

Essential Principles of Energy Videos

Student Analysis Guide

1. Read the [Energy Literacy Framework Principle #_____](#) and fill in a [KWL Chart](#).

What I know	What I want to know	What I learned



2. Do you know where energy comes from? Many people don't understand energy well.

As we try to become aware of new information, it is usually best to think about what we already know, and what we might have misconceptions about. That is, what questions we can answer, and what questions we cannot answer. In fact, sometimes when we guess and get an answer wrong at first it helps us learn the new answer more easily than if we don't venture a guess at all. So don't be afraid to be wrong. One way to identify our own misconceptions is to ask very basic questions such as:

- a. When people talk about "energy", what do they mean? Can there be more than one meaning?
 - b. Have people always used energy? What are some ways that the human use of energy has changed over time?
 - c. Why does energy matter to people? Why does it matter to other living things?
3. How do you use energy in ways that relate to *Energy Literacy Framework* essential principle _____?
- a. For example, when you turn on a light [where does the energy come from?](#)
 - b. For example, when you eat food, where does the energy come from?
 - c. How can your choices about using different forms of energy affect other people?
 - d. What are some things you can name that required energy to happen?
4. Read "Energy Literacy Essential Principle _____" and its Fundamental Concepts quickly to get an overview of the ideas. How can you restate the general idea being presented?
5. Look at the text again. This time, focus on text features such as the size of words, diagrams, pictures, and captions. What role does each of these play in helping you understand the text?
6. Read the text again more slowly. As you do, you can annotate the text in several ways:
- a. Mark parts that you find interesting.
 - b. Mark part that you find difficult to understand.
 - c. Circle words that are not clear to you.
7. For the words you circled, choose five that seem important, such as words that are used more than once. Try to create a definition for the word on your own, or at least tell something about what it relates to.
8. Get into a team and share your annotations. What ideas that you marked did others also mark? Which did they not mark? Why might there be differences?
9. Share the words you circled in your team. What words did several team members circle? Work together to look up the definitions in a dictionary.

10. Read the text again now that you know the meaning of these words. What ideas do you understand better now?

Vocabulary Word	Create a definition	Look Up a Definition

11. Imagine that you are a video designer. Before playing one of the *Essential Principles of Energy Videos*, look at the text of the “Energy Literacy Essential Principle” and its Fundamental Concepts. Think about what images you would use to illustrate each Fundamental Concept to help a peer watching the video to understand its meaning.

While watching the video take notes on what the video developers actually chose.

Fundamental Concept	Your idea for an image to represent this concept	What did the video developers choose?

12. In pairs or trios discuss the energy literacy Fundamental Concept and the images that were used. For each Fundamental Concept, tell why you think the images on the video were chosen. What other images could have been used? How might the meaning have been different if different images were chosen, such as those you predicted might be used? Why might some images have been better than others for the video?

Return to the KWL chart that you started at the beginning of this analysis. Which of the ideas did you learn something about using the videos? What questions do you still have? What new questions can you add? Think about the information that it would be helpful to have about energy. Where could you go to find that information?