Second Grade

Learning About Science

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In 1st Grade you learned about: Rocks, Soil, and Water The Sun and Moon, Seasonal Changes Changes in the Movement of Things Properties of Objects Similarities of Living Things How Living Things Change

What do you remember?

Second Grade

This year in 2nd Grade you will learn more about: **Characteristics of Different Rocks Objects and Patterns in the Night Sky Seasonal Weather Patterns Observation of Falling Objects Physical Changes of Matter** Animal Survival, Basic Needs of Living Things, and Their Ability to Change

What is Science?



Science is the study of the natural world.







Scientists do many things

- Observe
- Ask questions
- Test or experiment
- Make Conclusions
- Classify
- Share their ideas

What do you observe about the rock?



What questions might you ask about this rock?



In science, we test our questions.



How does the rock break?

Scientists measure rocks.



Scientists classify rocks into groups.



Which rocks look like they should be in the same group?

As we learn about rocks in this unit, you will be able to say:

- I can recognize the rocks can be large or small.
- I can see that rocks are made from different substances.
- I can sort rocks based on how they look and feel.

Let's Do an Experiment We want to know how rocks break into smaller rocks. How do you think rocks break into smaller rocks by nature?

How Do Rocks Break?

How Do Rocks Break?

- By rocks falling off a cliff
- By hot and cold temperatures
- By rolling down a hill
- By rolling in a river
- Roots growing in cracks of rocks
- By the rain, snow, and ice
- By Animals moving rocks
- By ice expanding in cracks of rocks

Let's do an experiment to see if rocks break by hitting each other rolling in a river.

Examine the rocks in front of you.

Are they all the same?

How are these rocks different from each other?

List of Differences of the Rocks

List of Differences of the Rocks

- Different colors
- Different textures
- Some have layers
- Some are harder than others
- Some have bigger particles than others
- Some sparkle and shine more than others
- Some weigh more than others

Predictions

- If all these rocks were hitting each other in a stream, which differences do you think would be the the biggest reasons rocks would break each other?
- Pick out the rocks that you think will break easily.
- Pick out the rocks that you think will break other rocks.

Shake and Break Experiment

- Put all your rocks in to the plastic bottle.
- Add water to the top of the rocks. Do not fill the bottle to the top.
- Put the lid on securely.
- In your group, when I say go, take turns shaking the bottle as hard as you can so the rocks will break.
- When you are shaking, during the experiment notice what is happening inside the bottle.
- Go!

Observations

- Stop shaking the bottle.
- What is the first thing you notice that is different about the inside of the bottle?
- Why does the bottle look like this?
- What is another thing that you see at the bottom of the bottle?
- Why are they there?

Conclusion

- A conclusion is your judgment or understanding of the experiment.
 - -What did you learn from this experiment?
 - What can you say about how rocks break apart in rolling in a stream of water?
 - Why is it important to know this?