

Grade 4

Topic Physical Setting

Title What is Sand?

Standards:

4.1.5 Demonstrate how measuring instruments, such as microscopes, telescopes, and cameras, can be used to gather accurate information for making scientific comparisons of objects and events. Note that measuring instruments, such as rulers, can also be used to designing and constructing things that will work properly.

4.2.5 Write descriptions of investigations, using observations and other evidence as support for explanations.

Objectives:

Cognitive:

Students will record and illustrate information based on observations of sand particles.

Affective:

Students will work cooperatively to classify and organize data from their observations.

Psychomotor:

Students will use hand lenses to describe sand particles.

Materials:

- 1 white paper plate per pair
- 1 toothpick per person
- 1 magnifying glass per person
- A pinch of coarse sand per pair
- Rock samples
- Activity sheet (attached)
- K-W-L (attached)

Procedures:

1. Ask students, “What do you know about sand?” The students will complete a K-W-L.
2. Then bring the class together and chart ideas on a class K-W-L chart. (*featuring vocabulary words: particle, classify, observe*)
3. Ask the students what questions they may have about sand. Record questions on K-W-L.
4. Divide students into pairs.
5. Hand out paper plates, toothpicks, magnifying glasses, and sand.
6. Using their magnifying glass, students observe initial sample of sand.

7. They should then draw and record their observations on the activity sheet numbers #1 and #2.
8. Students should separate sand and divide the particles into groups. (*Note to teacher: The students decide how to group the sand.*)
9. Students should record their groupings on the activity sheet number #3 in the form of illustrations and writing.
10. Students report their findings to another pair in the classroom.
11. Students compare their findings with the other pair.
12. Students report their findings to the whole group.
13. Students speculate about these particles and describe them. Discussion. (*Note to teacher: Students should notice that some of the particles look like larger materials such as rocks, shells, etc.*)
14. Post Assessment: Students will go back to their K-W-L and add what they have learned to their chart. Students should refer to the vocabulary chart that is posted in the classroom.
- 15.

Assessment:

Informal:

- Teacher observes students working in groups cooperatively and using the hand lens appropriately. (A teacher checklist might be used.)

Formal:

Pre Assessment:

- K-W-L

Post Assessment:

- K-W-L

Observation Post Assessment Rubric

- Students use pictures to describe sand particles
- Students show evidence of color in their pictures
- Students show evidence of size particles in their pictures
- Students mention various shapes of particles
- Students use words to describe sand particles
- Students use color words in their description
- Students mention texture in their description
- Students will mention talking with other students

7 – 8 Exemplary

5 – 6 Proficient

3 – 4 Progressing

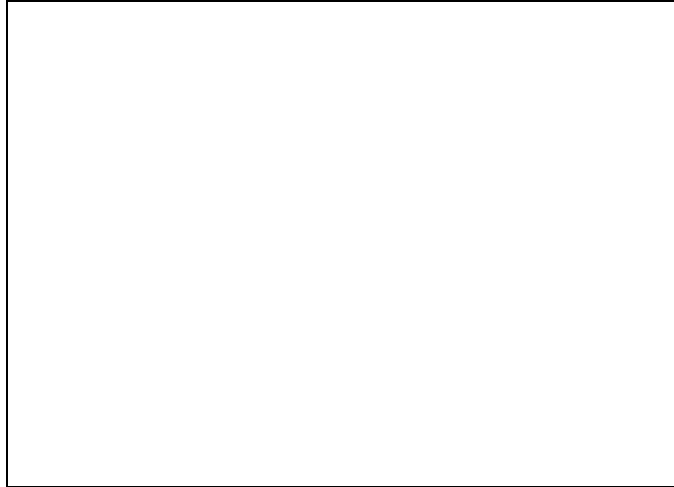
0 – 3 Not There Yet

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What is Sand? ACTIVITY SHEET

Name:

- 1 Observe your sample of sand. Illustrate what you see below.



- 2 Write 1-2 observations that you made from looking at your sample of sand.

On the lines below, describe how you grouped your sand.

K

W

L

**What do you know about sand?
What does sand look like?**

K

W

L