

Main Ideas, Key Points, Questions:

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

Objective(s):

- Analyze various physical situations and label, with correct magnitudes and directions, the forces acting on objects.
- Understand how a free-body diagram is a visual representation of the forces acting on an object.

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. What kind of quantity is a force?

2. How do you represent an object in a free-body diagram?

3. How do you represent a force in a free-body diagram?

4. What force acts on all objects, all the time on Earth? State this force, and write the notation used for this force. What force does a surface exert on an object perpendicularly? State this force, and write the notation used for this force.

5. How do you represent the strength of a force in a free-body diagram?

6. What is a force applied by a person or object that pushes or pulls on an object called? What force opposes an object's motion, either as it slides or before it begins to move? What force is applied to an object by a rope or a string? State these forces, and write each of their notations.

7. Draw a free-body diagram for a box sitting on a horizontal surface that is pushed to the right, experiencing friction during its acceleration.