

➤ Main Ideas, Key Points, Questions:

After watching the video segment, write down key points, main ideas, and big questions.

➤ Objective(s):

- *Understand that all forces act in action-reaction pairs that are equal in magnitude but opposite in direction.*
- *Apply Newton's third law to various scenarios in order to calculate the relationship between an object's acceleration and mass.*

➤ Notes:

During the video segment, use words, phrases, or drawings to take notes.

➤ Summary:

After watching the video segment, write at least three sentences explaining what you learned. You may ask yourself: "If I was going to explain this to someone else, what would I say?"

Answer the following.

1. Define Newton's third law in your own words.

2. As you sit in your chair right now, you are probably exerting a force of about 750 N downward on the chair. What force, and in what direction, does the chair exert back on you?

3. When two objects interact, they exert _____ forces on one another in _____ directions.

4. If two objects are experiencing the same amount of force, does that mean they will both experience the same amount of acceleration?

5. The earth and a falling object are in an action-reaction force pair together. Why does only the falling object appear to be accelerating?

6. A classic example of an action-reaction force pair is a horse pulling a cart. If the force exerted when the horse pulls the cart is equal to the force exerted when the cart pulls back on the horse, how do either of them accelerate?

Answer the following.

7. Look around your classroom and list three action-reaction force pairs that you observe.
