to gather information. (DOK 1)

**Vocabulary:** rulers, thermometers, scales, and hand lenses

**Teaching Strategy(ies):**

1. After the teacher explains what rulers, thermometers, scales, and hand lenses are used for, the students will participate in a nature walk.
2. During the walk student will use hand lenses to observe insects and plants found in nature.
3. Place various objects at a table for students to explore their purpose. For example, students can examine teddy bear counters with a hand lens and measure the weight of teddy bear counters with a scale.

**Materials:** hand lenses, various objects to explore, rulers, thermometers, scales, hand lenses, teddy bear counters



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**Competency:** 1 Develop an understanding that living and non-living things have identifiable characteristics.

**Objective(s):** d Recognize that people have always had questions about their world and identify science as one way of answering questions and explaining the natural world. (DOK 1)

**Vocabulary:** world, questions

**Teaching Strategy(ies):**

1. Students will watch a United Streaming video "Peep and the Big Wide World".
2. Students will ask questions they generate after viewing the video.
3. The teacher will use a circle map to record questions that the students generated.
4. The class will discuss the questions and answers.

**Materials:** computer, United Streaming subscription, board, dry erase markers

**Competency:** 1 Ask questions and find answers by scientific investigation.

**Objective(s):** e Describe ideas using drawings and oral expression. (DOK 2)

**Vocabulary:** heard, smelled, saw

**Teaching Strategy(ies):**

1. Students will pick a topic out of a hat, such as: family, friends, school, pets, etc.
2. The teacher will read topic to the students.
3. The students will then draw a picture about their given topic.
4. Students will gather on the carpet to explain their drawing in orally.
5. Students will go on a nature walk.
6. They will draw things heard, smelled, and observed on the walk.

**Materials:** hat, various topics, drawing paper, pencils, crayons, "sharing" carpet, paper, pencils, crayons



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**Competency:** 1 Ask questions and find answers by scientific investigation.

**Objective(s):** f Recognize that when a science investigation is done the way it was done before, very similar results are expected. (DOK 1)

**Vocabulary:** solid, liquid, melting, sink, float

**Teaching Strategy(ies):**

1. Teacher will place a cup of ice on a table (where it is accessible for students to view) in the morning. Throughout the day, the student will check on the ice to observe the changes.
2. The class will discuss how the ice changed from the solid to a liquid.
3. One week later the class will repeat the experiment. TTW pose question, "What will happen to the ice?"
4. Teacher will place various objects in a bucket full of water students will predict which ones will sink or float. Class will repeat the experiment.

**Materials:** cup, ice, various objects, bucket, water

**Competency:** 1 Ask questions and find answers by scientific investigation.

**Objective(s):** a Demonstrate an understanding of a simple investigation by asking questions. (DOK 2)

**Vocabulary:** spy (in the context of the game)

**Teaching Strategy(ies):**

1. The teacher will place an item in the bag. Students will ask questions about the item trying to figure out what the item is.
2. The teacher will lead the class in a game of "I spy". Students will generate questions to figure out what the object is. The object "spied" can be shapes, colors, numbers, etc.

**Materials:** objects for bag, bag



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**Competency:** 4 Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.

**Objective(s):** b Identify and describe properties of Earth materials (soil, rocks, water, and air). (DOK 1)

**Vocabulary:** Earth, soil, rocks, water, air

**Teaching Strategy(ies):**

The teacher and students will use magazine pictures to create a class tree map to describe properties of Earth materials (soil, rocks, water, and air).

**Materials:** chart tablet, markers, magazines, scissors, glue

**Competency:** 4 Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.

**Objective(s):** c Collect and display local weather data. (DOK 2)

**Vocabulary:** weather terms (foggy, sunny, cold, windy, etc)

**Teaching Strategy(ies):**

1. Using the internet, the teacher and students will print out the weather report daily.
2. Then, they will discuss the weather report for the day.
3. The students compile the weather reports for the week to create a "Class Weather Booklet."

**Materials:** computer, printer



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**Competency:** 4 Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.

**Objective(s):** d Describe ways to conserve water. (DOK 2)

**Vocabulary:** conserve/conservation

**Teaching Strategy(ies):**

1. The teacher and students will brainstorm various ways to conserve water.
2. The teacher and student will construct and illustrate a circle map on water conservation.

**Materials:** chart tablet, markers, crayons

**Competency:** 4 Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.

**Objective(s):** e Describe the effects of the Sun on living and non-living things. (DOK1)

- Warms the land, air, and water
- Helps plants grow

**Vocabulary:** Sun, plants

**Teaching Strategy(ies):**

1. The teacher and students will discuss the importance of the Sun on living things.
2. The teacher and students use two separate plants to conduct and experiment showing the importance of the sun on the plants.
3. One plant will be placed in a dark spot and one will be placed in the sunlight.
4. The student will observe the progress of the two plants.

**Materials:** two plants



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**Competency:** 4 Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.

**Objective(s):** f Identify the sun as Earth's source of light and heat and describe changes in shadows over time. (DOK 2)

**Vocabulary:** Earth, soil, rocks, water, air

**Teaching Strategy(ies):**

1. The students will go outside first thing in the morning with a partner. The partners will measure each other's shadows.
2. Later in the day, the partners will return to the same spot and use a different color chalk to measure the "new" shadow.
3. The teacher and students will discuss the differences in the shadows.

**Materials:** sidewalk chalk (different colors)