

Rock Star Centers

Summary

Students will complete a Rock Star Journal while studying the properties of their rock.

Group Size

Individual

Materials

- [Rock Star Journal](#) (pdf)
- Ziploc bags
- Rock for each student
- Pencil
- Center materials
- Crayons

Additional Resources

Books

- *Rocks and Minerals*
, by Dr. R. F. Symes (Eyewitness Books); ISBN 0-394-89621-1
- *Rocks and Minerals*
, by Ann O. Squire; ISBN 0-516-22505-9
- *Gemstones*
, by Ann O. Squire; ISBN 0-516-22505-7
- *Investigating Rocks*
, by Natalie Lunis and Nancy White (Big Book); ISBN 1582730814
- *Remarkable Rocks*
, by Ron Cole (Big Book); ISBN 1-56784-221-6
- *Rocks, Minerals, and Fossils*
, by Rebecca Hunter; ISBN 0-7398-3250-6

Video

- *Uses of Rocks and Minerals*
; ISBN 1-58541-088-8

Background for Teachers

All rocks are made of minerals or a combination of minerals. They are used to make many products. Common minerals, such as graphite, are used to make the lead in pencils, while other minerals are more rare, such as gold and silver. These minerals are often used to make jewelry or money. Common minerals can be identified by looking at some of their properties or attributes, such as color, texture, hardness, and luster.

Intended Learning Outcomes

1. Demonstrate a positive learning attitude
5. Understand and use basic concepts and skills.

Instructional Procedures

Invitation to Learn

Tell the students they are going to study a rock star. They each get to choose their own rock star, and

then they are going to learn everything they can about their “rock” star.

Instructional Procedures

Have each student select one rock from his/her rock collection. Give each student a *Rock Star Journal*. Put the rock in a bag that is stapled to the front of his/her journal. It is important that they keep it safe and don't lose it. When they are finished you will want to discuss the results and try to determine a good use for their rock.

Students will rotate through the different centers and complete tasks to help determine the different properties of their rock. These are the centers:

Center 1—Weight

Students will use a balance scale to determine how heavy their rock is. They may add teddy bear counters, marbles, or some other nonstandard unit of measure to determine the weight of their rock.

Materials

- Balance scale

- Nonstandard weights (e.g., teddy bear counters, marbles, etc.)

Center 2—Size and Shape

Students will trace their rock onto their paper. They will also use string to determine the circumference of their rock.

Materials

- Scissors

- Ball of sturdy string

Center 3—Hardness

Students will determine how hard their rock is by scratching it with several objects (e.g., fingernail, penny, nail, etc.). If the object does not make a mark, then the rock is harder than the object.

Materials

- Penny

- Nail

Center 4—Texture

Students will compare the texture of their rock to varying grits of sandpaper. They will take a small square of the sandpaper that matches their rock's texture and glue it into their journal.

Materials

- Several pieces of sandpaper with different grits

Center 5—Sink or Float (density)

Students will predict whether or not their rock will sink or float. Have a sample of pumice so students can compare it to their rocks before they test for density.

Materials

- Container of water

- Paper towels

- Sample of pumice

Center 6—Shiny or Dull (luster)

Students will compare their rocks to pieces of aluminum foil, sparkly sequins or glitter, wax paper, or a brown paper sack. They will take a sample of the one that is most like their rock and glue it in their journal.

Materials

- Aluminum foil

- Glitter or sequins

- Brown paper sack

- Wax paper

Center 7—Color

Students will draw their rock and how it looks on the outside. They should pay close attention to

whether or not the rock has layers or multiple colors.

Materials

Crayons

When each child has had a chance to complete each center, have a short discussion about the findings. Based on these findings, see if they can come up with some ideas for uses of the rock.

Extensions

Using the word MINERALS, conduct a “making words” activity. Some possible words and chunks that can be created are: a, an, in, me, ran, man, nail, sail, rail, mine, line, miner, Reams, linear etc.

Make an interactive writing book about the properties of rocks and their uses. For example, a page may read, “Some rocks are hard. Hard rocks can be used to make tools like hammers and jewelry like diamond rings. Some rocks are soft. Soft rocks can be used to make things to write with like chalk and pencil lead.”

Be sure to include pictures alongside difficult vocabulary words for learners with special needs.

You may also want to have students work with partners as they move through the centers.

Family Connections

Teachers could send a short summary of each of the centers home and ask families to test more rocks for hardness, texture, etc.

Give families the Web site to the Mineral Information Institute. Ask students to look up one of their favorite minerals. Bring in a sample or printed picture.

Issue a challenge for families to find three kid-friendly Web sites about rocks and minerals.

Assessment Plan

The Rock Star Journal is a good indicator as to whether or not the student understood the centers. When the centers are complete, students could also be asked to write a short descriptive paragraph about their rock using information they discovered at the centers.

Authors

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