

Main Ideas, Key Points, Questions:

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

Objective(s):

- *Understand the influence of work, energy change, and time on the amount of power exerted.*
- *Calculate the amount of power exerted by determining the rate at which work is done on an object or energy is converted by 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?"

Questions to consider:

1. Define power in your own words.

2. Power is measured in what unit? What base units make up this unit?

3. In what unit is power measured in the United States? How is this unit relative to the unit discussed in the previous question?

4. What is the equation for power in terms of work and time?

5. What is an equation for power in terms of force and velocity?

6. If the amount of work done remains constant but occurs over less time, how does this affect the amount of power exerted? Explain.

7. If the force applied to an object remains constant, is more power needed for the object to move faster? Explain.

8. Explain how a 45 and 60 watt bulb differ in terms of energy output.
