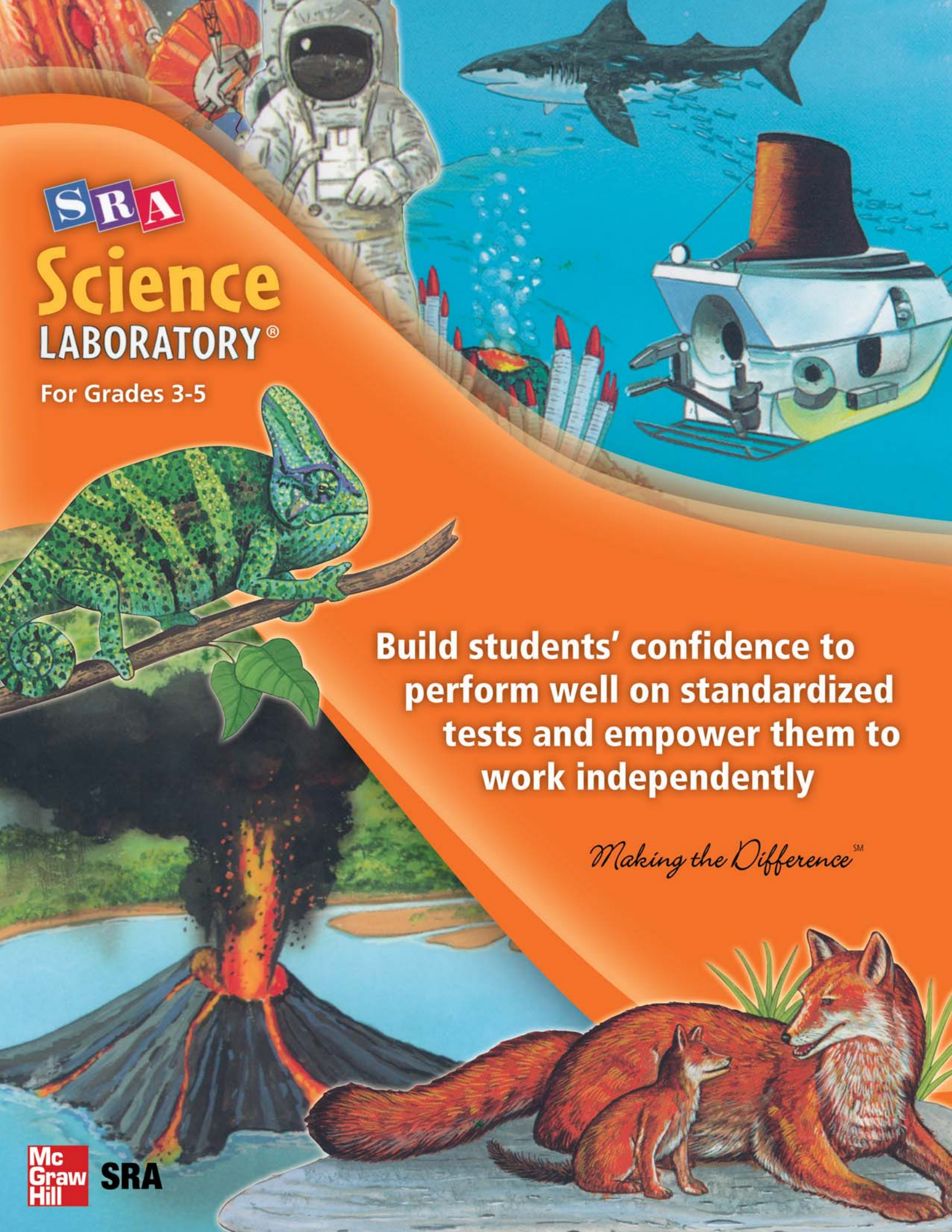




SRA

Science LABORATORY®

For Grades 3-5

**Build students' confidence to
perform well on standardized
tests and empower them to
work independently**

Making the DifferenceSM

**Mc
Graw
Hill**

SRA

Every student works with optimal efficiency, enthusiasm, and self-reliance.



Pre- and posttests gauge students' skill level and measure progress:

- Pretests identify how well each student comprehends core science content and vocabulary, allowing you to assign the appropriate *Science Cards*.
- Posttests let you keep track of each student's skill mastery and ensure comprehension before advancing to the next level.

Student Science Cards, Answer Key Cards, and Record Books allow students to:

- Work independently and at their individual levels
- Score their own work
- Keep a record of their progress so they can see what skills are mastered and where they need additional practice
- Take responsibility for their progress
- Grow their self-esteem along with their skills

A and B Science Cards present the same content at two different reading levels to address the individual needs of each student:

- *A Cards* are written below grade level with reading selections that provide core content and highlighted vocabulary in an appropriate format for challenged readers.
- *B Cards* are written at grade level and provide comprehensive, extended coverage of core content and highlighted vocabulary.

Answer Key Cards provide answers for the Science Cards, allowing students to score their own work.

Each Science Card contains the main reading selection and highlights important science vocabulary.

Think About It exercises encourage critical thinking about science concepts.

THINK ABOUT IT

The diagram shows features of the ocean floor. Look at the diagram. Answer the questions.

Ocean Floor Features

17. The deepest part of the ocean floor is labeled _____.

A. A
B. B
C. C
D. D

18. The part that may rise above the ocean's surface as an island is _____.

A. A
B. B
C. C
D. D

42A Changes on the Ocean Floor

© Digital Vision/Getty Images, Inc.

Constructive Force (kon-struk'tiv-fōrs) any natural phenomenon that creates new landforms; volcanic eruptions are natural activities that create landforms.

CHANGES ON THE OCEAN FLOOR

Using SCIENCE Words

1. _____ is an example of a constructive force.

A. A tornado
B. An avalanche
C. A volcano

LEARN ABOUT WORDS

Joe knows Mary, and Mary knows Joe. Joe knows Mary, and she knows him.

The words *she* and *him* are pronouns. Pronouns are words used in place of nouns. In the example above, *she* takes the place of *Mary*, and *him* takes the place of *Joe*. Some other common pronouns are *you*, *he*, *it*, *her*, and *them*. Each sentence below has a noun in **bold type**. Later in the sentence there is a pronoun that takes the noun's place. Find that pronoun, and write it.

- Alan lost his vacation photos.
- Ask the lifeguard where she thinks it is safe to swim.
- Jackie knew it was her turn to water the plants.
- The oceanographer will be diving today if he is feeling better.
- Put the fish in a bowl, and give them some food.
- Chad laughed after he was hit by the wave.
- Scientists believe they have discovered a new volcano on the ocean floor.
- When that dog starts to howl, it does not stop.
- Keshia, did you collect all those seashells?
- The children complained because they could not go swimming.

Additional **Learn About Words** exercises reinforce key reading concepts.

Each Lab contains 160 Science Cards and Answer Key Cards.

42A Changes on the Ocean Floor Key Card

Using SCIENCE Words

1. C

Comprehension

2. b
3. c
4. a
5. b
6. a

Learn About Words

7. his
8. she
9. her
10. he
11. them
12. he
13. they
14. it
15. you
16. they

Think About It

17. B
18. A

Writing About Science

What is one mistake someone learning about the ocean floor might make?

SRA Science Laboratory 5



SRA Science Laboratories Grades 3–5

Supplement your current science program and reinforce core science content and vocabulary for any classroom and every student

Give students the freedom to work independently

This self-paced, leveled program allows students to:

- Work alone – scoring their own work
- Advance toward more challenging activities
- Keep a record of their own progress

Whether students are at, below, or above grade level, **SRA Science Laboratories** includes materials for all levels, and works upward as students' skills develop. Students moving at a slower pace do not struggle to keep up with their classmates. More advanced students move ahead without waiting for their classmates to catch up.

Improve students' reading, vocabulary, and comprehension using core science content and prepare students for standardized tests

SRA Science Labs provides systematic practice for:

- Life, Earth, and Physical Sciences
- Science vocabulary
- Reading and writing skills

Each Lab contains:

- High-interest reading selections and skill exercises
- Assessment formats that include commonly tested science content

Use this easy-to-implement and comprehensive approach to develop students' science skills

SRA Science Labs includes everything you need to incorporate science skills practice into your curriculum in a user-friendly system.

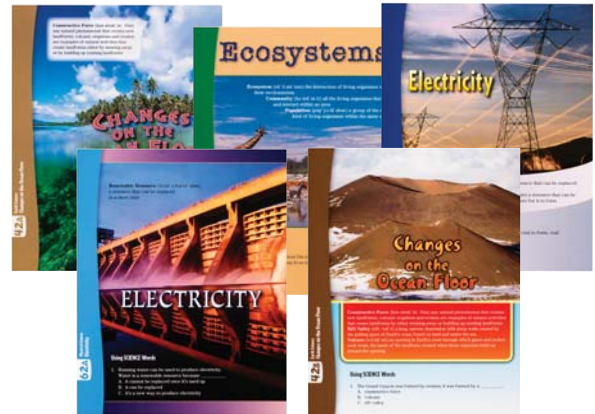
The program provides the following materials in one complete classroom package:

- Diagnostic
- Instructional
- Enrichment
- Assessment

Create an environment of learning using integrated components

Science Cards provide science practice in a colorful and engaging format:

- 160 reading selections about Life, Earth, and Physical Science topics
- Cards A and B provide the same topics at two different reading levels
- Questions and activities test students' ability to:
 - Use and understand science vocabulary
 - Comprehend science content
 - Apply new skills



Science Cards

Answer Key Cards let students check, correct, and monitor their own work:

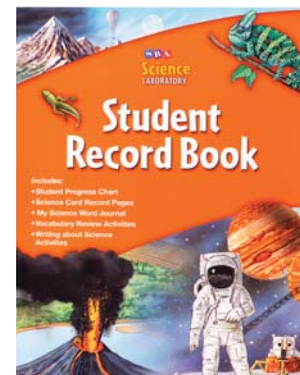
- Provide answers to Science Card questions
- Include optional writing practice about science topics



Answer Key Cards

Student Record Books make it easy and convenient for students to track their progress:

- Space for recording Science Card answers and completing writing practice activities
- Science Word Journal for recording and tracking vocabulary terms
- Science Progress Chart for charting and reviewing skills progress

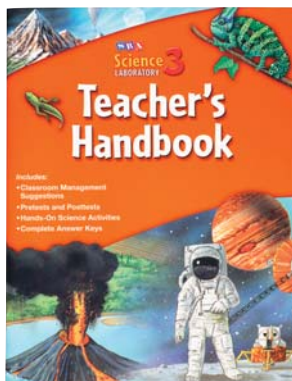


Student Record Book

Simplify teaching with resources to minimize record-keeping and help you monitor students' progress regularly

Teacher's Handbook provides the resources you need to teach and assess students' growth:

- Program overview and guidance for a variety of classroom environments
- Blackline Masters for pretests, posttests, and Hands-on Science Activities
- Answers to pretests and posttests



Teacher's Handbook

For more self-paced learning tools, check out SRA Reading Laboratory® and SRA Mathematics Laboratory®!

Reading Laboratory® at a Glance

Power Builders—booklets arranged in color-coded levels that keep students challenged as they progress through the program—are the core of the *Reading Labs*. Each Power Builder contains a fiction or nonfiction reading selection in the areas of history, science, sports, and technology, plus assessments for self-checking.

Mathematics Laboratory® at a Glance

Double-sided Activity Cards give students practice in basic skills, word problems, and applications, which are essential for today's testing procedures. Number Sense Cards correspond with each Activity Card to reinforce skills learned. Mixed Review Cards in each section include questions in standardized test format so students gain repeated exposure to testing methods.



Classroom Resource CD-ROM

Classroom Resource CD-ROM offers interactive tools for you and your students:

- Classroom management tools help you keep track of students' progress.
- Computerized versions of the pretest and posttest save time in assigning and grading cards.
- Student Vocabulary Games help students practice and review science vocabulary.
- The program's 80 Writing Strategies in Science can be printed and used in classroom activities to help students develop science writing skills.

SRA Science Laboratories is flexible and adaptable to meet the needs of many classrooms for:

- | | | |
|---|----------------|------------------------------|
| • Supplement to current science curriculum | • After school | • Summer school |
| • Tutorials with the help of a peer or tutor and Activity Centers when students finish work ahead of time | • Intervention | • Middle school |
| | • Title I | • Whole-group or small-group |
| | • Enrichment | • Extra credit |
| | • Test prep | |

For more information and to speak with a sales representative, call **1-800-201-7103** and visit **SRAonline.com**.



SRA Science LABORATORY®

Help your students independently build their science skills

- Self-paced, leveled program with practice for students at all skill levels
- Presents core science concepts while reinforcing reading and writing skills
- Relates science to other curricular areas and everyday life
- Easy to implement in any classroom or program
- Includes everything teachers and students need

Making the Difference

1-800-201-7103

Resources and ordering information at SRAonline.com



R80001831
1006

The McGraw-Hill Companies



220 East Danieldale Road
DeSoto, TX 75115-2490

My students don't comprehend the reading in their science books.

I need to stress reading as well as science in my classroom today.

ALL my students need to pass our state science test.

Our students struggle with science vocabulary.

Sound familiar? Look inside for an all **NEW** supplemental science reading program that uses SRA's proven method for supporting science reading and vocabulary development.

SRA

Science Labs



For grades
6 and up

**Mc
Graw
Hill**

SRA



Do you remember the
SRA Reading Labs®
from your school days?

Today, it's all about
reading SCIENCE!

On the enclosed samples
you'll find two science
cards of different reading
levels from each of these
SRA Science Labs:

- Life Science
- Earth Science
- Physical Science

SRA Science Labs are also
available for grades 3–5.
For additional information visit:
www.SRAonline.com

A Science Supplement that is Easy to Use!

Three New SRA Science Labs provide a change of pace.

- Science topics are aligned to state and national standards.
- Each SRA Science Lab contains 180 Science Cards covering key science concepts and vocabulary.



Flexible

Provides core science content in an **alternate reading format**

- Science content area reading for ALL students
- Individualized student practice
- Full year review of science in a limited time
- Quick test review
- Individualized assessment opportunities

Adaptable

Develops science **content reading skills** in a variety of classroom settings

- Science classrooms
- Reading support programs
- Intervention programs
- Summer School
- After school programs

Help Students Read the Science

- **Students learn and retain core science ideas and vocabulary** by working independently at their own reading levels.
- **Students build confidence and increase comprehension** by practicing with test questions that are modeled after standardized tests.

Readability and Vocabulary

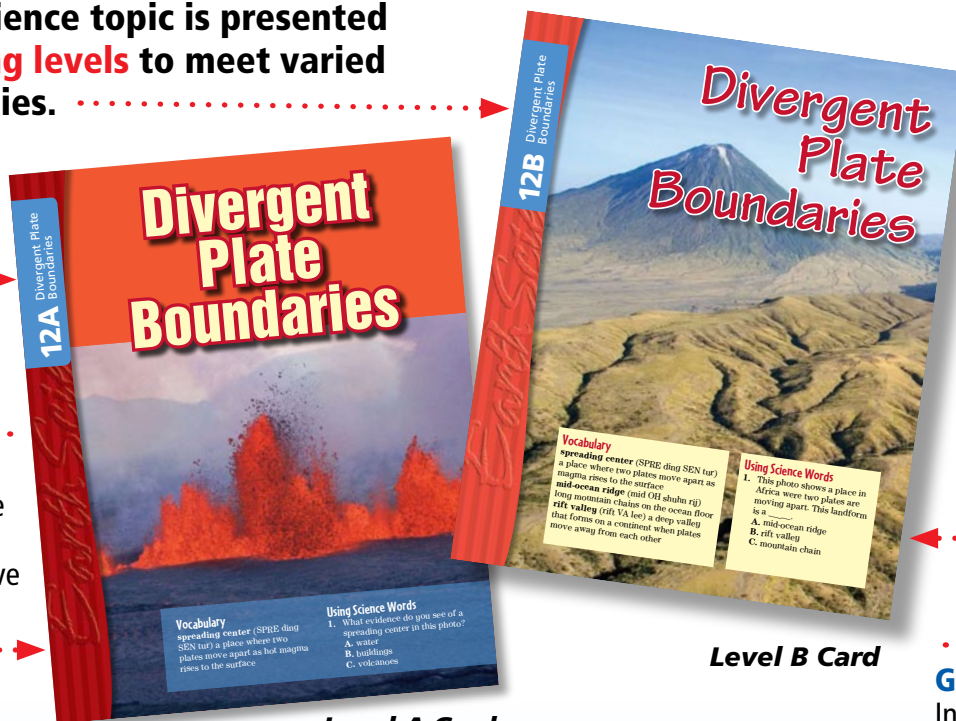
Every core science topic is presented at **two reading levels** to meet varied student abilities.

Vocabulary

Key science terms are presented as a pre-reading aid to improve comprehension.

Highlighted Terms

Science vocabulary is used in context to develop a strong understanding of the language of science.



Pre-reading
Using Science Words engages students to build background knowledge before reading.

Level B Card

Guided Reading
In-text comprehension questions help struggling readers focus on the main ideas to improve their comprehension.

Level A Card

1. The outer layer of Earth is the crust. Under the crust is Earth's mantle. The crust and upper part of the mantle are broken into large pieces called plates. Plates can move in different ways. Some plates slide sideways past each other. Some plates move toward each other. Some plates move away from each other. Places where plates move away from each other are called divergent plate boundaries.

Reading Check

2. What happens at a divergent plate boundary?

a. Plates come together.
b. Plates move apart.
c. Plates slide sideways.

3. Most divergent plate boundaries are on the ocean floor. In the middle of the boundary is an area called the spreading center. A **spreading center** is a place where magma, or molten rock, comes to Earth's surface. As magma cools, it becomes solid rock. This rock forms new ocean crust.

4. This crust becomes part of a large mountain chain under the ocean. These mountain chains are called **mid-ocean ridges**. The best-known mid-ocean ridge is probably the Mid-Atlantic Ridge. This mountain chain is about 10,000 kilometers long. It runs down the middle of the Atlantic Ocean.

Reading Check

5. A spreading center is _____ a mid-ocean ridge.

a. in the middle of
b. a mountain close to
c. where crust is destroyed in

6. The Mid-Atlantic Ridge can be seen in Iceland, a small country in the North Atlantic Ocean. It has many volcanoes. Spreading along the Mid-Atlantic Ridge affects Iceland. First, spreading is causing the country to split in half. Second, magma comes to the surface through Iceland's volcanoes. Finally, heat from the magma warms water near the surface and forms hot springs.

Reading Check

7. What supplies Iceland's volcanoes with magma?

a. hot springs at the surface
b. cold water in the Atlantic Ocean
c. spreading along the Mid-Atlantic Ridge

8. Magma is very hot. Because of this, many scientists used to think that nothing could live near mid-ocean ridges. But in the 1970s, openings, or vents, were found along the ridge. Many organisms were discovered living near these deep-sea vents.

Reading Check

9. The vents along the mid-ocean ridges are called smokers. Water with many nutrients pours out of smokers. Smokers look like underwater chimneys. Giant tube worms, crabs, clams, and other organisms use the nutrients to survive.

Reading Check

10. Underwater smokers are _____?

a. nutrients
b. warm patches of crust
c. hot vents that support life

11. Some divergent plate boundaries form on continents. These are called rifts. A rift forms where the crust gets stretched. As the land stretches, it gets weaker and sags. A trough, or valley, called a **rift valley** forms. In time, ocean water fills the valley.

12. Rifts are forming in several places on Earth. Rifting has caused Saudi Arabia to move away from Africa. The valley that formed is the East Rift Valley. The water that filled the valley is the Red Sea.

Reading Check

13. What causes plates to diverge, or move apart? Scientists think most plates diverge because of convection. Convection is a process that transfers energy from one place to another. In the mantle, convection takes place as hot material rises, cools off, and then sinks. This movement of material is called a convection current. Convection currents cause plates to move.

Reading Check

14. What causes plates to diverge?

a. rift valleys
b. convection currents
c. underwater smoker vents

Word Study

Word Usage One good way to learn new words is to use them. Replace common words with more precise terms. Use science terms when you need a specific idea.

Look at the number in parentheses. Find that paragraph in the reading with the same number. Then find the best term to fill in the blank. Write the term.

7. Large pieces of Earth's crust and upper mantle are called _____. (1)
8. Plates move away from each other at _____ boundaries. (1)
9. _____ rises to the surface along a spreading center. (2)
10. A mid-ocean ridge is a mountain _____ on the ocean floor. (2)
11. _____ is responsible for Iceland's volcanoes. (4)
12. The temperature near deep-sea _____ is very hot. (6)
13. Underwater smokers spew rich _____ into the nearby water. (6)
14. A _____ is where Earth's crust is stretched. (7)
15. Convection _____ move both matter and energy. (8)
16. Divergence is caused by _____ in Earth's mantle. (8)

Inside Level A Card

They Will See on Tests!

1 The rocks of Earth's crust and upper mantle are broken into huge slabs called tectonic plates. These hard plates move slowly over Earth's surface in different ways. Plates move sideways past each other at sliding plate boundaries. Plates move toward each other at convergent plate boundaries. Plates move away from each other at divergent plate boundaries.

2 Most divergent plate boundaries are on Earth's ocean floors. In the middle of these boundaries is an area called the spreading center. A **spreading center** is a place where hot, liquid rock material, or magma, comes to the surface. When this liquid rock cools, it hardens to form new ocean crust. Over very long periods of time, the crust builds up. This build-up forms gigantic underwater mountain chains known as **mid-ocean ridges**.

3 The best-known mid-ocean ridge is probably the Mid-Atlantic Ridge. As its name suggests, much of this 10,000-kilometer long mountain chain lies along the middle of the Atlantic Ocean. A small part of the chain, however, comes to the surface in Iceland, a country in the northern Atlantic. Spreading along the Mid-Atlantic Ridge has had several effects on Iceland. Spreading is causing Iceland to split in half! The spreading is also the reason for many active volcanoes and hot springs in this country.

4 In addition to being places where new crust forms, divergent plate boundaries are also biologic hot spots. Magma that rises along a mid-ocean ridge can reach 1000°C. These high temperatures caused many scientists to conclude that these parts of Earth's oceans were lifeless. In the late 1970s, however, giant tube worms, huge clams and crabs, and mussels were discovered in and near vents along the ocean ridges.

5 The vents along the ridges were named smokers. They were given this name because vents look like chimneys as they spew black, white, or even gray fluids into the water. The fluids contain important nutrients for the many life forms that live near the hot vents.

6 Some divergent plate boundaries are on Earth's continents. These areas are called rifts. At these places, plates rift, or move apart. They form a deep depression called a **rift valley**. Rifting is taking place in East Africa. The East Rift Valley is an area that formed when Saudi Arabia rifted from the rest of Africa. The water filling the valley is the Red Sea—a future ocean. This valley and sea are shown in the photograph on the front of this card.

7 What causes tectonic plates to diverge? Scientists think that convection in the upper mantle is the reason that plates move. Convection is a process that transfers heat from one area to another as the result of differences in density.

8 All magma is very hot. However, it is cooler right under the plates and hotter further down away from the plates. Hot magma is less dense than cool magma, so it rises toward the surface. There, it begins to cool. As magma cools, it becomes more dense and sinks down away from the surface.

9 As magma repeatedly heats and cools, it moves in a circular pathway called a convection cell under the plate. These cells are called convection currents. Convection currents are thought to cause some of Earth's plates to move away from each other. Convection currents also may drive the motion of convergent tectonic plates, where plates come together.

Comprehension

Write the letter of the best answer.

- Plates move away from each other at _____.
a. divergent boundaries
b. convergent boundaries
c. sliding boundaries
- Underwater mountain chains are known as _____.
a. spreading centers
b. mid-ocean ridges
c. rift valleys
- Over time, a rift valley will fill with _____.
a. magma
b. smokers and living organisms
c. ocean water
- New crust forms when _____.
a. smokers spew water
b. molten rock material cools
c. hot magma rises
- _____ cause most plate motion.
a. Smokers
b. Rift valleys
c. Convection currents

Word Study

Nouns The words in **bold type** are nouns. A noun indicates a person, place, or thing.

The **doctor** smiled at **Joe**. (persons)
Jungles in **Pera** are hot. (places)
The **rocket** needs **fuel**. (things)

Prefixes A prefix is a syllable that can be added to the beginning of a word to form a word with a different meaning.

con + **vergent** = convergent
the prefixes **con** and **com** mean together
di + **vergent** = divergent
the prefix **di** means two

Read the definitions below. Add a prefix to each word to make a new word with the stated meaning. Write the new word.

- two terminals: ____ode
- talk together: ____verse
- two different forms: ____morphic
- bring together: ____nect
- break into two parts: ____vide

Each phrase below contains one noun. Write the noun.

- plates move slowly
- this liquid rock cools
- Iceland to split apart
- many scientists to conclude
- rifted from the rest of Africa

Copyright © SRAM/Crow-Hill. All rights reserved. SRM Earth Science Laboratory

Comprehension

Students monitor their comprehension of the reading.

Word Study Skills

Word Study exercises on every card reinforce language skills using science examples to strengthen reading in the content area and science vocabulary development.

Inside Level B Card

Standardized Test Practice

Help students learn how to tackle difficult science tests.

Test Strategies

Test Tips help all students build test-taking strategies.

Using Visuals

Charts, graphs, and diagrams give students practice interpreting graphics modeled after high-stakes tests.

Extended Response

Writing prompts help students develop writing skills needed for test success.

Immediate Feedback

Answer Key Cards allow students to grade their own work.

Standardized Test Practice

Test Tip **Line Graphs** Look at line graphs to see how amounts or conditions change over time. When a line goes upward, it shows an increasing trend. A line going downward shows a decreasing trend.

Population Growth for Two Species with a Limited Food Supply

Multiple Choice Use the graph to answer the questions.

- Which statement best describes what happened during the first four days?
A. Species B increased in number faster than Species A.
B. Species A increased in number faster than Species B.
C. Species A and Species B both steadily increased in number.
D. Nothing happened during the first four days.
- About how many of Species B were in the container on Day 17?
A. 1
B. 17
C. 50
D. 150
- Which resource were Species A and Species B most likely competing for?
A. air
B. food
C. water
D. sunlight

Standardized Test Practice

Test Tip **Diagrams** Read all of the labels in the diagram before answering the questions.

Multiple Choice Use the diagram to answer the questions.

- What is shown at point C?
A. a rift valley
B. a sliding plate boundary
C. a mid-ocean ridge
D. a trench
- What type of plate boundary is shown?
A. sliding plate boundary
B. divergent plate boundary
C. mantle boundary
D. convergent plate boundary
- What do the circular arrows in the diagram represent?
A. deep sea smokers
B. rift valleys
C. mid-ocean ridges
D. convection cells

© Arthur Morris/Corbis

Test Practice

Multiple Choice questions give students test practice on every card.

74A Key Card
Symbiotic Relationships

Using Science Words
1. B

Comprehension
2. c
3. b
4. c
5. c
6. c

Word Study
7. negative
8. help
9. die
10. gives off
11. takes
12. harmed
13. scatters
15. destroy
16. cause

Standardized Test Practice
17. A
18. C
19. C

Writing About Science
Describe the importance of bees to the human food supply.

74B Key Card
Symbiotic Relationships

Using Science Words
1. C

Comprehension
2. a
3. c
4. b
5. c
6. b

Word Study
7. unique
8. parasite
9. nectar
10. tries
11. commensalism
12. requires
13. is helped
14. activity
15. unusual
16. hurt

Standardized Test Practice
17. A
18. C
19. B

Writing About Science
Explain the difference between mutualism and parasitism.

© 2014 LPA Science Laboratory

An Easy-to-Use Program



Differentiated Instruction

Meet the needs of **ALL** your students so they can succeed in science.

- Students work at different levels at the same time.
- Students work at their own pace.
- Separate *Key Cards* provide answers to foster independent work.
- Every student grades and records his or her own work.
- Students enjoy tracking and graphing their own progress.

for Your Classroom!



Teacher Support

Simple guidelines help you get students started without a lot of prep time.

- Pretests and posttests for diagnostics and assessment
- Outline of vocabulary and topics
- Classroom routine suggestions
- Hands-on labs for inquiry options
- Electronic or paper tests to meet your classroom needs

Technology

A Classroom Resource CD-ROM provides electronic options.

- Pretests and posttests automatically scored by the computer
- Assigns appropriate cards based on each student's pretest results
- Motivating science vocabulary games
- Classroom management and tracking tools
- Writing strategies in science

Empower Your Students to Succeed in Science!

- **Support** Struggling Readers
- **Encourage** Independent Work
- **Reinforce** Key Science Concepts
- **Increase** Vocabulary Retention
- **Prepare** Students for Science Testing



An excellent foundation program.

I would love to have this in my science classroom.

This kit is a teacher's dream come true.

The Science Lab concept is easy to use.

SRA

Making the Difference

1-800-201-7103

Resources and ordering information at
SRAonline.com