

To our teachers:

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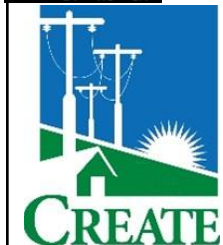
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**Wisconsin Public Service
SolarWise for Schools
and the
The CREATE Energy Center**

LITHIUM BASICS

INSTRUCTOR ANSWER KEY

Read all of the questions and instructions before starting so you know what to look for while watching the video.

In completing the questions that require full sentences, you are welcome to use phrases you hear in the video. When you do this, put the phrases you lift from the video in “quotation marks.” Doing so clearly declares that your answer (or a part of it) comes from the video and is not plagiarized.

1. What is the chemical symbol for Lithium?

Li

2. What is the atomic number of Lithium?

3

3. Give a short description of how Lithium looks in its pure form.

In pure form, lithium is a soft, silvery-white metal.

4. What is the name of the chemical group (or family) to which Lithium belongs?

Alkali Metals

5. As a group (or family) these metals are extremely reactive. Using complete sentences, explain why.

“Each alkali metal has just one electron in its outermost electron shell; a lone valence electron. As you may know, elements with this arrangement lose their lone valence electron easily to many other substances.”

6. Using complete sentences, explain why Lithium is always found in nature as a mineral.

“Each alkali metal has just one electron in its outermost electron shell; a lone valence electron. As you may know, elements with this arrangement lose their lone valence electron easily to many other substances. They are so reactive with other substances that as a group they are almost always combined with other elements in nature as minerals.”

In Summary:

7. List at least three noteworthy properties of Lithium that were talked about in the video.

7a. **Lithium is very reactive.**

7b. **Lithium is very soft.**

7c. **Lithium is the least dense of all of the metals.**

8. Take one of the three noteworthy properties of Lithium you listed in number 7. Using complete sentences, explain why this property might be especially useful in battery applications.

Students may not know enough at this stage to know the best answer, so you may get many responses. Among those shown and discussed in the video, lithium’s density (along with other important properties) is probably the most useful in battery applications. As the least dense of all of the metals, its “lightness” makes it especially useful where having lightweight batteries matters, which is just about every application.