

Summer Science Contest for Rising 5th Graders

Name (First MI Last) _____

School _____ Grade Level for 2017-18 _____
should be 5th grade

*Parents, your assistance is greatly appreciated! Please assist your child with online searches and decision making, but the work submitted should be your child's work.

**When complete, please drop off at the front desk of ANY Elementary school in Rock Hill Dist. #3. Buildings are closed on Fridays.

***The deadline for submission is **Thursday, June 29, 2017**. Winners will be announced at the start of the 17-18 school year.

****Entries valid only from Rock Hill School District #3 students.

Matter and Mixtures 5.P.2

What is matter?

Your chart lists elements. What is the difference between an element and a mixture?

Listed below are 6 common forms of matter, known as elements. What do you know about each? Do some research to find out some additional information about each. If you would like to see a periodic table, go to www.ptable.com

Element	Something you know	Research Findings
Sodium		
Calcium		
Iron		
Copper		
Fluorine		
Aluminum		

Changes in Landforms and Oceans 5.E.3

Read the passage. Below, make a Venn Diagram comparing the Rockies and the Appalachian Mountains

Both the Appalachian and Rockies have two things in common; the beauty and wonder of their high elevations. And Black Bears. But there are many differences between these two historic ranges. Stretching from central Alabama into Newfoundland, the Appalachian mountains were formed over 480 million years ago from marine sedimentary rocks, volcanic rocks and slivers of ancient ocean floor--which is at least quadruple the millions of years that it took for the Rockies to form. Compared to the highest peak of the Appalachians of 6,684 feet (Mount Mitchell), the Rockies highest peak is 14,440 feet (Mount Elbert). Alongside that, the Rockies stretch across the country almost twice as long as the Appalachian Mountains (1,500 miles compared to 3,000 miles). The rock of the Rockies is typically either limestone or dolemite, which gives climbers rugged cliffs to enjoy.

From <https://geomaps.wr.usgs.gov/parks/province/appalach.html> AND <http://blog.theclymb.com/out-there/appalachian-mountains-and-rocky-mountains-compared-and-contrasted/>

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Physical Science: Forces and Motion 5.P.5

There are many connecting roads to travel from Rock Hill, SC to Myrtle Beach, SC. Study the routes below, make the necessary calculations and answer the questions.

		Step 1	Step 2	Step 3	Step 4	Step 5	
Route A	Road	Main St RH	Hwy 21-S	Hwy 97-S	I-20E	Hwy 501-S	Make the calculations based on Route A
	Distance (miles)	2.5	25	30	122	2.5	Total Distance (use correct units)
	Time (minutes)	5	29	34	129	7	Total Time (use correct units)
Route B	Road	Main St. RH	I-77S	I-20E	Hwy -76	Hwy 501-S	Make the calculations based on Route B
	Distance (miles)	2	41	82	67	18	Total Distance (use correct units)
	Time (minutes)	4	32	74	80	25	Total Time (use correct units)

Which is the shorter (distance) route to Myrtle Beach? _____

Which route will take the least time to reach Myrtle Beach? _____

Distance ÷ Time = Speed. What is the average speed of travel to Myrtle Beach via each route?

Route A:

Route B:

If both routes are known, why might someone choose Route B?

Interdependent Relationships in Ecosystems 5.L.4

A 5th grade student wanted to know the correct balance of nature. He set up 5 jars. Into Jar A, he placed 6 snails. Into Jar B, he placed 4 snails and 2 plants. Into Jar C, he placed 3 snails and 3 plants. Into Jar D, he placed 2 snails and 4 plants. Into Jar E, he placed 6 plants. Each jar was filled with the same amount of the same type of water and sealed tight. The jars were set near a window and observed. Draw the setup of the experiment below.



Why would a student think this would be a proper experiment to observe the balance of nature?

“Each jar was filled with the same amount of the same type of water and sealed tight. The jars were set near a window and observed.” Why are these aspects of the experiment important? Are there other considerations for such an experiment?

Which jar would you predict would be the correct balance of nature? Explain.

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