

**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?

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

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

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

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

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

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7. What is the equation for spring potential energy?

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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?

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

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