GRADE 4 | SCIENCE

STUDENT UNIT 1 | ONE SUBJECT ONLY

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STUDENT SCIENCE WORKBOOK - Unit 1

Science only. Read the teaching text, then complete safe investigations, explanations and questions.

Lesson 1: Energy transfer and measurements

Science Lesson

Learn: A lamp transforms electrical energy into light and thermal energy. A battery stores chemical energy. Energy is transferred or transformed, not created from nothing. Measurements should have appropriate units.

Science Practice: 10 Assignments

1. Identify the energy input to an electric lamp.

2. Name two energy outputs from the lamp.

3. Draw a labeled energy-flow diagram.

4. Explain why a lamp may feel warm.

5. Measure or estimate a safe household object’s length in centimeters.

6. Explain the difference between an observation and an explanation.

7. What does a thermometer measure?

8. Why should a graph label its axes?

9. Write a question about energy that could be investigated safely.

10. Advanced: distinguish useful energy output from unwanted heat loss, without claiming energy disappears.

Observe and Explain

Separate observations from hypotheses and illustrations from measured results. Never invent experimental data. Use safe materials and adult guidance where needed.

Advanced Science Extension

Form a measurable question about this lesson, describe a fair comparison and identify at least one limitation. This challenge is available at any age when prerequisites are mastered.

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