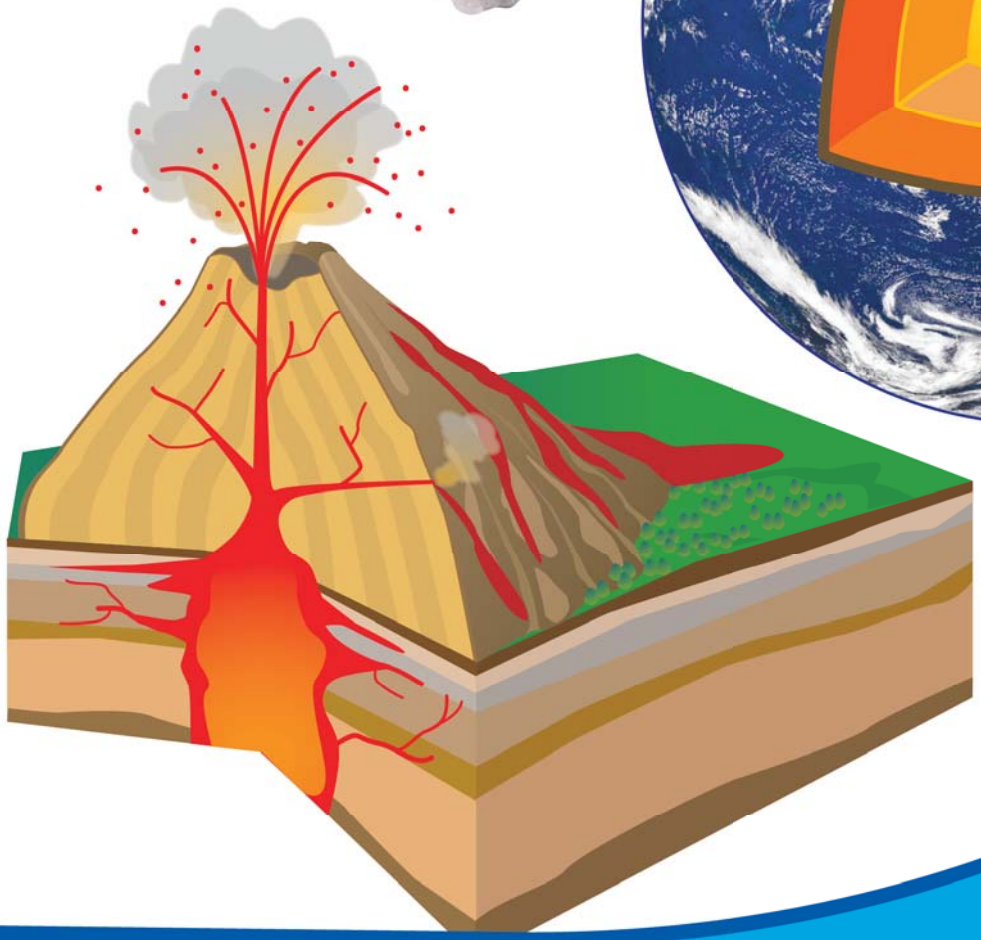
EARTH SCIENCE

Graphic Organizers



 Visit **www.newpathlearning.com** for Online Learning Resources.

NewPath Learning

Table of Contents

NEWPATH LEARNING

Phone: 800-507-0966
Fax: 800-507-0967
www.newpathlearning.com

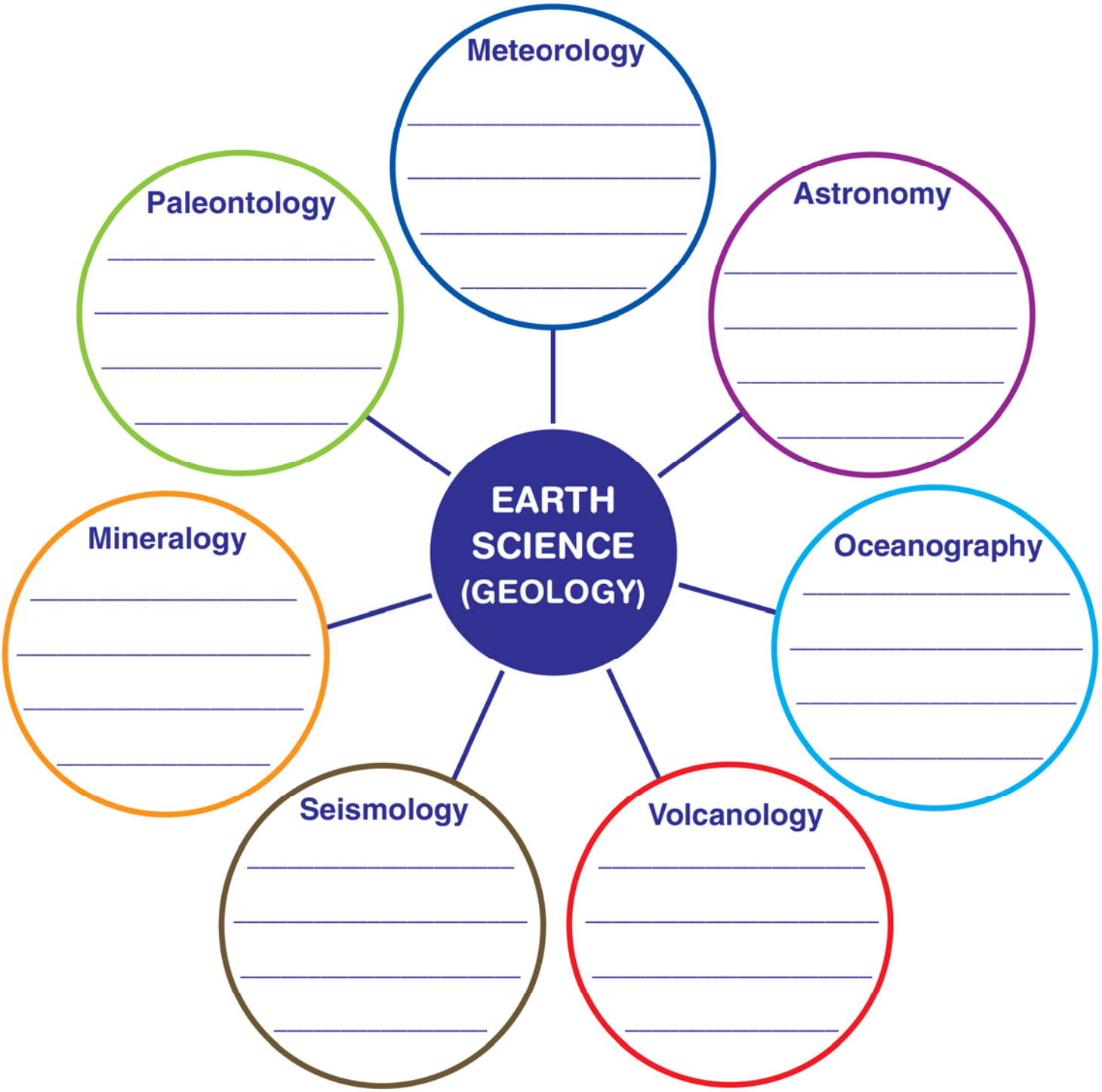
ISBN 978-1-63212-084-7

NewPath Learning® Products are developed by teachers using research-based principles and are classroom tested. The company's product line consists of an array of proprietary curriculum review games, workbooks, charts, posters, visual learning guides, interactive whiteboard software and other teaching resources. All products are supplemented with web-based activities, assessments and content to provide an engaging means of educating students on key, curriculum-based topics correlated to applicable state and national education standards.

1. Introduction to Earth Science

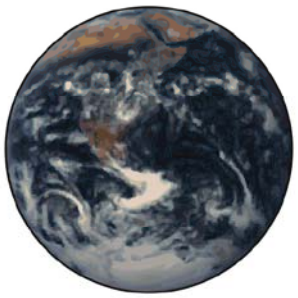
Geology or **Earth Science** are general terms that refer to a wide range of scientific studies. A **geologist** usually specializes in a specific field or branch of the Earth Sciences.

Different fields of study within Earth Science are identified for you in this graphic organizer. Give a brief description of the focus of each particular specialty. For example, **mineralogy** is the **study of minerals**, their physical properties, forms and uses.



1. Introduction to Earth Science Quiz

1 The study of the **solid earth** is called _____.



A meteorology
B astronomy
C geology
D archeology

2 **Paleontology** is the study of the _____.

A movement of pieces of the earth's crust
B fossilized remains of ancient life forms
C causes and formation of volcanoes
D formation, mining, and uses of minerals and mineral resources

3 The study of the **atmosphere**, including the forecasting of weather, is called _____.

A mineralogy
B astronomy
C astrology
D meteorology

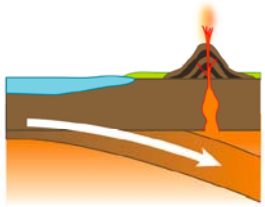
4 **Minerals** contain elements and compounds that are valuable and useful in our homes and in industry. A _____ is a geologist who specializes in the study of minerals.

A meteorologist
B microbiologist
C paleontologist
D mineralogist

5 A geologist who studies the **lava** that flows out of the ground in Hawaii is called a _____.

A mineralogist
B seismologist
C volcanologist
D paleontologist

6 A(n) _____ is a scientist who studies the **movement** of pieces of the **earth's crust** and the **earthquakes** and **volcanoes** created by these movements.



A mineralogist
B seismologist
C paleontologist
D astronomer

7 Many times geologists **combine** their knowledge with information from other sciences like chemistry or biology to work in a certain branch of earth science. A scientist who studies the interactions between **living organisms** and their **environment** is called a(n) _____.

A paleontologist
B cartographer
C botanist
D ecologist

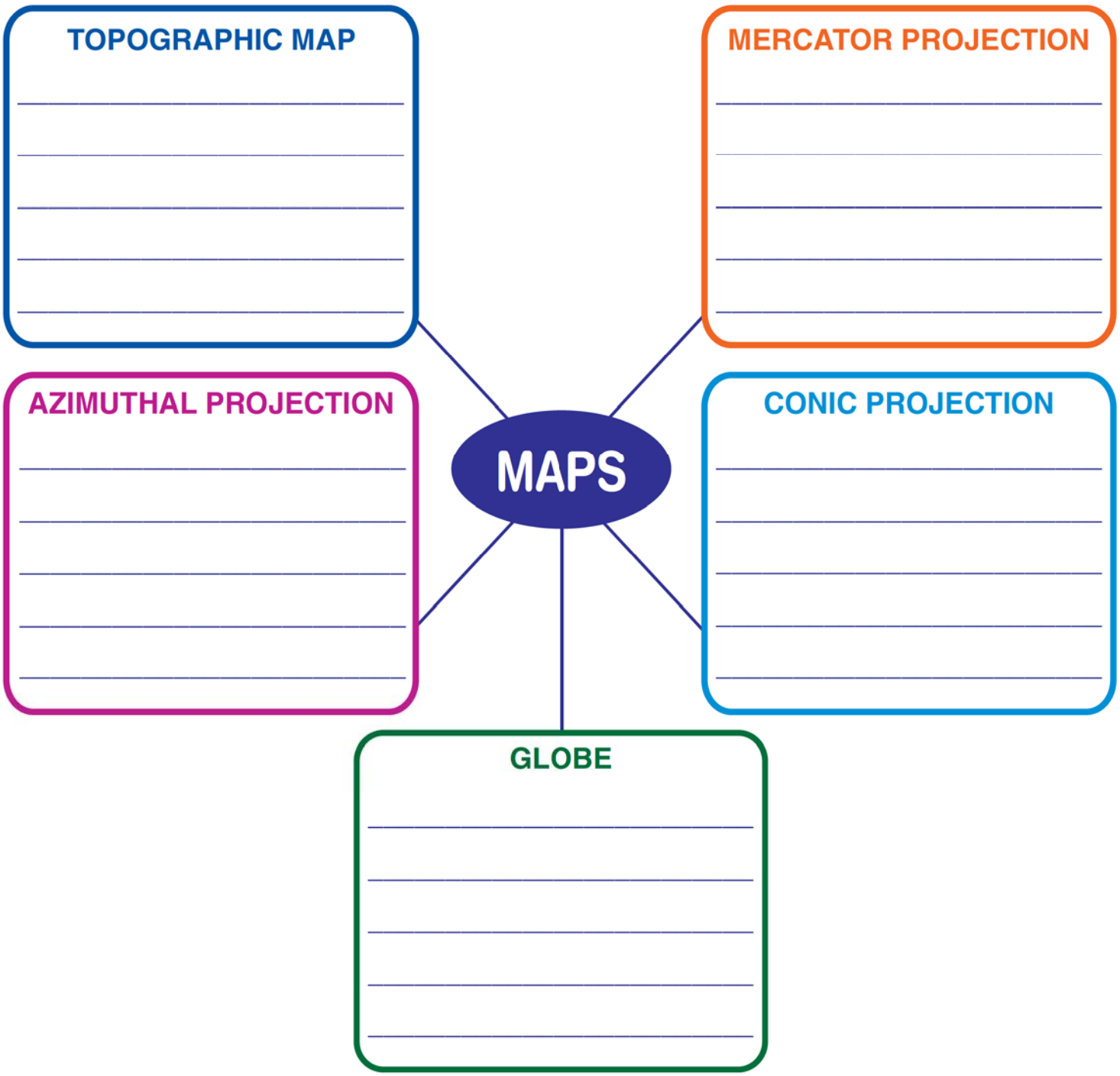
8 Geology is the study of the physical earth. _____ is the science that studies all physical things that are outside of or **beyond the earth**.

A Astronomy
B Meteorology
C Astrology
D Mineralogy

2. Maps as Models of the Earth

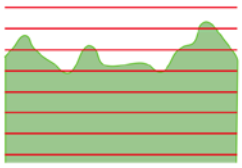
Maps are **two-dimensional representations** of Earth's three-dimensional surface. Each type of map has its **strengths** and its **weaknesses**. As a result, each type of map is best used for specific purposes.

Below are **five types** of common maps. **Describe** how each map is created (*definition*) and briefly explain its strengths, weaknesses, and the situation for which that map is best suited.



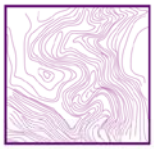
2. Maps as Models of the Earth Quiz

1 In the picture below, you can see the difference in elevation for a series of mountains and valleys. The **differences in altitude, landforms,** and the **overall form of the land** is called _____.



A a map projection
B a contour interval
C topography
D strike and dip

2 A topographic map shows the topography of the earth's surface using a series of lines called **contour lines**, such as those seen in this graphic. Contour lines **connect** _____.

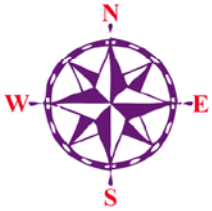


A the highest and lowest points in an area
B points of equal elevation
C areas of similar shape
D the peaks of mountains and hillsides

3 A map is a flat, two-dimensional picture of the spherical earth. When the oceans and landmasses are projected onto a cylinder of paper, a **Mercator projection** map like this is created. When mapped this way, landmasses are accurate near the equator, but distorted near the poles.

A true
B false

4 On a globe or map, a **compass rose** is included to show the directions of north, south, east, and west. **North, south, east** and **west** are called the _____.



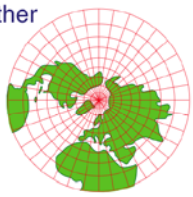
A major directions
B prime meridians
C cardinal directions
D index contours

5 A **conic projection** map is created when a portion of the earth's surface is projected onto a cone of paper which is then unrolled into a flat piece of paper. The open end of the cone touches only **one line of latitude** and all lines of longitude. What can you conclude about the accuracy of these maps?

A Landmasses are very distorted.
B Distortion of the landmasses is relatively small.
C They result in a sphere.
D They cannot be used in the Southern Hemisphere.

6 An **azimuthal projection** is a map that is created when the surface of the globe is projected onto a **flat plane**. The plane touches the globe at a **single point** (usually the North or South Pole). These maps are most accurate **near the point of contact** and become more distorted further away from the point of contact.

True or false?



A true
B false

7 The imaginary lines on the globe that run through the North Pole and South Pole are called **lines of longitude**. They are also known by the name _____.

A contours
B meridians
C equators
D projections

8 **Lines of latitude** are lines on a globe that _____.

A are always parallel to each other
B intersect at the poles
C run north and south
D run east and west and intersect at two points

3. Minerals

One of the most common approaches to categorizing minerals is by their **chemical composition** or **formula**. Below is a flow chart of the major groupings of minerals by **chemical formula group**. For each group, list **three minerals** that belong to that group. In addition, list a use of one mineral from each group.