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Rock Cycle Simulation Lab



Science Teacher Resources

Included Resources

Resource Summary

Necessary Supplies/Materials

Crayon Cycle Lab Worksheet

Crayon Cycle Lab Worksheet Answer Key

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Resource Summary

Objective:

Students will be able to describe, compare, and model various rock cycle processes and components.

Notes:

This lab walks students through modeling rock cycle processes, and asks them to make analogies between the activity and the rock cycle.

Necessary Supplies/Materials

Crayon Cycle Lab Worksheet (included) Crayon Cycle Lab Worksheet Key (included)

At each lab station:

~4 crayons ~4 pennies ~5 ice cubes lighter candle textbook foil safety goggles tweezers

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<u>Materials</u> crayons pennies lighter candle textbook ice foil goggles tweezers

YOU'VE LEARNED ALL ABOUT THE STEPS IN THE ROCK CYCLE. TODAY, YOU'LL SIMULATE IT USING CRAYONS AS ROCKS!

Procedures

- 1. Lay one piece of tin foil inside the other so that you have double thickness.
- 2. Each group member should pick a different colored crayon and peel any wrapper off of it.
- 3. Make crayon shavings by rubbing the crayon with the penny. (This works best if the crayon is flat on the counter). You need enough crayon shavings of different colors to have a pile about 6 cm by 6 cm and 2 cm thick.
- Place the crayon shavings inside the center of the foil square and fold all 4 sides over the top. Make sure no shavings can fall out.
- 5. Place the foil packet on a desk and lay a textbook on top of it. Then, squish the shavings by sitting on the book for 60 seconds.
- 6. Remove the book and GENTLY open the foil packet and examine your crayon shavings.

What happened to the shavings?

- 7. Rewrap your crayon, light your candle and use the tweezers to hold the packet over the lit candle. The bottom of the packet should be about a centimeter from the flame. Heat the packet for 60 seconds.
- When you're done, cool the packet down with your ice.
 After about a minute, (make sure it's cool) carefully unwrap your packet.

What's it look like?

9. Clean Up! Throw away the foil, used crayon and ice. Clean everything else as best you can!

ANALYSIS QUESTIONS!	
Which step in the rock cycle was represented by	
rubbing with the penny?	_ the shavings?
sitting on the packet?	_ squished shavings?
the candle's flame?	_ the melted crayon?
the ice?	the cooled crayon?





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- 5. Place the foil packet on a desk and lay a textbook on top of it. Then, squish the shavings by sitting on the book for 60 seconds.
- 6. Remove the book and GENTLY open the foil packet and examine your crayon shavings.

What happened to the shavings? They are kind of stuck together!

7. Goggles on!

Rewrap your crayon, light your candle and use the tweezers to hold the packet over the lit candle. The bottom of the packet should be about a centimeter from the flame. Heat the packet for 60 seconds.

When you're done, cool the packet down with your ice.
 After about a minute, (make sure it's cool) carefully unwrap your packet.

What's it look like? One solid piece - all different colors!

9. Clean Up! Throw away the foil, used crayon and ice. Clean everything else as best you can!

Which step in the rock cycle was represented by	
rubbing with the penny? weathering/erosion	the shavings? <mark>sediments</mark>
sitting on the packet? compaction/cementation	squished shavings? <mark>sedimentary rock</mark>
the candle's flame? Earth's heat	the melted crayon? magma/lava
the ice? <mark>cool crust/atmosphere</mark>	the cooled crayon? igneous rock