

Main Ideas, Key Points, Questions:

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

Objective(s):

- *Understand how Hooke's law represents the non-constant force exerted by springs as they are stretched or compressed, and use it to calculate the force exerted by a stretched spring.*
- *Apply the spring potential energy equation to situations in which an object stretches or compresses a spring or in which a spring does work 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. According to Hooke's law, the force necessary to stretch or compress a spring is proportional to what value?

2. What is the rest position of a spring called?

3. What is the equation for Hooke's law?

4. In what direction is the force of a compressed spring?

5. Explain what it means for a spring to apply a "restoring" force?

6. Do rubber bands follow Hooke's law? Explain.

7. What is the equation for spring potential energy?

8. If a spring is stretched to twice the length of its equilibrium position, by what factor does the energy stored in the spring change?

9. How is spring potential energy determined from a force versus position graph?
