

6-8th grade Activities

Week of Jan
8th -
12th

This week will be a bit of a roller coaster for you and your teachers. What does that mean? Well, when someone describes an event as a roller coaster, it means that there will be ups and downs. As we work together to prepare your new classrooms, we want to ensure that learning still happens. Therefore, your challenge is to embrace this crazy ride, and learn all about roller coasters over the week while we are apart. All of these assignments will be due on Tuesday, January 16th. If you need any help, you can reach your teachers by email.



Social Studies



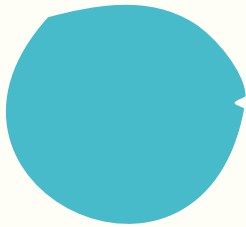
Using the internet, research the oldest roller coaster in the world.

- Write a three paragraph essay about how roller coasters came into existence.
- Add a fourth paragraph that tells me about the sites you used to gather information, and why you believe those are credible sources.



Turn It In:

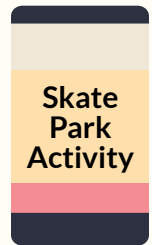
Create a Google Doc and e-mail a link to your teacher **when school reopens.**



The science principals needed to make a roller coaster are similarly used when building a skate park. You need to generate enough momentum to keep moving, but not so much that you fly out of your seat!

Science

- **Show your work:** Design the most complex ramp you can (but don't let the rider fall off!) and screenshot it.
- **Write about it:** What did you try? What worked and didn't work?
- **Reflection:** Write about what you learned about different energy types (kinetic, potential and thermal). When was each type of energy largest? When was it smallest? How did changing the mass affect the movement of the skater? What else did you figure out?

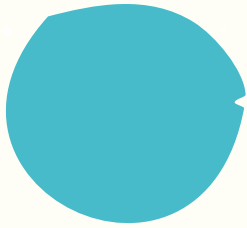


<https://phet.colorado.edu/en/simulation/energy-skate-park-basics>



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Art



Roller coaster design involves both art and engineering. Check out this tutorial on how to draw a roller coaster.

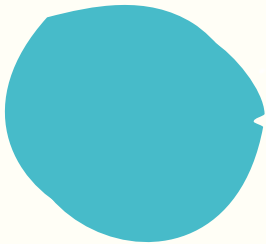
Tutorial

<http://bit.ly/2CUM5a6>



Turn It In:

Draw your roller coaster and turn it in to your teacher **when school reopens.**



Math



Have you heard about Newton's Revenge, the new roller coaster? It's so big, fast, and scary that people are already starting to talk. Some people are worried about the tunnel that thrills riders with its very low ceiling.

The closest the ceiling of the tunnel ever comes to the seat of the roller-coaster car is 200 cm. Although no accidents have been reported yet, rumors have been spreading that very tall riders have broken their arms as they went through the tunnel with their arms raised over their heads. Unfortunately, due to these rumors, many tall people have stopped riding the coaster.



To figure out if the tunnel was safe, we measured the height of people's raised arms when they were sitting (reach) and listed the results in the table.

Graph the data neatly on a piece of graph paper. Do you see a trend? That means, is there a relationship between people's height and their reach?

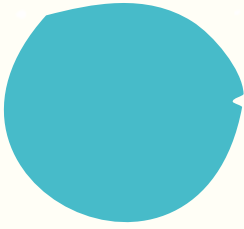
Use the internet to find the tallest person. Now, use your data to determine if the 200 cm tunnel is tall enough for that person. Explain how you found your answer.

Height (cm)	Reach (cm)
166.4	127
169	133
172.8	133
179	139
170	139
183	137
162.5	121
165	126
157.5	128
165	123
169	132
156	119



Turn It In:

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Roller coasters are fun, but they can be dangerous too. Read the article linked below to answer the following question.

Article

<http://bit.ly/1bElqvn>

Some people argue that roller coasters are just too dangerous, and we should ban them from amusement parks. Other people argue that roller coasters are risky, but inherently fun, and people should be able to ride a roller coaster if they want to. Choose a position and write a response to justify your answer.

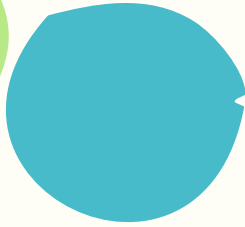
You must include specific details from the article to support your reasoning.

ELA



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Sir Issac Newton is responsible for much of what we understand about the movement of objects in our world. Yet, he was not only a scientist, but also a man of God.

Religion



“For Newton the world of science was by no means the whole of life. He spent more time on theology than on science; indeed, he wrote about 1.3 million words on biblical subjects. Yet this vast legacy lay hidden from public view for two centuries until the auction of his nonscientific writings in 1936. Newton’s understanding of God came primarily from the Bible, which he studied for days and weeks at a time. He took special interest in miracles and prophecy, calculating dates of Old Testament books and analyzing their texts to discover their authorship.”



Newton had an amazing gift in his ability to understand scientific principles, and he shared that gift with others in the academic community. Take some time to think about the gifts that you’ve been given, and how you will share those gifts with others. Then write a prayer that thanks God for your specific gifts, and shares how you will offer those gifts to others.



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- If you have any questions about these assignments, please e-mail your teacher.



- If creating a Google Document is not an option to complete the assignments, you can hand-write your work and turn it in on **when school reopens**.