



## Level 4 • Module 1

# Energy with Spotlight Lessons on Matter

## Lesson Overview

Your student is learning how windmills change wind to light to understand how energy can be transformed and transferred. In Spotlight Lessons on Matter, your student is exploring how matter can be described and measured by its physical properties.

Classroom activities for this module include the following:

- Observing and classifying energy at different energy stations
- Investigating speed and collision to show how energy is transferred
- Exploring circuits, conductors, and insulators
- Building a simple generator to observe how a windmill transforms energy
- Building a device with materials from the classroom to harness energy
- Observing properties of matter before and after mixing

### Conversation Starters

Support your student's learning with these talking points:

- Discuss ways energy is used in different rooms of the home or at different times of the day.
- Classify energy use in the home using categories, such as sound, heat, or light.
- Talk about the relationship between speed and energy. For example, see how wind speed affects a pinwheel or flag.
- Have your student describe and compare properties of different objects around the home.

### Activities

Have fun with these related activities at home:

- Compare energy bills and talk about when and why they might be higher or lower.
- Make a list of ways to conserve energy like turning off lights or using public transportation. Choose an idea to try for a week.
- Safely take apart a flashlight or other small object that uses energy. Research how the object works.
- While cooking or baking, have your student mix ingredients and describe what changes occur.



### ADDITIONAL RESOURCES

*The Boy Who Harnessed the Wind* by William Kamkwamba and Bryan Mealer



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