

## Day 3: 5 Step Writing Process

### English Language Arts

#### Essential Question: What is involved the 5 Step Writing Process?

- **Time to think...** Write 2 sentences for each question.
- **How do you begin your writing?**
- **What do you think about?**
- **Do you find it hard to get started?**

Most people find it difficult to start writing because there are so many things to think about. The Writing Process will allow you to take each step separately while creating your masterpiece.

Let's begin with the 1st step.

**PreWriting** - thinking about a topic, brainstorming then planning ideas (In this section the topic is already chosen for you. This step is important because you have to consider the audience (the reader who will be reading your essay).

This may sound like a lot but the step is simple...you think about ideas that you would like to write about. Ask yourself: What things do I like? What things interest me? What things would others like to know about?

After you have thought about these questions start writing down some thoughts. Don't think too hard about it just let your imagination take control.

**Activity:** Come up with a list of 5 things that you think would be good topics to write about. Decide who will be your audience and then for each 5 things Write 3 things that would be interesting to know about the topic.

**Example:** Vacation Destinations - Where to go? What is there to do? What exciting things would you see?

## Day 3: Jack Rabbit Rate

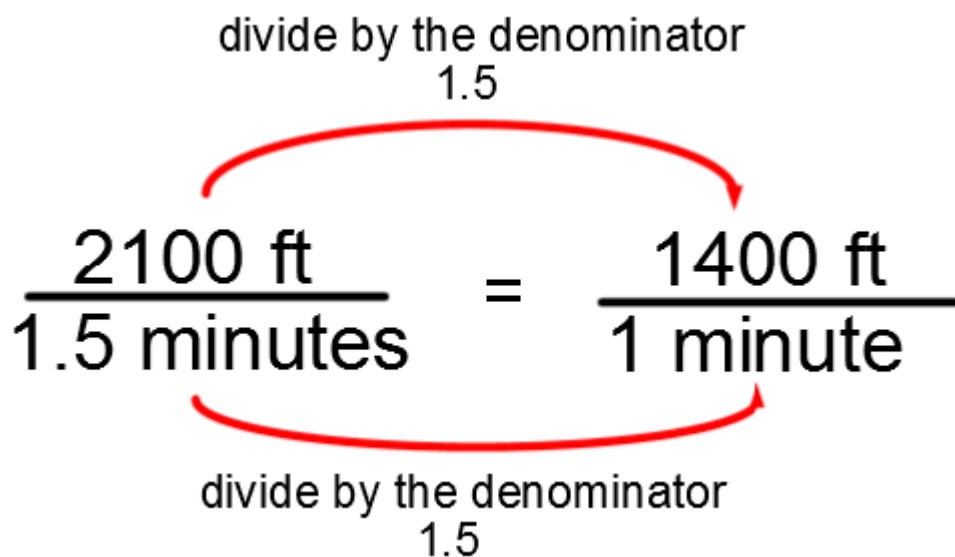
### Math

Example 1: The Jack Rabbit has about 2,100 feet of track and lasts for around 1 minute and 30 seconds. What is the average speed of the ride in feet per minute? Use the formula below:

$$\frac{2100 \text{ ft}}{1.5 \text{ minutes}} = \frac{1400 \text{ ft}}{1 \text{ minute}}$$

divide by the denominator  
1.5

divide by the denominator  
1.5



Answer: \_\_\_\_\_

## Day 3 and 4: Build a Roller Coaster

### Science

Let's build a paper roller coaster so we test some of the concepts we learned.

Materials needed:

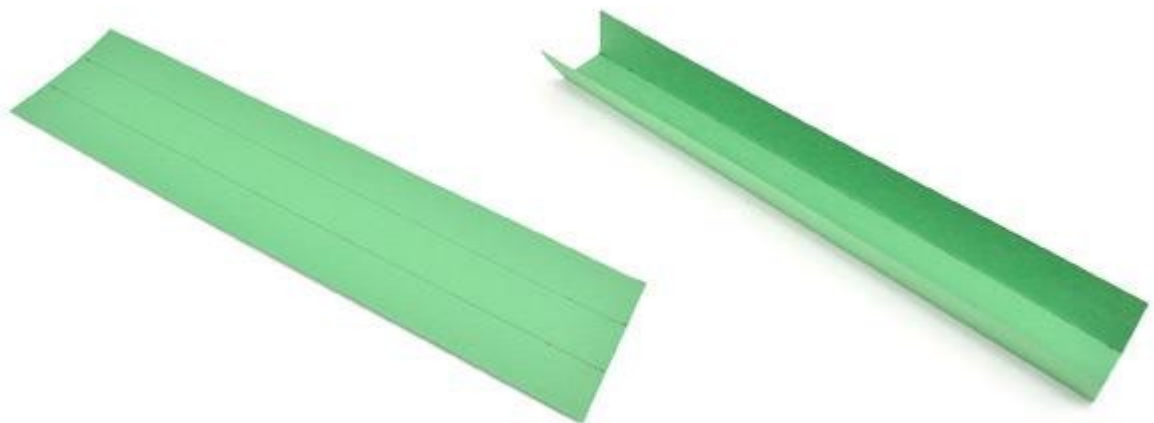
- Paper
- Tape
- Scissors
- Rulers
- Pencil
- corrugated cardboard
- instruction paper
- a marble

## Build a Paper Roller Coaster!

Taken from: [www.sciencebuddies.org/stem-activities/paper-roller-coaster#summary](http://www.sciencebuddies.org/stem-activities/paper-roller-coaster#summary)

Prep Work

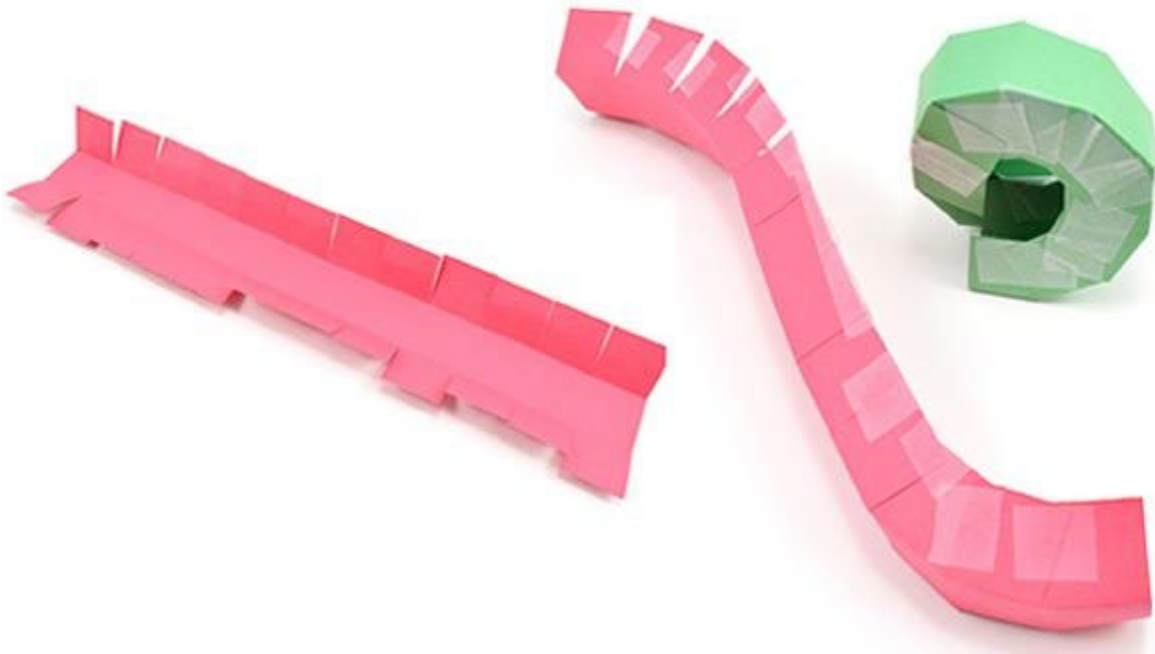
1. Before you try building an entire roller coaster, practice building the individual track segments. You can print the template from the weblink and cut out the pieces, or follow the instructions to draw your own with a pencil and ruler.
2. To build a straight segment:
  - a. Cut a 7.5 cm (3 inch) wide strip of paper.
  - b. Draw two parallel lines that divide it into three 2.5 cm-wide strips.
  - c. Fold the two sides up 90 degrees along those lines to form walls.



## Day 3 and 4: Build a Roller Coaster

### Science

3. To build a loop or a hill:
  - a. Cut a 7.5 cm (3 inch) wide strip of paper.
  - b. Draw two parallel lines that divide it into three 2.5 cm-wide strips.
  - c. Make marks every 2.5 cm along the long edges of the paper.
  - d. Cut inward 2.5 cm from these marks to form tabs.
  - e. Fold the tabs up 90 degrees.
  - f. Bend the track into the shape you want, and tape the tabs together to hold it in place. This step is easier with two people, one to hold the track in place and one to do the taping.



4. To build a curve:
  - a. Cut a 7.5 cm (3 inch) wide strip of paper.
  - b. Draw two parallel lines that divide it into three 2.5 cm-wide strips.
  - c. Make marks every 2.5 cm along one long edge of the paper.
  - d. Cut inward 5 cm (2 inches) from these marks.
  - e. Fold up the uncut side of the paper 90 degrees to form a wall.
  - f. Fold up the tabs on the other side to form the other wall.
  - g. Since the bottom portion of the track is cut into segments, you can bend it horizontally to form a curve. Tape the tabs together to hold the curve in place.

## Day 3 and 4: Build a Roller Coaster

### Science




5. To build a support strut:
  - a. Cut a 6.25 cm (2.5 inch) wide strip of paper.
  - b. Draw four parallel lines that divide it into five 1.25 cm (0.5 inch) wide strips.
  - c. Cut inward 2.5 cm along these lines from one edge.
  - d. Fold along the lines to form a square shape (so two of the segments overlap), and use tape to hold in place.
  - e. Fold the tabs you cut at the end outward. This will allow you to tape the tabs flat to a piece of cardboard, so your strut can stand upright.



### Procedure


1. Before you start building, plan out a design for your roller coaster. Draw your design on paper. Figure out how many supports and pieces of track you will need. Make sure your marble starts at the top of a hill.
2. Using a piece of corrugated cardboard as a base, assemble your track according to your plan. Tape the track segments together end-to-end to connect them.
3. Place the marble at the top of your track and let it go. Watch carefully.

 What happens? Does it make it the whole way through the track?

## Day 3 and 4: Build a Roller Coaster

### Science

4. If the marble made it the whole way to the end, try making your track longer by adding more pieces.

 How long can you make your track before the marble comes to a stop?

5. If your marble didn't make it to the end, try to figure out why. Is there a spot in your track where the marble got stuck? Was the marble going too slow to make it through a loop? If necessary, make changes to your design, like making the curves more gradual or the starting hill taller, and try again.

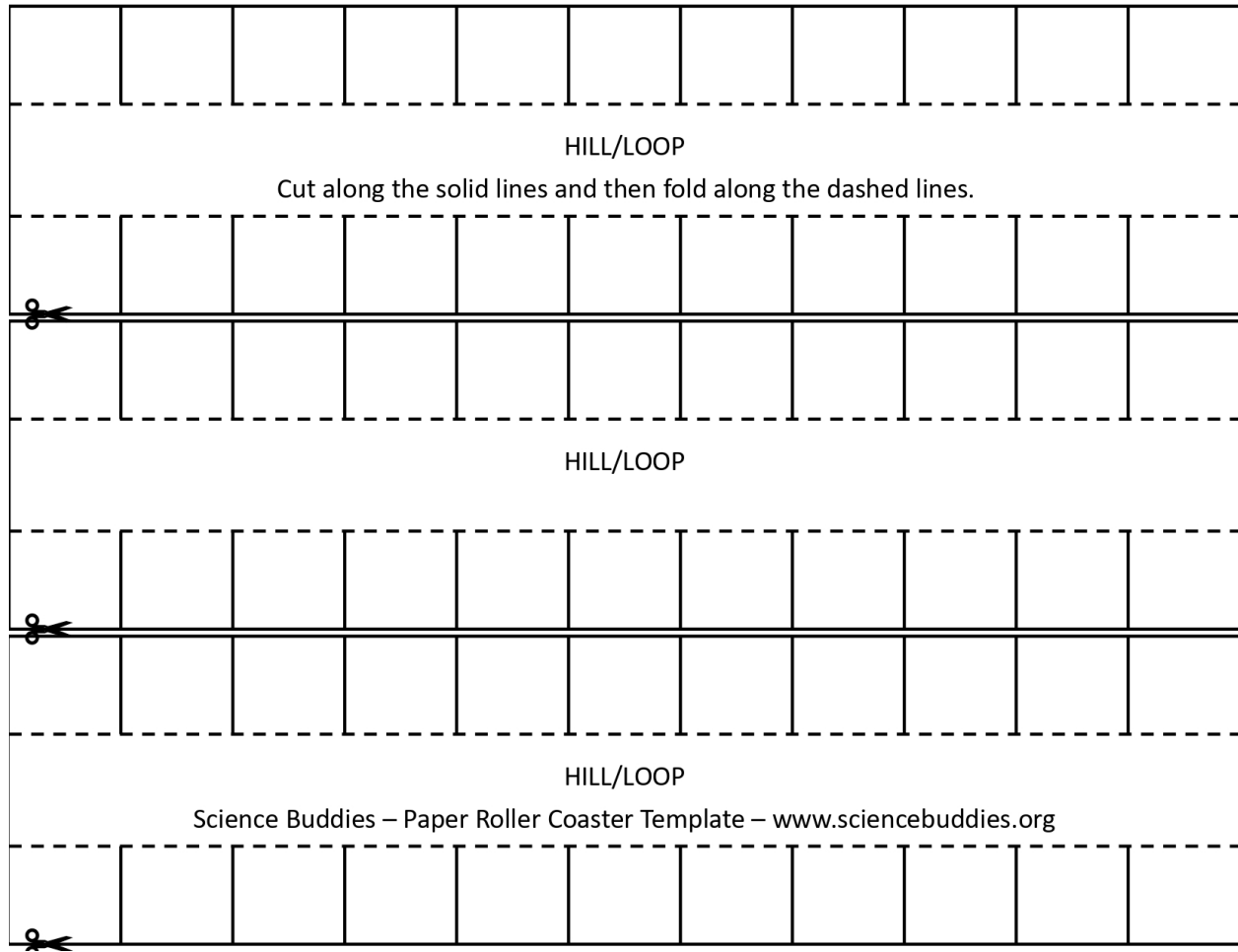


### What Happened?

If you made your starting hill tall enough, and all the curves and loops of your roller coaster were gradual, your marble should have been able to get all the way to the end. However, if your coaster had any sharp turns or corners, your marble might have gotten stuck. If you tried to have your marble go up a hill or through a loop that was taller than the hill it started on, it wouldn't make it all the way through. Why not? It is all about energy!

## Day 3 and 4: Build a Roller Coaster

### Science



- ❖ Did the marble make it the whole way?
- ❖ How could we make the marble stop?
- ❖ What term that you learned is stopping the marble?

## Day 3: Thunderbolt

### Social Studies

Research the second coaster on the list above. Then please answer the following five questions about the Thunderbolt. Please write at least 3 sentences for your answers.

1. When was the Thunderbolt first built and who designed it?

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2. Was the Thunderbolt known by another name? If so, what was it?

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3. What was its top speed? And it's highest and lowest points?

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4. What changes have been made to the Thunderbolt over the years?

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5. According to the information you found about the Thunderbolt, do you believe the Thunderbolt should still be in operation? Explain your decision

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- All research material can be printed from this site  
[https://en.wikipedia.org/wiki/Thunderbolt\\_\(Kennywood\)](https://en.wikipedia.org/wiki/Thunderbolt_(Kennywood))