Day 1: Introduction

English Language Arts

In this unit you will learn about the historical development of 5 major roller coasters. Some of these coasters have been around since the 1900's! Kennywood Park has been an attraction in the Pittsburgh area for over 120 years!! Located in West Mifflin, PA, Kennywood was designated as a National Historical Landmark in 1987. You will be constructing a Compare and Contrast essay. In the essay you will research the oldest and newest of the roller coasters you will learn about in the history section of this unit: The Jack Rabbit; The Steel Curtain; The Phantom's Revenge; The Thunderbolt; and The Racer

Let's think about our Essential Questions:

- **What does it mean to Compare and Contrast? Do a five-minute brainstorming activity using what you have learned previously about these skills.**

- **Are both of these skills equal when writing this type essay? This question is your opinion answer...be as honest as you can about your thoughts. If the answer is yes, then give 3 reasons; if no, then give 3 reasons why you think they aren't equal.**

Day 1: Rate/Unit Rate

Math

In this unit you will learn about unit rate and absolute value by taking a closer look at the roller coasters in Kennywood! The lesson will be finished by comparing the overall change in altitude to the speed of the rollercoaster.

Describe key terms:

- **Rate** - A ratio comparing two quantities of different kind of units
- **Unit Rate**- A rate that is simplified so that it has a denominator of one

Define each term and use them in a real-world context.

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Day 1: Key Terms

Science

In this unit you will learn about energy and how it transfers through a rollercoaster! The lesson will be finished by using the scientific method to make Kennywood Park even better!

Describe key terms: Use any resource available to you! Even ask a friend or family member!

- Energy - Ability to do work
- Kinetic energy - Energy in MOTION
- Potential energy - Stored energy
- Lift hill - Upward slope of a roller coaster that the car will be pulled up
- Freefall - Downward slope that is driven by **gravity**
- Friction - Force between two surfaces that are touching each other

To help describe these terms, let me use the example of riding your bike! You expend energy by pushing the pedals of the bike up the lift hill. When your bike is at the top of the hill it has **potential energy** then when you start to go down the hill, the free fall, **kinetic energy** is released. You push your brake which causes some friction in the brakes that slow down the bike until you stop! Energy is never lost; it just changes forms.

Provide real life examples of the key terms:

Energy: _____

Kinetic Energy: _____

Potential Energy: _____

Lift Hill: _____

Freefall: _____

Friction: _____

Day 1: Introduction

Social Studies

In this unit we will be focusing on the fun topic of roller coasters! Not just any roller coasters, but Kennnywood roller coasters, some of the oldest and most interesting coasters in the country!

1. Write a five-minute quick write about your experiences at Kennywood Park. If you have never been there, you may write about what you know about the park.

2. After you finish with the short writing assignment, try engaging with your family or friends about their experiences at Kennywood Park. This will help give you a different perspective on what Kennywood means to other people.

3. What are some common themes you found?

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