







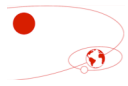


Name: \_\_\_\_\_ Date: \_\_\_\_\_

<p>Circle the term or scenario that you think does not belong in the group.</p>	<p>Why did you circle that term or scenario?</p>
<p> Two people battle it out in a tug-of-war.</p> <p> A man leaning on a wall is supported by the wall.</p> <p> The Earth and the moon's gravities pull each other so the moon stays in orbit.</p> <p> A mountain climber hangs off a cliff, held by his rope.</p>	
<p> A long-jumper exerts a force down on the ground, and the ground exerts a force up on the jumper.</p> <p> A bat exerts a force to the left on the baseball, and the baseball exerts a force to the right on the bat.</p> <p> A mover exerts a force to the right on the chair, and the friction from the ground exerts a force to the left on the chair.</p> <p> A mover exerts a force to the left on the piano, and the piano exerts force to the right on the mover.</p>	



The Earth's gravity pulls the moon towards it, while the sun's gravity pulls on the Earth.



Team one pulls team two to the left, while team two pulls team one to the right.



A climber's weight pulls down on a rope, while the rope pulls up on the climber.



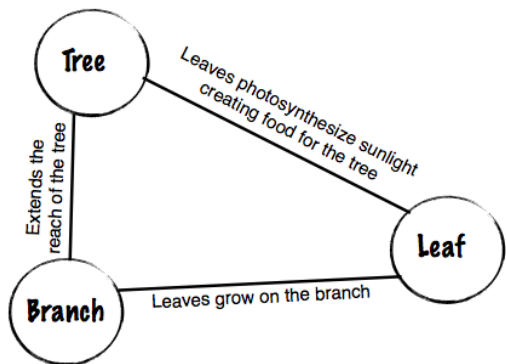
A girl exerts a force on a wagon to the left, while the wagon exerts a force on the girl to the right.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Vocabulary**

In the space below, create a web demonstrating the relationships between each of the following vocabulary words: force, Newton’s Third Law of Motion, force pairs, push and pull. If you are having trouble describing one of the words, think about what it means in the Playground Physics app and describe why it’s important that way.

Example:



**Let's Jump Rope**

Read through your old description of jumping rope that you wrote and remember what it felt like to jump rope. Sometimes the way things appear to us and the physics behind them seem like two different things. Think about the patterns you have observed using the Playground Physics app and what it has allowed you to better see about jumping rope and the following questions:

- When you jump, what are you touching?
- When you jump, are you pushing or pulling anything?
- When you jump, what forces are pushing on you?
- When you jump, what can you do to go higher or stay closer to the ground?
- What directions do you move in as you jump?
- What directions does the jump rope move in as you jump?
- How does the movement of your friends who are holding the rope impact your jumping?
- What do you feel as you jump rope?

In the space below, rewrite the narrative from your original paper adding in all of the evidence and patterns you now have to describe the forces involved with jumping rope. Use all of the vocabulary words on the first page in your new narrative.