

HISTORY & GEOGRAPHY

STUDENT BOOK

► **4th Grade | Unit 1**

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HISTORY & GEOGRAPHY 401

OUR EARTH

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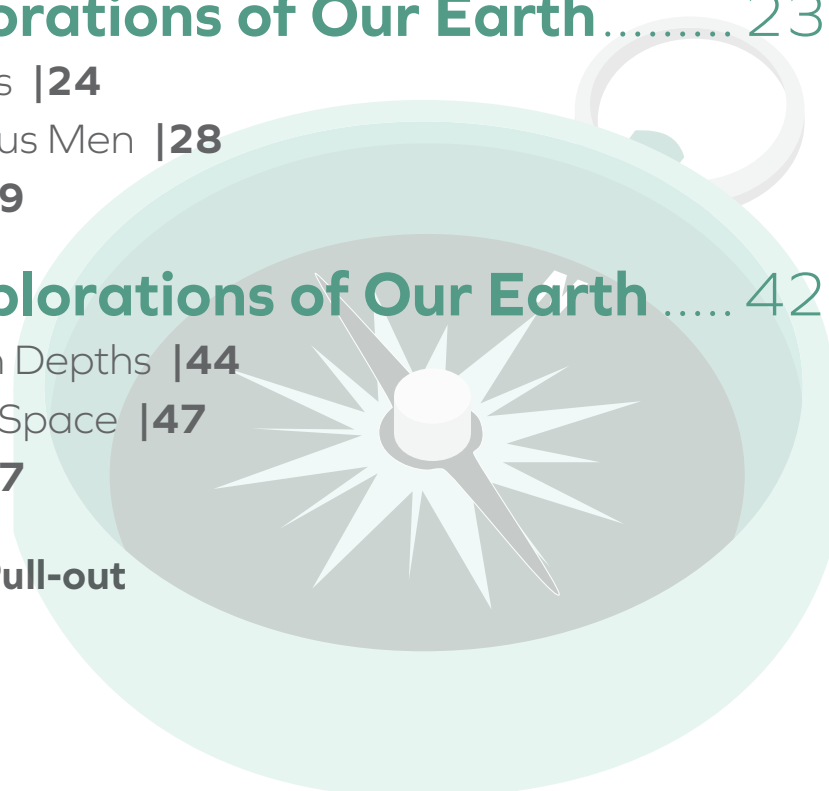
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OUR EARTH

Man has always been curious about the unknown. This curiosity has led men to risk their lives to learn things they did not know about our earth, the heavens above it, and the deep oceans.

Man is still making new discoveries in our world. Someday you may do it, too. The Bible says in Psalms 19:1, "The heavens declare the glory of God and the firmament showeth his handiwork." You will study some of His handiwork in this LIFEPAK®.

Objectives

Read these objectives. The objectives tell you what you will be able to do when you have successfully completed this LIFEPAK. Each section will list according to the numbers below what objectives will be met in that section. When you have finished this LIFEPAK, you should be able to:

1. Define and find geographic features on a map or globe.
2. Identify and describe the continents and oceans.
3. Identify some of the great bodies of water in the world.
4. Know north, south, east, and west on a map.
5. Explain why Europeans began exploring the earth.
6. Explain the different ways Europeans tried to reach the Far East.
7. Describe what Prince Henry, Columbus, and Magellan did to become famous.
8. Explain what the Europeans learned about the earth during the Age of Exploration.
9. Describe the inventions used to explore under the ocean.
10. Describe what explorers found under the ocean.
11. Describe and name the stages of the American space program.
12. Name and describe some of the probes and satellites sent into space from earth.

1. THE SURFACE OF THE EARTH

In this section you will learn how to mark and divide a globe, which is a map of the whole earth. You will learn the names for the different **features** on the earth's surface. You will study the earth and its surface—the **continents**, **canals**, oceans, and large **rivers**. Perhaps you will someday travel and visit some of the places you study!

Objectives

Review these objectives. When you have completed this section, you should be able to:

1. Define and find geographic features on a map or globe.
2. Identify and describe the continents and oceans.
3. Identify some of the great bodies of water in the world.
4. Know north, south, east, and west on a map.

Vocabulary

Study these new words. Learning the meanings of these words is a good study habit and will improve your understanding of this LIFEPAK.

aquifer (ak' wə fè r). A large body of water underground.

axis (ak' sis). An imaginary line through the earth around which the earth turns.

cargo (kär' gō). The load of goods carried by a ship.

equator (i kwā' tər). An imaginary circle around the earth halfway between the North and South Poles. It divides the earth into the Northern and South-ern Hemispheres.

feature (fē' cher). A thing that stands out and attracts attention.

globe (glōb). A model of the earth.

hemisphere (hem' ə sfir). Half of a sphere.

planet (plan' it). A large body of matter, like the earth, that moves around the sun in space.

rotate (rō ' tāt). To turn on an axis.

sphere (sfir). A ball-shaped object.

Note: All vocabulary words in this LIFEPAK appear in **boldface** print the first time they are used. If you are unsure of the meaning when you are reading, study the definitions given.

Pronunciation Key: **h**at, **ā**ge, **cā**re, **fā**r; **l**et, **ē**qual, **tē**rm; **i**t, **ī**ce; **h**ot, **ō**pen, **ō**rder; **o**il; **o**ut; **cup**, **pūt**, **rū**le; **ch**ild; **l**ong; **thin**; /ʒh/ for **th**en; /zh/ for **meas**ure; /u/ or /ə/ represents /a/ in **ab**out, /e/ in **tak**en, /i/ in **pencil**, /o/ in **lemon**, and /u/ in **circus**.



| Map of Geographical Terms

GEOGRAPHICAL TERMS

archipelago (är' kə pel' ə gō). A group of many islands.

bay (bā). A small area of sea or lake partly enclosed by land. A bay is usually smaller than a gulf.

canal (kə nal'). A waterway dug across land for ships or small boats to go through.

coast (kōst). The land along the sea; seashore.

continent (kon' ti nent). One of the seven great masses of land on earth.

delta (del' tā). A fan-shaped deposit of dirt and sand that collects at the mouth of some rivers.

gulf (gulf). A large part of an ocean or sea with land around it. A gulf is usually larger than a bay.

harbor (här' bär). A deep bay used to shelter ships.

island (ī' land). A body of land surrounded by water.

isthmus (is' mäs). A narrow bridge of land, with water on both sides of it, connecting two larger pieces of land.

lake (lāk). A body of water, usually fresh, surrounded by land.

mountain (moun' tən). A very high hill.

mouth (mouth). The part of a river where its waters flow into some other body of water, usually a lake or ocean. Also, the opening of a harbor or bay into the ocean.

ocean (ō' shən). Any of four major divisions of the great body of salt water that covers almost three-fourths of the earth.

peninsula (pə nin' sə lə). A piece of land almost surrounded by water, or extending far out into the water.

river (riv' er). A large natural stream of water that flows into a lake or ocean.

sea (sē). Any large body of salt water, smaller than an ocean. Often it is a part of the ocean surrounded by some land or islands.

source (sôrs). The beginning of a brook or river.

strait (strāt). A narrow waterway that connects two larger bodies of water.

tributary (trib' yə ter' ē). A stream or river that flows into a larger river.

Maps

It is difficult to make a map of our earth on a flat piece of paper, because the earth is not flat. The earth is shaped like a ball, and only a map on a ball can show it correctly. Look at the following map. This is one way to make a flat map of our world.

The map shows the main features of our earth. It shows the **oceans** and the continents in their correct places. It is difficult to see things along the sides and bottom of this map, however. The map cannot show these very well because they should be going around on the other side of a ball, not lying flat on a piece of paper.



| A map of the world.



Map exercises.

- 1.1 List the names of the seven continents: _____

- 1.2 List the four oceans: _____

- 1.3 Between Asia and Australia is a large **archipelago**. Circle it.
- 1.4 The **peninsula** of Florida is on the right side of North America. Put an "X" on it.
(Use a United States map if you need help.)
- 1.5 Below Florida along the **coast** of North America is a large **gulf** called the Gulf of Mexico. Put a big star in the middle of it.
- 1.6 North and South America are connected by an **isthmus**. Circle it.
- 1.7 Put a square around the large **island** on the right side of Africa.



Teacher check:

Initials _____ Date _____

The best map of our earth is a **globe**. A globe is a model of our **planet**. It is a world map drawn on a ball shape. We call this ball shape a **sphere**. The globe shows the big bodies of water and land. If you have one you will want to look at it and compare it to the pictures in the LIFE PAC.

When you look at the globe, you can only see half of it at a time. This half is called a **hemisphere** ("hemi" means half). You live in the Western Hemisphere if you are in the United States. North and South America are both in the Western Hemisphere. Africa, Europe, and Asia are on the opposite side in the Eastern Hemisphere. The next two maps show these two hemispheres.

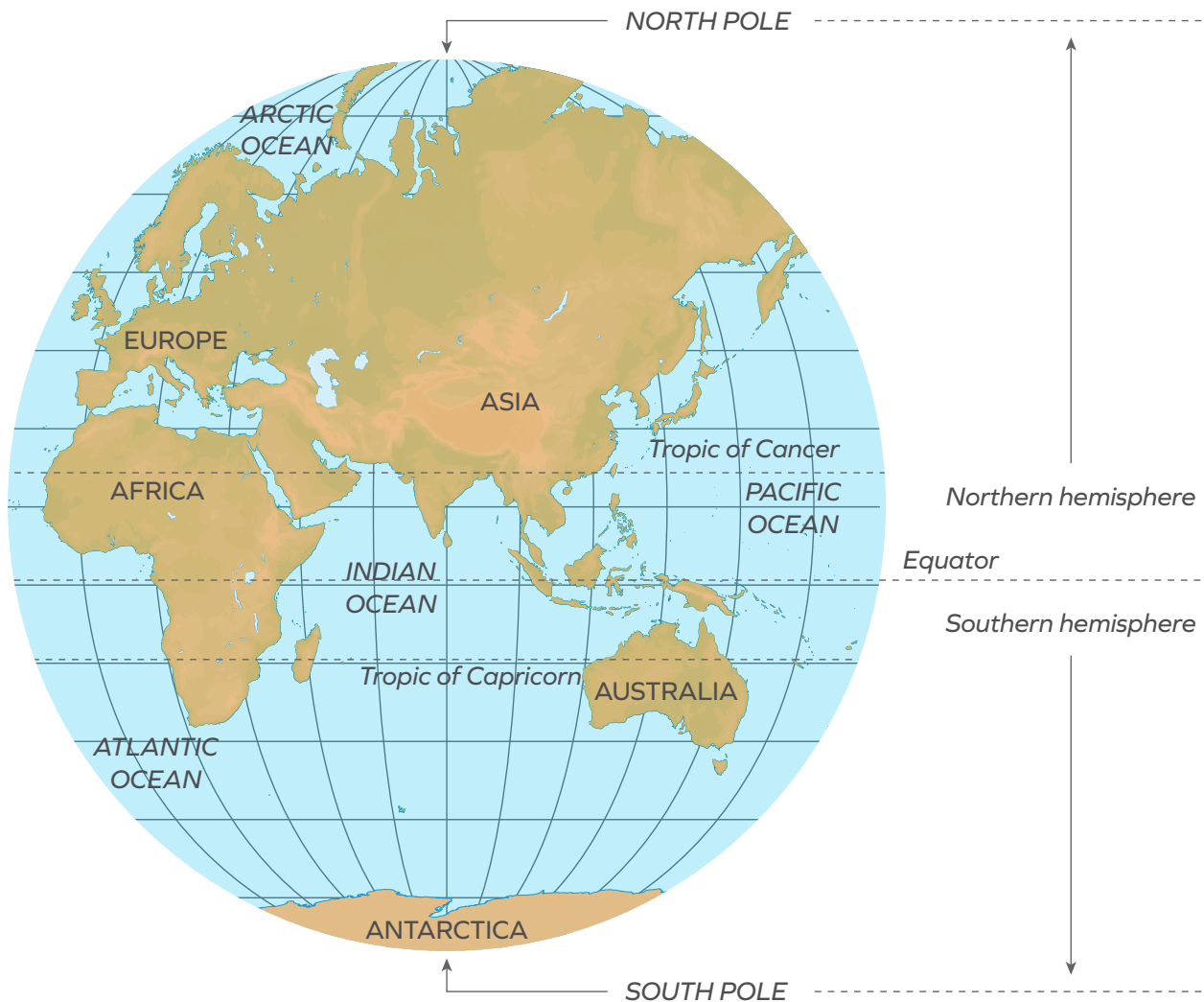
Directions on a map are shown by north, south, east, or west. There is an easy way to remember the directions. On a map, north is always put at the top. Therefore, going up on a map is always going north, and going down is always south. East is to the right (Remember: East right, West left.), and west is to the left. The only time this will not work is if north is not at the top of your map, which almost never happens.



| Western Hemisphere

Look at the maps. Do you see the line drawn across the middle of each one? This line is called the **equator**. The equator is a line that divides the earth into two equal hemispheres. The half above the equator is the Northern Hemisphere. Most of the people in the world live in this hemisphere, because most of the land is there. Below the equator is the Southern Hemisphere. It is mostly water, with much less land for people to live on.

To the north and south of the equator are the Tropic of Cancer and the Tropic of Capricorn. These lines mark the end of the *tropical zone* around the equator, which you will study in a later LIFEPAK. It is only between these two lines that the sun ever gets exactly overhead in the center of the sky. You can remember that Capricorn is the one south of the equator by imagining that it sinks to the bottom because it is a bigger, heavier word than Cancer.



| Eastern Hemisphere



Complete these sentences.

- 1.8** The best map of the earth is a _____ .
- 1.9** The shape of a globe is a _____ .
- 1.10** The imaginary line around the middle of the earth is called the _____ .
- 1.11** The two imaginary lines that mark the ends of the tropical zone are the Tropics of _____ and _____ .
- 1.12** The bottom half of the earth is called the _____ Hemisphere.
- 1.13** Most of the people in the world live in the _____ Hemisphere.



Write north, south, east, or west. Use the Western Hemisphere and Eastern Hemisphere maps.

- 1.14** The Tropic of Cancer is _____ of the equator.
- 1.15** Antarctica is _____ of the equator.
- 1.16** Australia is _____ of Africa.
- 1.17** Europe is _____ of Africa.
- 1.18** The Atlantic Ocean is _____ of the Indian Ocean.

At the top of the Northern Hemisphere is a point called the North Pole. This point is as far north as anyone can go on earth. At the bottom of the Southern Hemisphere is a point as far south as anyone can go. That is the South Pole. The north and south poles, like the equator and the Tropics of Cancer and Capricorn, are not really marks on the earth. They are just imaginary markings on a map to help us find places.

There is another imaginary line that connects the North and South Poles through the center of the earth. This line is called the **axis**. The earth turns, or **rotates**, around this line. If you spin a globe, it is rotating on its axis. The earth takes twenty-four hours to make a full rotation around its axis. We call this one day.

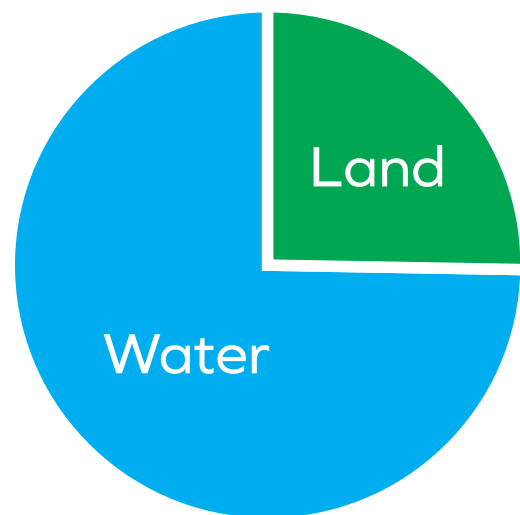
The earth turns toward the east. That makes the sun, which does not move, look like it is rising from the east. When our side of the earth is facing the sun, we have day. When our side turns away from the sun, we have night, and the other side of the world has day.

Oceans

The water of the world is colored blue on your map or globe. You can see that most of the earth is covered with water. If the earth's surface were divided into four parts, nearly three parts of it (three-fourths) would be water.

The largest bodies of water are the oceans. Look back at the map of the world. It shows four major oceans. The largest one is the Pacific Ocean. The Pacific separates North and South America from Asia and Australia. The next largest ocean is the Atlantic Ocean. It separates the Americas from Europe and Africa. The smallest ocean is the Arctic Ocean around the North Pole. The Indian Ocean is larger than the Arctic. It lies completely in the Eastern Hemisphere, south of Asia and east of Africa around the equator.

Oceans have many smaller parts that flow into openings in the land. These parts are called **bays**, gulfs, or **seas**. You have already located the Gulf of Mexico on your world map. It is a part of the Atlantic Ocean. Another part of the Atlantic is the Mediterranean



Sea, the water between Africa and Europe. The small opening between the Atlantic Ocean and the Mediterranean Sea is the **Strait** of Gibraltar.

Bays are usually much smaller than gulfs and harder to find on a map of the entire world. One that you can find easily however, is Hudson Bay; one of the largest bays in the world. It is in the northeast part of North America in the country of Canada. See if you can find it. (Ask your teacher for help if you need it.)

Bays that are deep and well protected from ocean storms are often made into **harbors**. These are safe places for ocean ships to stop and unload **cargo**. Cities are often built on good harbors, since that makes it easier to trade with other countries in the world. San Francisco, New York, Baltimore, and New Orleans are all American cities built on harbors.



Complete these questions.

- 1.19** List the oceans in order from largest to smallest.
1. _____ 2. _____
3. _____ 4. _____
- 1.20** The earth rotates on its axis once every _____.
- 1.21** The farthest south anyone can go is the _____.
- 1.22** The Strait of Gibraltar connects _____
to _____.
- 1.23** Deep bays that are protected from ocean storms often are made
into _____ for ships.
- 1.24** _____ of the earth is covered with water (how
much?).
- 1.25** The equator and the Tropic of Cancer are _____ lines.
- 1.26** The large bay in northeast North America is named
_____.

Continents

(Look at a globe or world map with this section.) The seven largest pieces of land on earth are called *continents*. Two of them, North and South America, are in the Western Hemisphere. Four others: Europe, Africa, Asia, and Australia, are in the Eastern Hemisphere. The last continent, Antarctica, is unusual because it is at the South Pole, and is in both the Eastern and Western Hemispheres.

Europe, Asia, and Africa are all connected together. Europe and Asia are divided by **mountains** and seas. The border between the two is an imaginary line through the Ural Mountains, the Caspian Sea, the Caucasus Mountains, and the Black Sea. The land of these two continents is often called Eurasia to show how closely they are connected.

Africa is connected to Asia by the Isthmus of Suez. This thin piece of land is crossed by the Suez Canal. The canal was finished in 1869. The 118 mile (190 kilometer)-long man-made strait connects the Red Sea to the Mediterranean Sea. It allows ships to sail between Europe and southern Asia without going all the way around Africa.

Asia is the largest continent on earth. It also has more people living on it than any other continent. It is in Asia that Noah's Ark landed after the Flood and human life started over again. The Tower of Babel was built in Asia in what is now the country of Iraq. From there mankind spread out all over the earth. It is also in Asia, in Israel, where Jesus, our Lord and Savior, was born and lived his adult life.

Europe is much smaller than Asia. The apostle Paul first brought the good news about Jesus to that continent. The good news spread until almost all of Europe was Christian. Many years later, beginning in about 1500, the people from this continent began to explore the entire earth. They were among the first people to map our world. We will study what they did during the "Age of Exploration" in section two of this LIFEPAK.

Africa is the second-largest continent. The country of Egypt in North Africa was a very important nation during Bible times. Joseph was sent into slavery there and became the second-most important ruler in the land. The children of Israel lived in Egypt for 400 years, until Moses led them out to the Promised Land. North Africa was also an important area of Christianity in the first few hundred years after Jesus's resurrection. Many important early leaders of the Christian Church came from North Africa. The church there was destroyed by a new religion called Islam about 700 years after Jesus's birth.

Australia is often called the "Island Continent," because it is the smallest continent on earth. It is not connected to any other continent, and all of it is south of the equator.

There is one continent that is even further south—Antarctica. It is a continent at the South Pole covered with snow and ice. It is larger than Europe or Australia, but it is too cold for people to make their homes there.

North and South America are the continents you know best. They are connected by the Isthmus of Panama. There is a canal across this isthmus, also. The Panama Canal is 51 miles (82 kilometers) long from start to finish. (It crosses a lake at one point.) The canal was built by the United States and opened in 1914. Ships sailing from New York to San Francisco traveled 7,800 fewer miles (12,630 kilometers) by using the canal instead of sailing around South America.

The many islands in the ocean are part of whatever continent they are close to. For example, the big island of Greenland northeast of North America is part of that continent. The archipelago of Japan (made up of thousands of islands) is part of Asia, the continent that is just to the west of it.



Put the correct answer in the blank.

1.27 _____ is the largest continent with the most people.

1.28 There are (how many) _____ continents.

1.29 The continent that is furthest south is _____.

1.30 The first people to explore and map the entire earth came from _____.

1.31 North and South America are connected by the _____.

1.32 Egypt was an important nation of the continent of _____.

1.33 _____ and _____ are in the Western Hemisphere.

1.34 The land of Europe and Asia together is sometimes called _____.

**Map exercises.**

- 1.35** Use a map or globe to find each item listed.
Then, mark it on the map above.
- | | |
|-------------------|-----------------------|
| a. Suez Canal | b. Caspian Sea |
| c. Red Sea | d. Mediterranean Sea |
| e. Black Sea | f. Caucasus Mountains |
| g. Ural Mountains | |
- 1.36** Draw a line to divide the lands of Europe and Asia.
- 1.37** Label the map Eastern or Western Hemisphere, whichever is correct.
- 1.38** Find and label the islands of Great Britain.
Draw an arrow to the continent they are a part of.

**Teacher check:**

Initials _____ Date _____

Great Rivers and Lakes

Most of the earth's water is in the oceans and seas, but it is too salty for people to drink. Fresh, or drinkable water, is found in rivers, **lakes**, and **aquifers**. There is also fresh water that is always frozen as ice and snow near the North and South Poles.

There are many important rivers in the world. Most start in the **mountains** and flow down to the ocean. The **source** of a river is where it starts. The **mouth** is where it ends, at a lake, sea, ocean, or another river. (The place where a bay or harbor opens into the ocean is also a mouth.) Rivers flow downhill, so traveling towards the source is going upriver (uphill), while going downriver (downhill) is traveling towards the mouth.

As rivers move downhill the water often gets muddy, full of dirt from the land. This dirt settles to the bottom when the river reaches the ocean and stops moving. The dirt piles up around the mouth of the river and creates a **delta**. Deltas are shaped like a triangle. They are named after the Greek letter delta (Δ), which is also triangle-shaped.

Many smaller rivers and streams called **tributaries** may flow into a big river between its source and its mouth. The main river along with all of its tributaries is called a river system. The land around a river system is called the river's *basin*. This is because the water in it all drains to one place, the mouth of the river—just as it does in a basin or sink.

The biggest river system in the United States is that of the Mississippi River. The Missouri, Platte, Arkansas, and Ohio Rivers are all tributaries of the mighty Mississippi. All the water in those rivers flows into the ocean at the mouth of the Mississippi River. Some of the rivers have their source in the Rocky Mountains in the west. Other rivers have their source in the Appalachian Mountains in the east. The Mississippi Basin covers most of the center of the United States.

The longest river in the world is the Nile River in Africa. It is 4,160 miles (6656 kilometers) long. It was on this river that the great nation of Egypt grew. Moses was hidden in a basket on this river because the king had ordered all the Israelite boys killed. An Egyptian princess found him there when she came to bathe in the river. She adopted him as her son and raised him in the palace. (Exodus 1:22-2:10.)



| Ozero Baykal (Lake Baikal)

Many great nations began on rivers, because the rivers would flood every year and cover the land with fresh soil that easily grew food. Babylon of the Old Testament was on the Tigris and Euphrates Rivers of Asia. The Chinese nation started on the Huang He and Yangtze Rivers of far eastern Asia.

Lakes are another important source of water for people and farms. Lakes are bodies of fresh water completely surrounded by land. The largest lake in the world is right in North America. It is Lake Superior, one of the Great Lakes on the border between the United States and Canada. The second largest is Lake Victoria in Africa. That lake is in three different countries: Uganda, Tanzania, and Kenya. Ozero Baykal (Lake Baikal) in Russia is the deepest lake in the world. It is over 5,000 feet (1,741 meters) deep and holds more fresh water than any other lake on earth. Ozero Baykal (Lake Baikal) is so deep that you could stack the Sears Tower (1,454 feet), Chicago's biggest skyscraper, on top of itself three times, and still not reach the top!

Aquifers are underground lakes. Although they usually are not marked on maps because they are not on the surface of the earth, they are very important to people who live near them. People can drill holes down to the aquifers to get fresh water even if they are not near a river or lake.



| The princess of Egypt found a basket with the baby Moses in it.



Match these items.

- | | | |
|-------------|-----------------|---|
| 1.39 | _____ lake | a. body of fresh water surrounded by land |
| 1.40 | _____ source | b. triangle-shaped collection of dirt where a river reaches the ocean |
| 1.41 | _____ mouth | c. underground lake |
| 1.42 | _____ delta | d. river that flows into a larger river |
| 1.43 | _____ aquifer | e. the start of a river |
| 1.44 | _____ tributary | f. the end of a river |



Fill in the blanks.

- 1.45** What is the deepest lake in the world? _____
- 1.46** Name the largest river system in the United States.

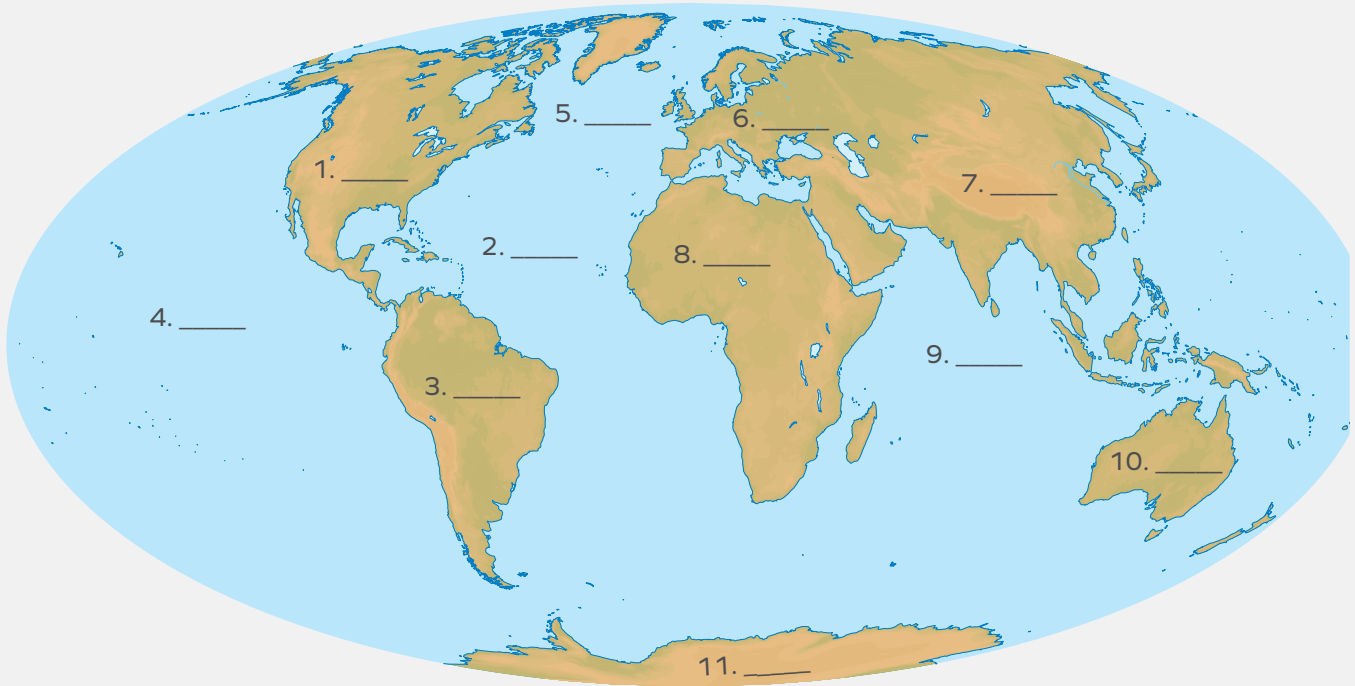
- 1.47** What is the longest river in the world? _____
It is on the continent of _____
- 1.48** What is the largest lake in the world? _____
It is on the continent of _____



Review the material in this section to prepare for the Self Test. The Self Test will check your understanding of this section. Any items you miss on this test will show you what areas you will need to restudy in order to prepare for the unit test.

SELF TEST 1

On this map of the world, write the letter in the correct space for the name of each continent and major ocean in the following list (3 points each answer).



1.01

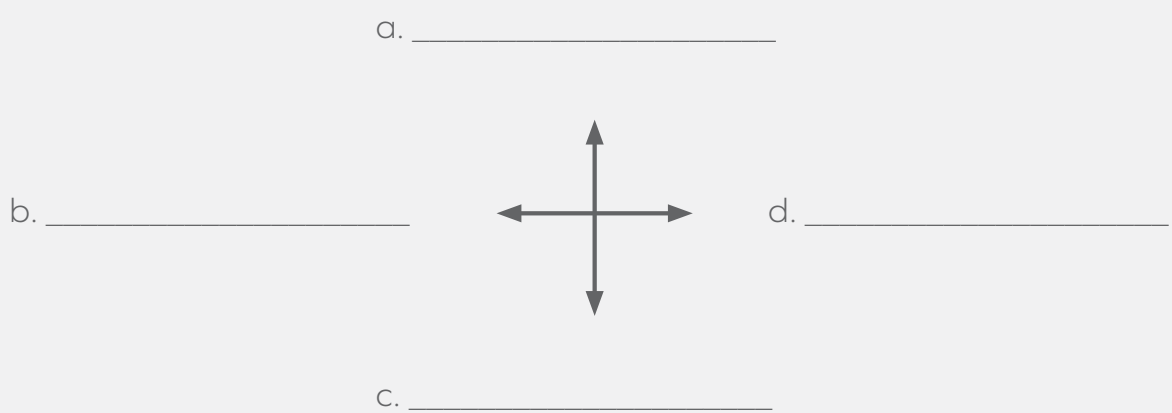
- | | | |
|-------------------|------------------|---------------|
| a. Atlantic Ocean | b. Europe | c. Australia |
| d. Arctic Ocean | e. Asia | f. Antarctica |
| g. Indian Ocean | h. North America | i. Africa |
| j. Pacific Ocean | k. South America | |

Put the correct letter on the blank (2 points each answer).

- | | | | | |
|--------------|-------|-------------|----|--|
| 1.02 | _____ | archipelago | a. | waterway dug across land |
| 1.03 | _____ | canal | b. | land that connect two bigger pieces of land |
| 1.04 | _____ | mouth | c. | land almost all surrounded by water |
| 1.05 | _____ | source | d. | underground lake |
| 1.06 | _____ | sea | e. | small river that joins a bigger one |
| 1.07 | _____ | delta | f. | large body of salt water |
| 1.08 | _____ | isthmus | g. | group of many islands |
| 1.09 | _____ | peninsula | h. | triangle-shaped collection of dirt at the mouth of a river |
| 1.010 | _____ | tributary | i. | beginning of a river |
| 1.011 | _____ | aquifer | j. | end of a river |

North, south, east, and west are the four directions on a map. Put them in their correct places on this diagram (3 points each answer).

1.012



Choose the correct answer from the list below (each answer, 2 points).

hemisphere	globe	equator	Mississippi
Cancer	Capricorn	Nile	Superior
fresh	axis		

- 1.013** One half of the earth is called a _____.
- 1.014** A _____ is a map of the earth on a ball shape.
- 1.015** The _____ is the longest river on earth.
- 1.016** The Tropic of _____ marks the northern end of the tropical zone.
- 1.017** The Tropic of _____ marks the southern end of the tropical zone.
- 1.018** The water in a lake is usually _____.
- 1.019** The largest river system in the United States is that of the _____ River.
- 1.020** The earth rotates every day around the imaginary line called the _____ that runs through the center of the planet between the north and south poles.
- 1.021** The world's largest lake is Lake _____ in North America.
- 1.022** The _____ is an imaginary line that runs around the middle of the earth from east to west.

Write *true* or *false* in the blank (each answer, 2 points).

1.023 _____ North America is in the Western Hemisphere.

1.024 _____ Three-fourths (most) of our earth is land.

1.025 _____ A gulf is usually larger than a bay.

1.026 _____ A harbor is a bay that is too shallow for ships.

1.027 _____ Australia is the largest continent.

1.028 _____ Jesus lived his whole life in South America.

1.029 _____ Egypt is in Africa.

1.030 _____ Islands are often part of the closest continent.

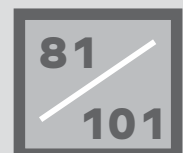


Teacher check:

Score _____

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