


Elementary Physics

ENERGY

 Its Forms, Changes, & Functions

Student Journal

**Tom DeRosa
Carolyn Reeves**



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First Printing: August 2009

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Master Books®
P.O. Box 726
Green Forest, AR 72638

Printed in the United States of America

Cover Design by Diana Bogardus
Interior Design by Terry White

ISBN 10: 0-89051-571-9
ISBN 13: 978-0-89051-571-6

All Scripture references are New International Version unless otherwise noted.

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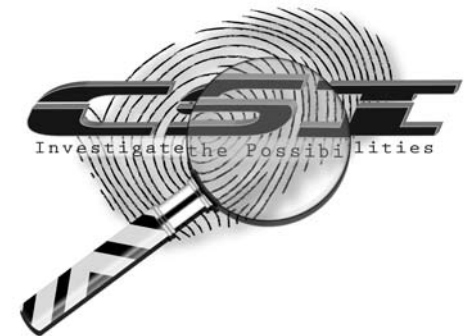


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Note to the Student

Record your ideas, questions, observations, and answers in the student book. Begin with "Thinking about This." After you read "Think about This," try to recall and note any experiences you have had related to the topic, or make notes of what you would like to learn.

Record all observations and data obtained from each activity.

You should do at least one Dig Deeper project each week. Your teacher will tell you how many projects you are required to do, but feel free to do more if you find an area that is especially interesting to you. The reason for the large number of projects is to give you choices. This allows you to dig deeper into those areas you are most interested in pursuing. Most of these projects will need to be turned in separately from the Student Answer Book, but uses the Student Answer Book to record the projects you choose to do along with a brief summary of each project and the date each is completed.

Record the answers to "What Did You Learn."

The Stumper's Corner is your time to ask the questions. Write two short-answer questions related to each lesson that are hard enough to stump someone. Write your questions along with the correct answer or write two questions that you don't know and would like to know more about.

Some of these experiments should be done with the help of adult supervision. They have been specifically designed for educational purposes, with materials that are readily available.



Date:



**The Activity:
Procedure and Observations**



1. Make a drawing to show how you connected the lightbulb, a wire, and a battery to make the light come on.

Drawing Board:

2. Could you tell that the lightbulb was warmer after it was turned on?

3. Feel the sandpaper and the board after you have rubbed them together. What kind of energy is produced?

4. Pluck the rubber bands. Can you see that they are vibrating?

Can you hear the sound they make while they are vibrating?

Compare the pitch made by the different rubber bands.



Dig Deeper

Blank area for writing answers to the 'Dig Deeper' section.



Stumper's Corner

1. _____

2. _____

What Did You Learn



1. Give two examples of how one form of energy can change into heat energy. Give another example of an energy change.

2. List two ways in which energy does work for us.

3. The following list contains examples of forces, properties of matter, and forms of energy. Underline all the examples of forms of energy: inertia, light, heat, density, buoyancy, electricity, lift, weight, chemical, push, nuclear.
4. Define mechanical energy and give an example.

5. What kind of energy can be quickly provided by a battery?

6. What is the law of conservation of energy?

7. Give an example of when an unwanted form of energy is produced in a device. _____
8. What happens to a roomful of light on a dark night when the lights are turned off? _____
9. Was energy transferred from the battery to the lightbulb when an electric circuit was completed? _____