



# Teacher Guide

Our resource has been created for ease of use by both **TEACHERS** and **STUDENTS** alike.

## Introduction

**T**his resource provides ready-to-use information and activities for remedial students in grades five to eight. Written to grade using simplified language and vocabulary, science concepts are presented in a way that makes them more accessible to students and easier to understand. Comprised of reading passages, student activities and overhead transparencies, our resource can be used effectively for whole-class, small group and independent work.



**Hands-on activities** are included to further develop students' thinking skills and understanding of the concepts. The **Assessment Rubric** (page 4) is a useful tool for evaluating students' responses to many of the activities in our resource. The **Comprehension Quiz** (page 48) can be used for either a follow-up review or assessment at the completion of the unit.

## PICTURE CUES

Our resource contains three main types of pages, each with a different purpose and use. A **Picture Cue** at the top of each page shows, at a glance, what the page is for.

## How Is Our Resource Organized?

### STUDENT HANDOUTS

**Reading passages** and **activities** (in the form of reproducible worksheets) make up the majority of our resource. The reading passages present important grade-appropriate information and concepts related to the topic. Embedded in each passage are one or more questions that ensure students understand what they have read.

For each reading passage there are **BEFORE YOU READ** activities and **AFTER YOU READ** activities.

- The **BEFORE YOU READ** activities prepare students for reading by setting a purpose for reading. They stimulate background knowledge and experience, and guide students to make connections between what they know and what they will learn. Important concepts and vocabulary are also presented.
- The **AFTER YOU READ** activities check students' comprehension of the concepts presented in the reading passage and extend their learning. Students are asked to give thoughtful consideration of the reading passage through creative and evaluative short-answer questions, research, and extension activities.

### Teacher Guide

• Information and tools for the teacher

### Student Handout

• Reproducible worksheets and activities

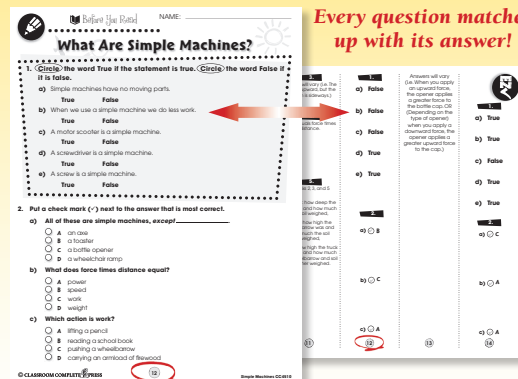
### Easy Marking™ Answer Key

• Answers for student activities



## EASY MARKING™ ANSWER KEY

Marking students' worksheets is fast and easy with this **Answer Key**. Answers are listed in columns – just line up the column with its corresponding worksheet, as shown, and see how every question matches up with its answer!



Every question matches up with its answer!



# Gains and Losses with Simple Machines

1. **Circle** the word True if the statement is true. **Circle** the word False if it is false.

a) You can do some things with simple machines that you couldn't do without them.

**True**                      **False**

b) If a simple machine makes something easier, it always makes it quicker too.

**True**                      **False**

c) When we gain something with a simple machine, we always lose something too.

**True**                      **False**

d) When you swing an axe to chop a log or swing a bat to hit a ball, what you gain is speed.

**True**                      **False**

e) The easier it is to lift something with a set of pulleys, the less rope you have to pull to do it.

**True**                      **False**

2. Put a check mark (✓) next to the answer that is most correct.

a) A wheel and axle works a lot like a \_\_\_\_\_.

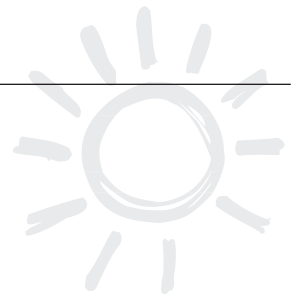
- A lever  
 B pulley  
 C screw  
 D wedge

b) Which simple machines are like kinds of inclined planes?

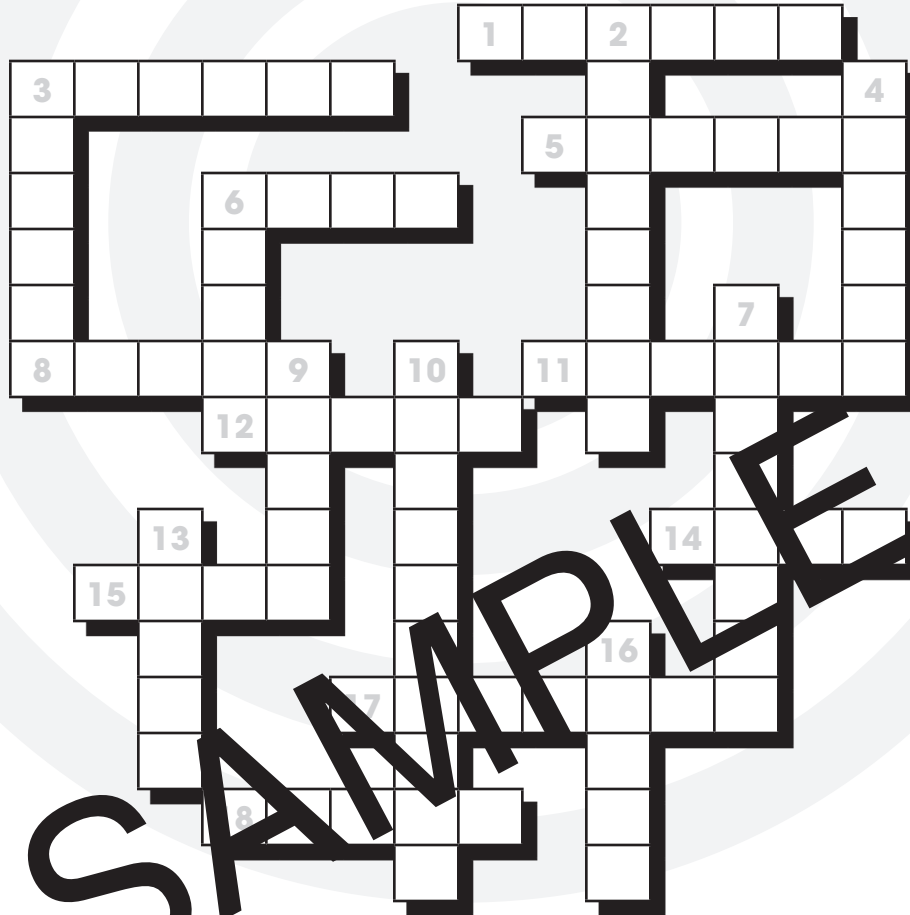
- A pulley and wedge  
 B wedge and screw  
 C screw and lever  
 D lever and pulley

c) Simple machines can do all of these things, **except** \_\_\_\_\_.

- A make force greater  
 B make motion faster  
 C make the amount of work less  
 D make force act in a different direction



# Crossword Puzzle!



### Across

1. The force you apply to a simple machine is the \_\_\_\_\_ force.
3. With a rope and a wheel, you can make a \_\_\_\_\_.
5. A machine with only one kind of movement is a \_\_\_\_\_ machine.
6. Force times distance.
8. A spiral staircase is a kind of \_\_\_\_\_.
11. A change from one place to another.
12. You can make one with a board and a fulcrum.
14. One joule per second.
15. Wheel and \_\_\_\_\_.
17. Something to do work with less effort.
18. A push or a pull.

### Down

2. The force that slows down something that is sliding.
3. Ramps are inclined \_\_\_\_\_.
4. How force is measured in the metric system.
6. \_\_\_\_\_ and axle.
7. How far a lever moves the load is the resistance \_\_\_\_\_.
9. The simple machine that looks like a piece of cake.
10. The load on a lever is the \_\_\_\_\_ force.
13. To apply a force is to \_\_\_\_\_ a force.
16. What levers do on their fulcrums.

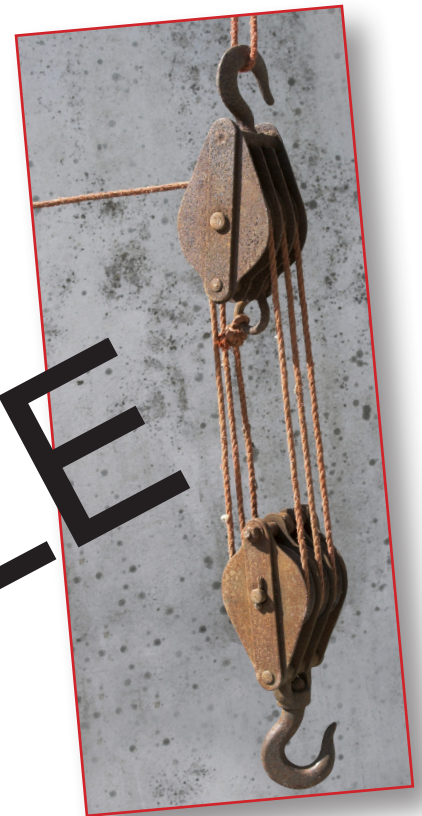
# Pulleys and Wheel and Axles



Crane



Pulley



Pulley

Ships wheel



Steering wheel

Wheel & Axle

