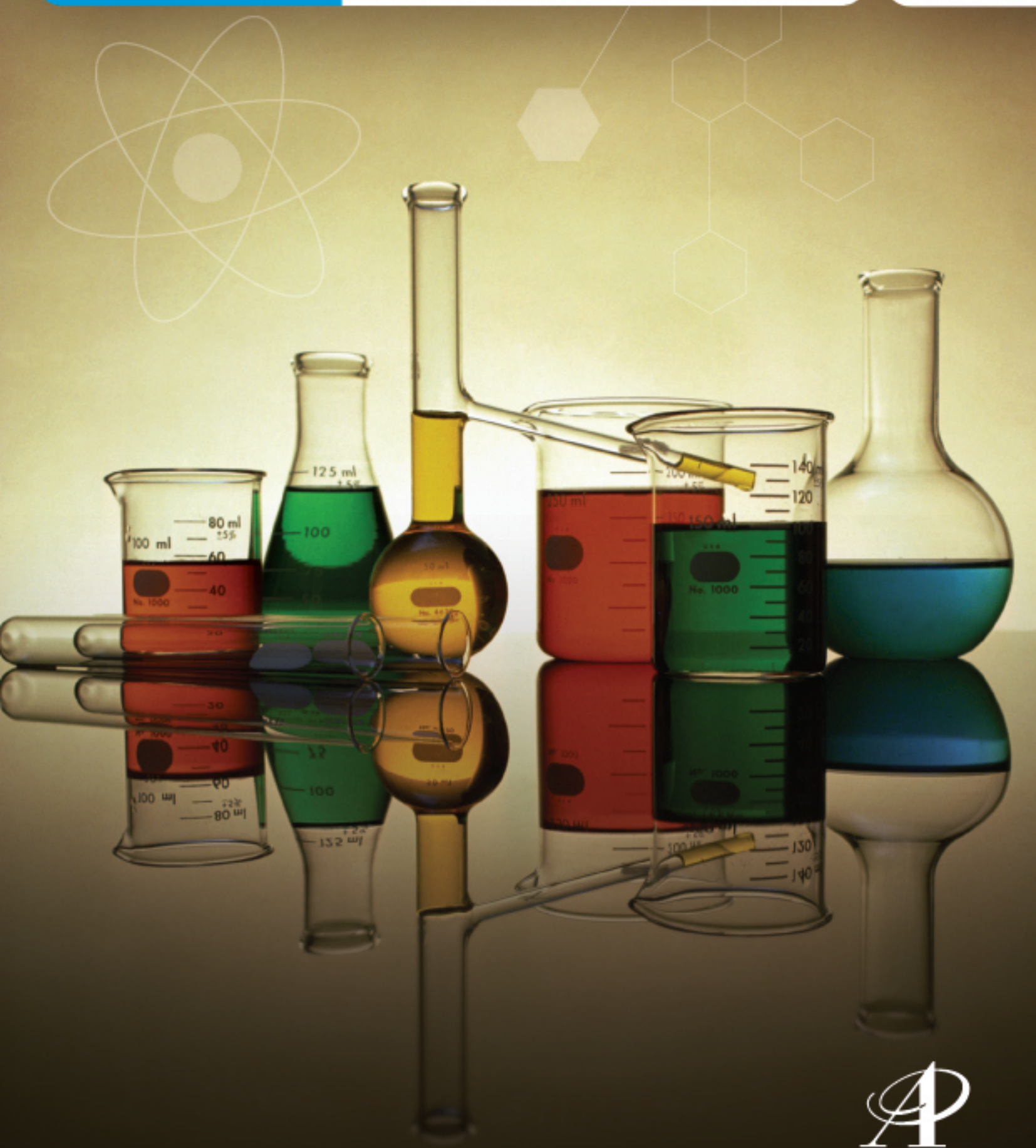




LIFE·PAC[®]

Science



Alpha Omega Publications[®]

SCIENCE 308

ROCKS AND THEIR CHANGE

CONTENTS

| | |
|--|-----------|
| I. HOW ROCKS ARE FORMED | 4 |
| By Heat | 7 |
| By Pressure | 18 |
| II. HOW ROCKS ARE CHANGED | 31 |
| By Water | 32 |
| By Wind | 34 |
| By Heat and Cold | 36 |
| By Plants | 39 |
| III. HOW ROCKS ARE USED | 50 |
| For Buildings | 51 |
| For Enjoyment | 57 |

| | |
|--------------------|--------------------------------|
| Author: | Merton B. Osborn, Ed.D. |
| Editor-in-chief: | Richard W. Wheeler, M.A.Ed. |
| Editor: | Joyce Davis |
| Consulting Editor: | Harold Wengert, Ed.D. |
| Revision Editor: | Alan Christopherson, M.S. |



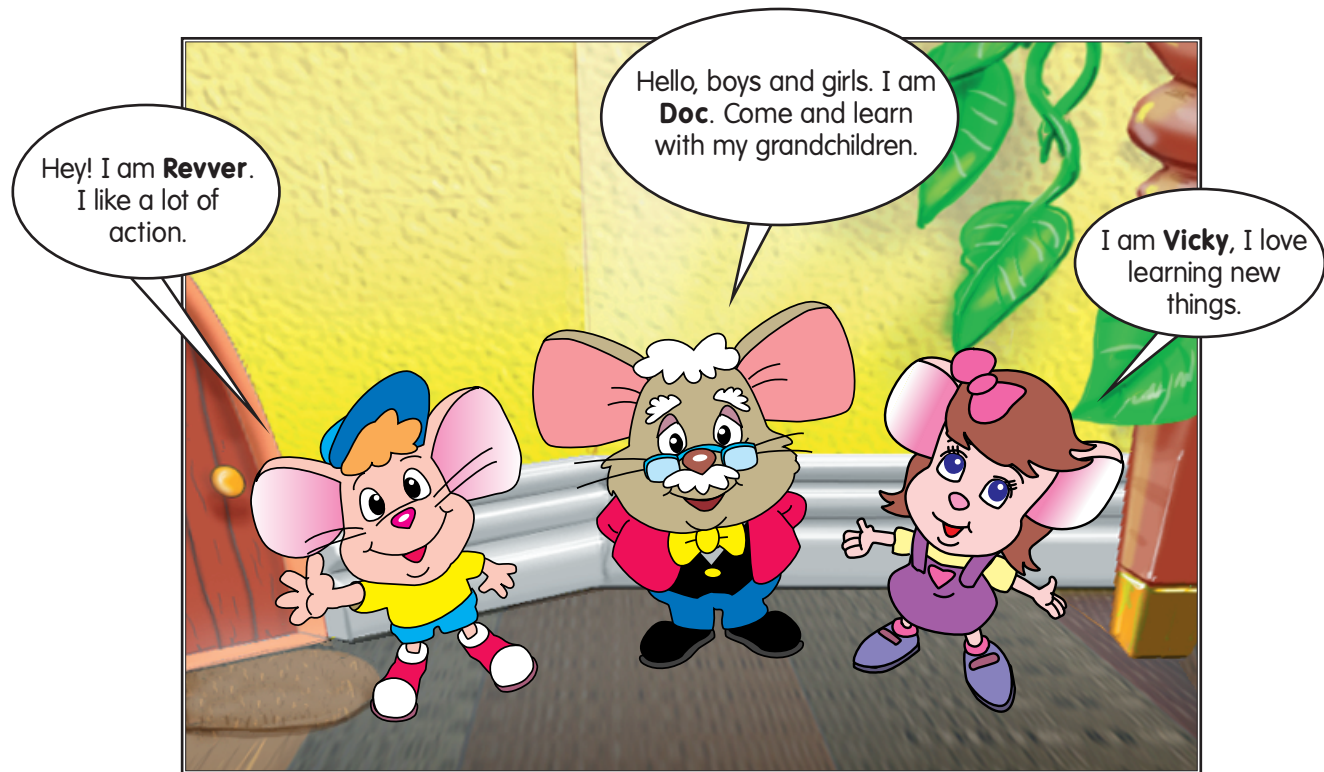
Alpha Omega Publications®

804 N. 2nd Ave. E., Rock Rapids, IA 51246-1759

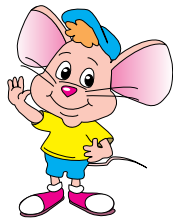
© MCMXCVI by Alpha Omega Publications, Inc. All rights reserved. LIFEPAC, Doc Dickory, Dewey Decimole, Revver, Rikki, and Vicky Dickory are registered trademarks or trademarks of Alpha Omega Publications, Inc. pending registration in the United States Patent and Trademark Office. All rights reserved.

All trademarks and/or service marks referenced in this material are the property of their respective owners. Alpha Omega Publications, Inc. makes no claim of ownership to any trademarks and/or service marks other than their own and their affiliates', and makes no claim of affiliation to any companies whose trademarks may be listed in this material, other than their own.

Learn with our friends.



When you see me, I will help your teacher explain the exciting things you are expected to do.



When you do actions with me, you will learn how to write, draw, match words, read, and much more.

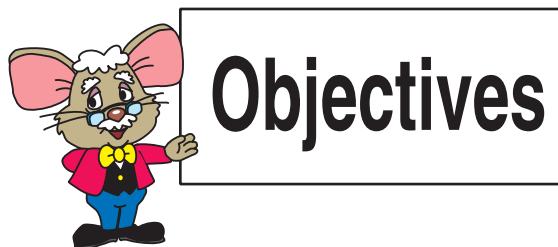


You and I will learn about matching words, listening, drawing, and other fun things in your lessons.

ROCKS AND THEIR CHANGE

God created the earth. He made many different kinds of rocks. We can learn so much about rocks that some people spend most of their lives studying about them. These people are called geologists. A geologist is a person who studies all about rocks. Geologists know how rocks are formed and how they change. In this LIFEPAC® you will learn how rocks are formed, how they can change, and how they are used.

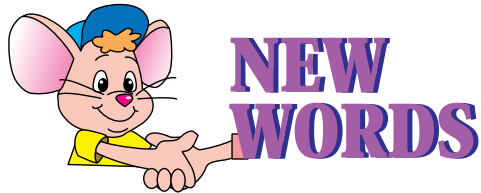
Many people who are not geologists study rocks because they enjoy them. They are called rock hounds. Perhaps you will become a geologist or a rock hound some day. Whether you gather rocks or just read about them in books, this LIFEPAC will help you know more about the earth—God’s great creation.



Read these objectives. They tell you what you will be able to do when you have finished this LIFEPAC.

1. You will be able to tell how rocks are formed.

2. You will be able to tell how rocks are changed.
3. You will be able to name three different kinds of rocks and give examples of each kind.
4. You will be able to tell how rocks are used.
5. You will be able to tell what precious stones are.



artist (är' tĭst). Person who paints pictures or carves statues.

astronaut (äs' trə nôt'). A person who goes into space in a rocket ship.

basalt (bə sôlt'). Hard rock left by a volcano.

biology (bĭ ôl' ə jē). Study of plant and animal life.

boulder (bôl' dər). A large, rounded rock.

college (kôl' ĭj). A school of higher learning.

core (kôr). The hot center of the earth.

crumble (krŭm' bəl). Break into very small pieces.

crust (krŭst). A hard, outside covering.

crystal (krĭs' təl). An evenly shaped clear mineral.

dissolve (dĭ zôlv'). Break up, change into a liquid.

erupt (ĭ rŭpt'). Burst forth.

feldspar (fēld' spär'). A common mineral on the earth's surface.

geologist (jē ôl' ə jĭst). A person who studies rocks.

geology (jē ôl' ə jē). Study of rocks.

gneiss (nĭs). Metamorphic rock.

granite (grăn' ĭt). Hard, igneous rock.

igneous (ĭg' nē əs). Formed by great heat and pressure.

lava (lə' və). Melted rock flowing from a volcano.

limestone (līm' stōn). A sedimentary rock.

liquid (lĭk' wĭd). Something not a solid or a gas, but like water; it flows.

magma (māg' mə). Hot, liquid rock under the earth.

mantle (mān' təl). The part of earth just beneath the crust.

marble (mār' bəl). A hard, limestone rock.

metamorphic (mēt' ə mōr' fĭk). Having to do with change of form.

mineral (mĭn' ər əl). A thing that is not a plant or an animal.

polish (pōl' ĭsh). To make smooth and shiny.

pressure (prēsh' ər). To press with a lot of weight and force.

quartz (kwôrts). A glassy mineral.

sedimentary (səd' ə mēn' tər ē). Rock formed from things that have settled to the bottom of the sea over a long time.

volcano (vōl kār nō). An opening in the earth through which steam and lava pour.

These words will appear in **boldface** (darker print) the first time they are used.

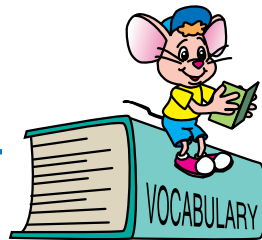
Pronunciation Key: hat, āge, cāre, fār; let, ēqual, tērm; it, ĭce; hot, ōpen, ōrder; oil; out; cup, pūt, rüle; child; long; thin; /TH/ for then; /zh/ for measure; /u/ represents /a/ in about, /e/ in taken, /i/ in pencil, /o/ in lemon, and /u/ in circus.

I. HOW ROCKS ARE FORMED

When God made the world, He caused much of it to be made up of rock. Rocks form the **core** of our mountains. Rocks lie under the ocean floor.

Rock is underneath all land.

In this part of your LIFE PAC, you will take a field trip with Look-It-Up Club and learn what **geologists** know about the ways rocks are formed. You will learn how heat and **pressure** have helped to form the rocks that we see all around us.



| | | |
|----------------|-------------|-------------------------------|
| basalt | (bə sôlt') | Hard rock left by a volcano. |
| boulder | (bôl' dər) | A large, rounded rock. |
| college | (kôl' ij) | A school of higher learning. |
| core | (kôr) | The hot center of the earth. |
| crumble | (krŭm' bəl) | Break into very small pieces. |
| crust | (krŭst) | A hard, outside covering. |