



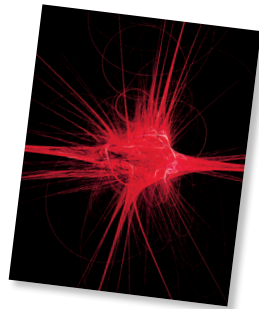
Teacher Guide



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

Introduction

This resource provides ready-to-use information and activities for remedial students in grades five to eight. Written to grade and 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

This 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

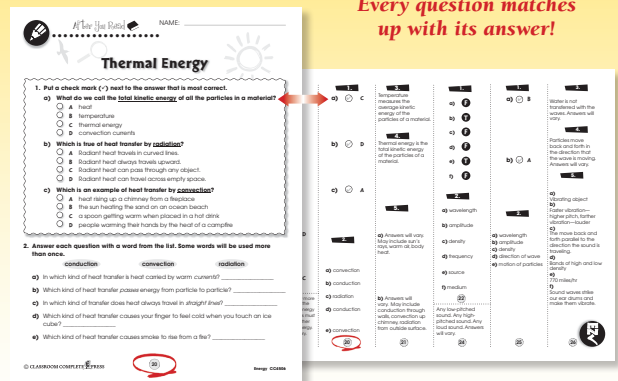
- Answers for student activities



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!





Sound Energy and Waves



Answer the questions in complete sentences.

3. Waves crash on a beach one after another. Why doesn't water pile up on the beach?

4. Explain the motion of the air particles that carry a sound wave. Include the direction that the sound is traveling in your explanation.

Extension & Application

SAMPLE

5. Tell about everything that happens when you hear a sound.

a) Begin by telling about the motion of the object that is the source of the sound.

b) Explain how motion of the source gives the sound its pitch and loudness.

c) Tell about the motion of the particles that carry the sound away from the source.

d) Tell what a sound wave is by using the word density.

e) Tell how fast sound travels.

f) Explain how our ears hear a sound.



1.

Across:

3. angle

9. sound

10. electromagnetic

13. reflect

14. energy

15. convection

Down:

1. transfer

2. conduction

4. nonrenewable

5. nuclear

6. conservation

7. hydroelectric

8. fossil

11. pitch

12. xray

1.

3. Water is not transferred with the waves. Answers will vary.

4. Particles move back and forth in the direction that the waves are moving. Answers will vary.

5.

a) Vibrating object

b) Faster vibration—higher pitch, farther vibration—louder

c) The move back and forth parallel to the direction the sound is traveling.

d) Bands of high and low density

e) 770 miles/hr

f) Sound waves strike our ear drums and make them vibrate.

1. Most will use either electrical or chemical energy.

2. Answers will vary.

3. All should include transformation into heat energy.

4. Yes.

All answers will vary.

1.

a) B

b) A

2.

a) wavelength

b) amplitude

c) density

d) direction of wave

e) motion of particles

1.

a) F

b) T

c) F

d) F

e) T

f) F

2.

a) wavelength

b) amplitude

c) density

d) frequency

e) source

f) medium

6.

Any low-pitched sound. Any high-pitched sound. Any loud sound. Answers will vary.

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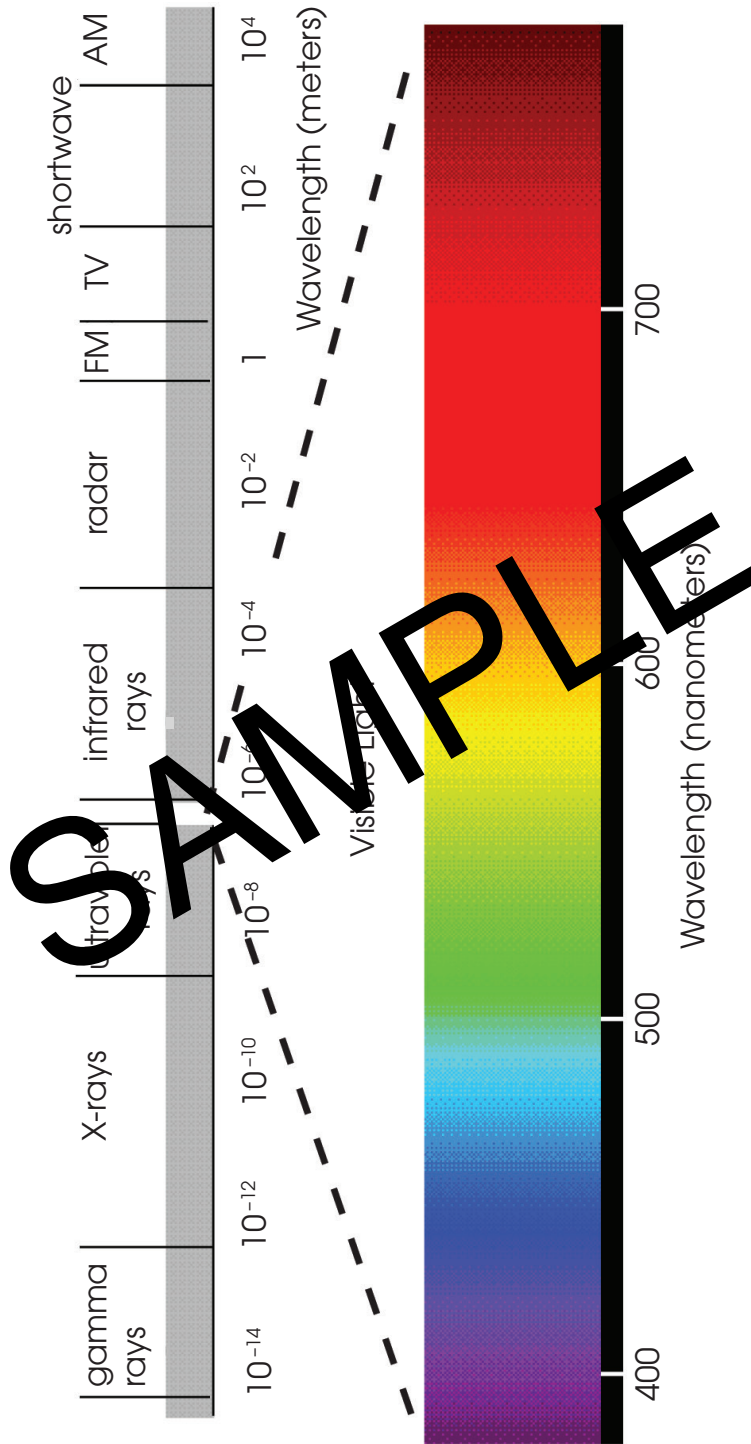
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8

Electromagnetic Spectrum



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