

Elective 7 Reading and Writing in Science with CCSS for ELA

Reading and Writing in Science with Technical Subjects

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A Brief History of Rockets Timeline

Elective 7 Reading and Writing in Science with CCSS for ELA Reading and Writing in Science with Technical Subjects

Reasoning:

I will be embarking on lessons that involve Newton's Laws and cumulate in an engineering project of building rockets and launching them. I would like to incorporate some reading and writing strategies to first explore the history of rocket and get the basics of Newton's Laws before beginning to understand how these laws apply to everything having to do with motion, including rockets.

Resources

Dunbar, Brian. “Adventures in Rocket Science Educator Guide.” *NASA, NASA*, 10 July 2009, www.nasa.gov/stem-ed-resources/adventures-in-rocket-science.html.

“A Brief History of Rocketry - Youtube.” *A Brief History of Rocketry* , 3 Oct. 2016, www.youtube.com/watch?v=j-5zdZGZ1tk.

Standards

MS-PS2-1. Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.*

MS-PS2-2. Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. [

ELA/Literacy – RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions (MS-PS2-1),(MSPS2-3)

WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration. (MS-PS2-1),(MS-PS2-2),(MS-PS2-5)

The Task

Sir Issac Newton's Laws explain how rocketry works, but he wasn't the first one to explore the motion of rockets. There is a long history of rockets in history being used for many purposes.

Read: A Brief History of Rockets- p. 27-36 in Adventures in Rocket Science Educator Guide-

www.nasa.gov/stem-ed-resources/adventures-in-rocket-science.html.

Watch: *A Brief History of Rocketry-*

www.youtube.com/watch?v=j-5zdZGZ1tk.



Prompt:

Create a timeline in Google Slides highlighting the important events in Rocketry. Make sure to include the events before Newton and after Newton.

1. As you are reading write down notes using the Guided Reading charts attached including the dates explanation of the rocketry event and its purpose
2. Watch the video to supplement the reading and add to the timeline
3. Include a slide explaining Newton's 3 Laws with pictures and how they apply to rocketry

Guided Reading Chart Part 1

| Date | Rocketry Event | Explanation/ Purpose |
|-------------|-----------------------|-----------------------------|
| | | |
| | | |
| | | |

Guided Reading Chart- Part 2

| Newton's Law | List Law | Explanation in own words | Examples of how the law applies to rockets |
|---------------------|-----------------|---------------------------------|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |

Instructions for Creating a Timeline in Google Slides

Step 1 Open a Blank Slide

Click Blank under the Template gallery and then you will see a new slide on the main interface.

Step 2 Select a Timeline Template

Go to the Insert tab, click Diagram on the drop-down menu to open the Diagram pane. Click the third diagram thumbnail to display more inbuilt timeline templates. You can change the number of the Dates to increase or decrease the number of the shapes.

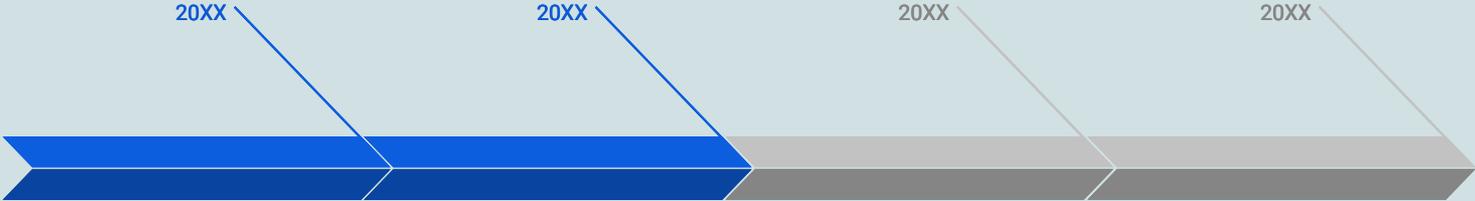
Step 3 Edit Text on the Timeline

Select a suitable template. Type the content into the timeline including the date and a description.

Step 4 Customize the Timeline

Change the colors and theme to suit your project

Click on the timeline to
add dates and
descriptions



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