SAHARA DESERT

CartoCraze!

Expanded Map Workshops from
MAP OF THE MONTH

DESERT

The surface of a desert can be formed of sand, ice, small stones or large rocks.

The definition of a desert is that it receives less than 10 inches of precipitation a year: that precipitation can be either rain or snow.

Deserts are the driest places on Earth. Even though we tend to think of deserts as torrid sand covered locations, these geographic areas can also be bitterly cold.

Humans have always found it challenging to live in desert environments, and have lived at the outer edges of many deserts where agriculture and raising of animals is possible. Often people who live in arid areas are forced to be nomads, moving from place to place to take advantage of seasonal weather. A surprising number of plants and animals have adapted to the harsh inhospitable conditions of both hot and cold deserts.

DESERT TERMS AND THEIR DEFINITIONS

These terms and their definitions will help you to understand some of the aspect of desert areas.

DESERT A region that receives very low amounts of precipitation.

HOT DESERT A region with very high temperatures, a great deal of evaporation of moisture, and often high winds, conditions that are inhospitable for life.
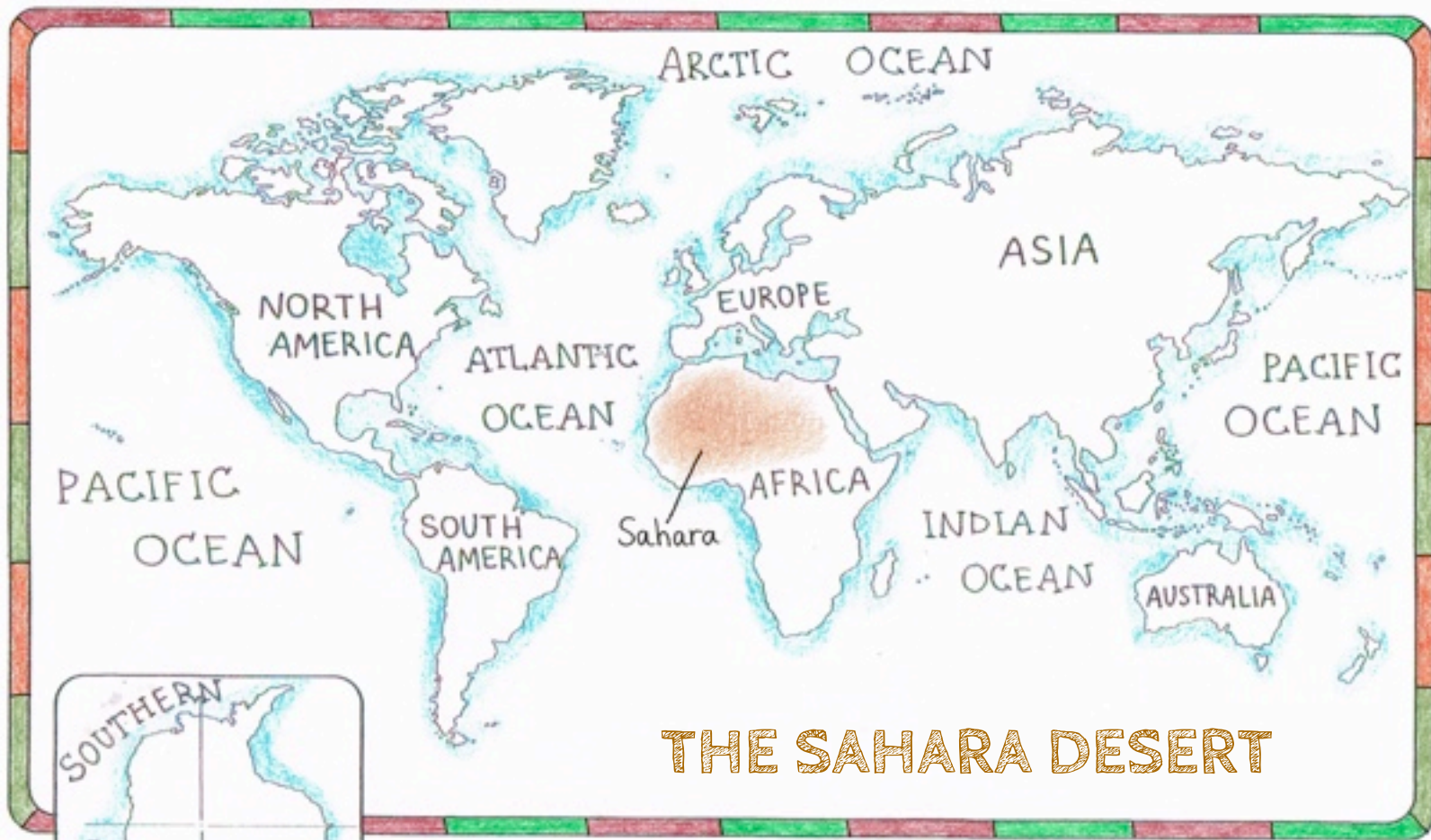
COLD DESERTS
1. A **COLD DESERT** region is often separated from the ocean or body of water by a mountain range which blocks weather systems that produce moisture. The area beyond the mountain range remains very dry. Often this a called a "Rain Shadow" and can affect cold as well as hot deserts.

2. A **POLAR DESERT** has moisture carried away by high winds and there are snow dunes instead of sand dunes.

SAND Small dry particles of minerals and rock that are part of many hot deserts which form dunes.

**DUNE** Masses of sand or snow that are moved and shaped by weather, wind and gravity.

The following presentation is an introduction to the
SAHARA DESERT, one of Earth's great deserts,
with some information about mapping, geography, people
and animals of its surrounding area.

ARCTIC OCEAN

ASIA

EUROPE

NORTH AMERICA

ATLANTIC OCEAN

PACIFIC OCEAN

PACIFIC OCEAN

AFRICA

Sahara

SOUTH AMERICA

INDIAN OCEAN

AUSTRALIA

SOUTHERN OCEAN

ANTARCTICA

THE SAHARA DESERT

Sahara is an Arabic word meaning Great Desert. The Sahara is the largest hot desert on Earth. It covers a vast area in the north African continent, and is larger than the continental United States. The Sahara is a very hot and arid landscape of mainly sand and rock, with very little vegetation. Yet there are many species of animals who have adapted to the harsh terrain and high temperatures. There are 70 kinds of mammals, 90 kinds of birds and about 100 kinds of reptiles. Some nomadic people live in the desert, but mostly on the edges of the desert where they can obtain water and grow food.
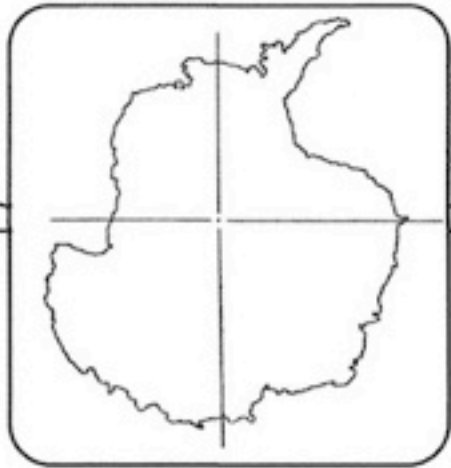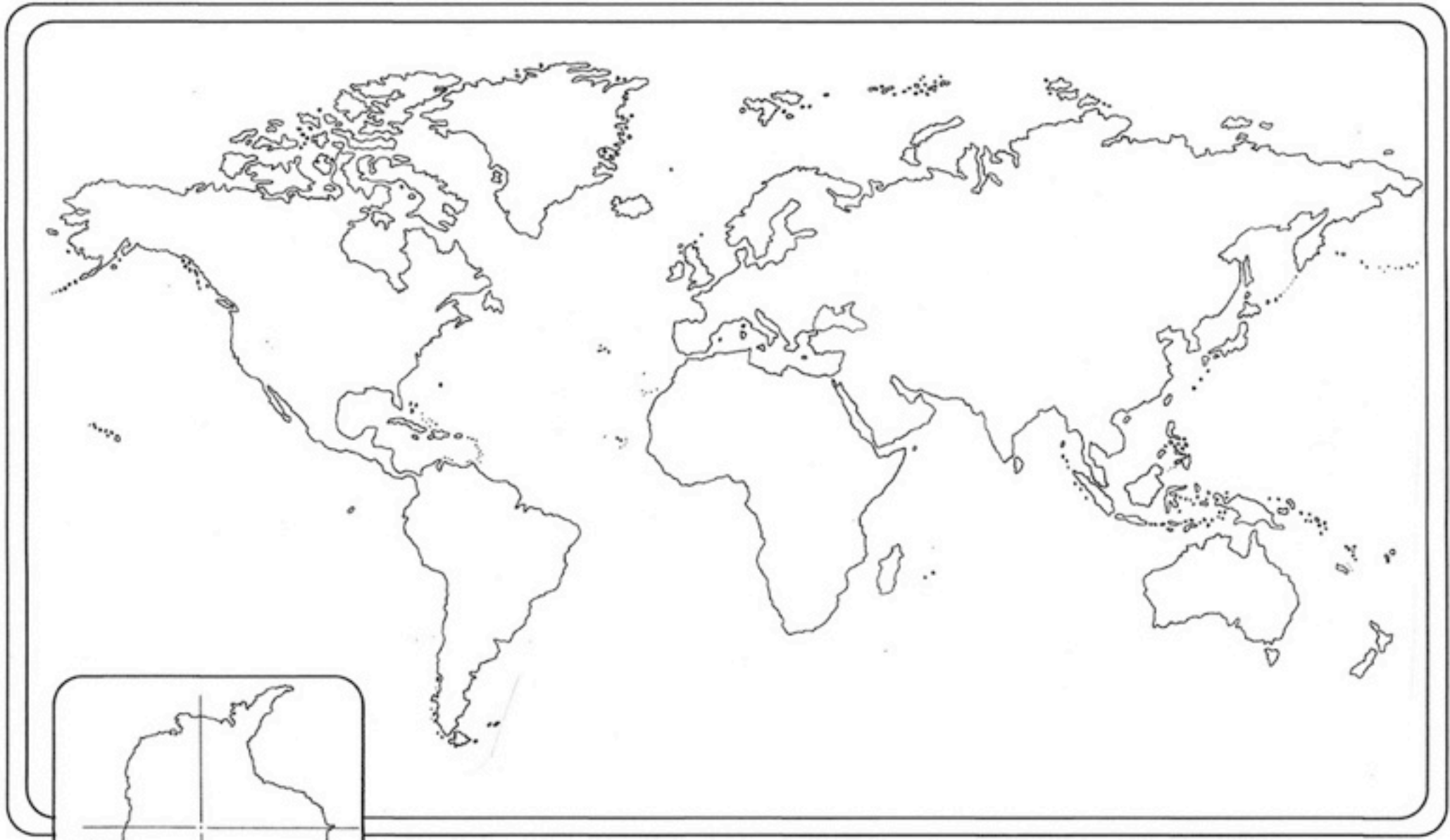
DESERTS

SEEN FROM THE SKY!

This satellite image allows us to see how vast an area the SAHARA DESERT covers in northern AFRICA.

See the contrast between the tan coloration of the sandy desert with the green more verdant areas to its south!

Can you name the BODIES OF WATER that border the SAHARA?
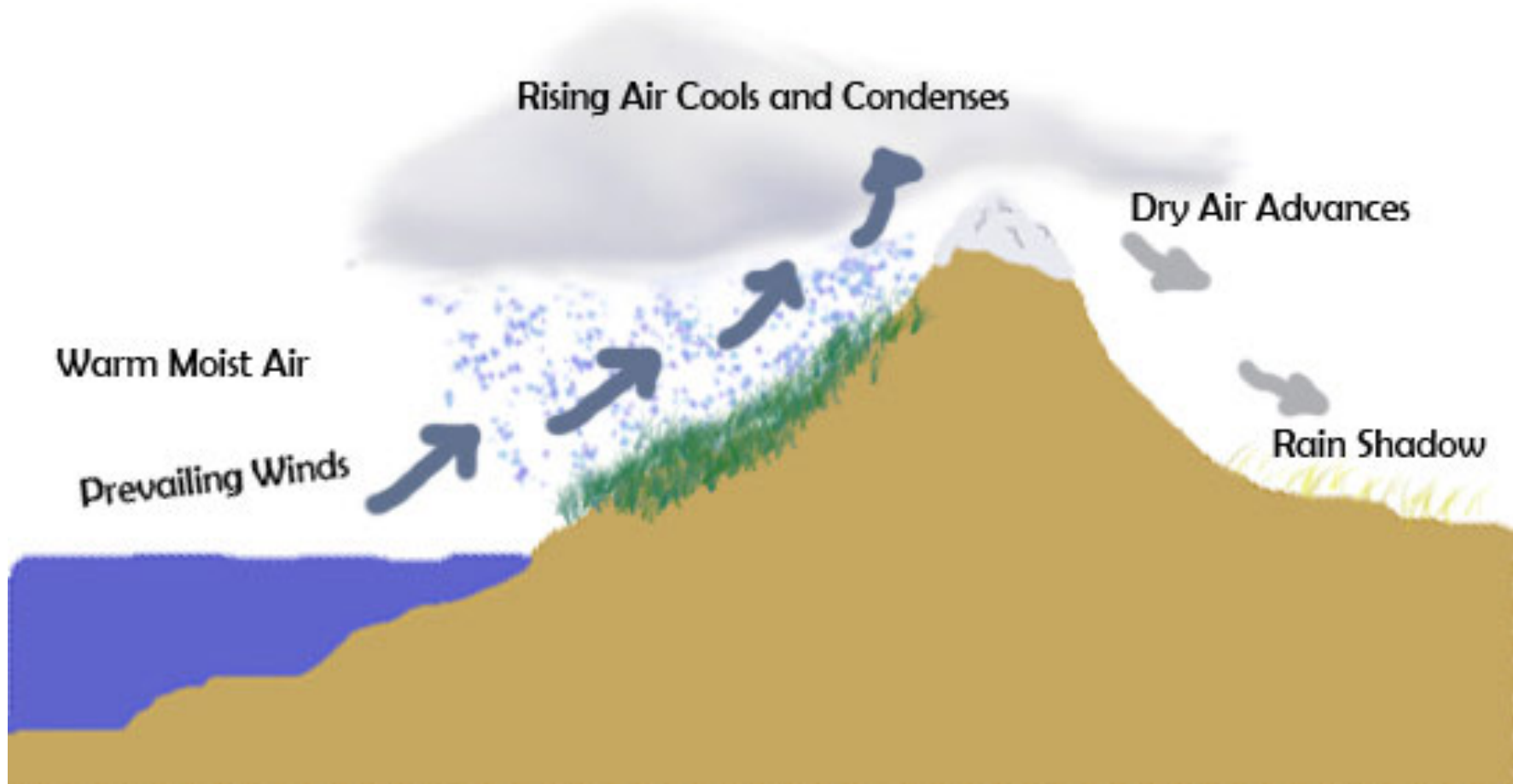To the North?
To the East?
To the West?

The average temperature in this harsh desert is 30 degrees Celsius, and temperatures can rise to 50 degree Celsius.
How hot are these temperatures by our more commonly used Fahrenheit measurement?

One of the reasons the Sahara Desert is extremely dry is because of the RAIN SHADOW EFFECT!

The huge Sahara is separated from the Mediterranean Sea and the Atlantic Ocean by several mountain ranges, notably the Atlas Mountains. Moisture that drifts in from the water rises and condense before it can reach the other side of the mountains. The area beyond the mountains remains very dry.
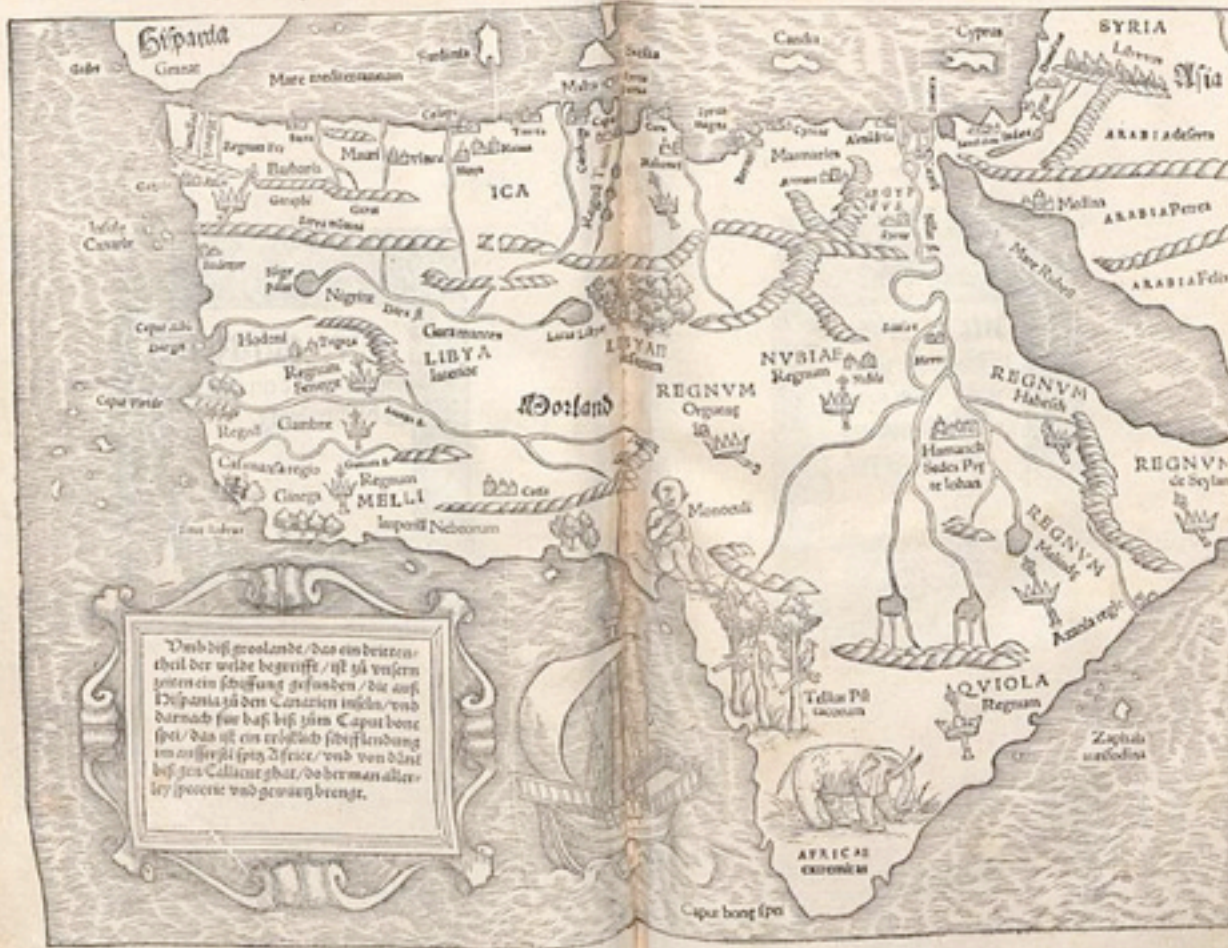Often this a called a "Rain Shadow."

Rising Air Cools and Condenses

Dry Air Advances

Warm Moist Air

Prevailing Winds

Rain Shadow

Africa/Libya/Morland/mit allen künig reichen so zu vnsern zeiten darin gefunden werden.

Mapmaker Sebastian Münster's picture is shown on this modern day German paper money.

This old map is from 1545 was made by German mapmaker Sebastian Münster. It shows the distorted outline of the continent of Africa, as it was known in his time.

Libya, which we know is in northern Africa, is shown more centrally located on this map. Early maps were often incorrect by today's standards but they help us understand how the people of the past knew their world.

NM 2222222 S
Banknote
HUNDERT DEUTSCHE MARK
100
DEUTSCHE BUNDESBANK
HUNDERT DEUTSCHE MARK
NM 2222222 S

Desert Horned Viper

The desert horned viper, found in the Sahara, is the most commonly found snake in North African deserts. This species dwells in sandy habitats, and prefer temperatures that range around 68 degrees Fahrenheit.

The sandy terrain of the desert provides camouflage while hunting prey (such as rodents, birds, and small reptiles). The snake can even sink into the sand to disguise itself. Another hunting advantage can be found in the vipers most distinguishable feature, the set of horns located above its eyes. In addition to offering their eyes protection from blowing sand, the horns break up the silhouette of the snake's head, giving them even more stealth when stalking prey.

The horned viper is able to acquire a sufficient amount of freshwater in the desert, where water is not easily accessible. They can trap morning dew in their scales, which is crucial to their survival. These snakes have venomous bites, but pose little threat to humans due to their non-aggressive nature.
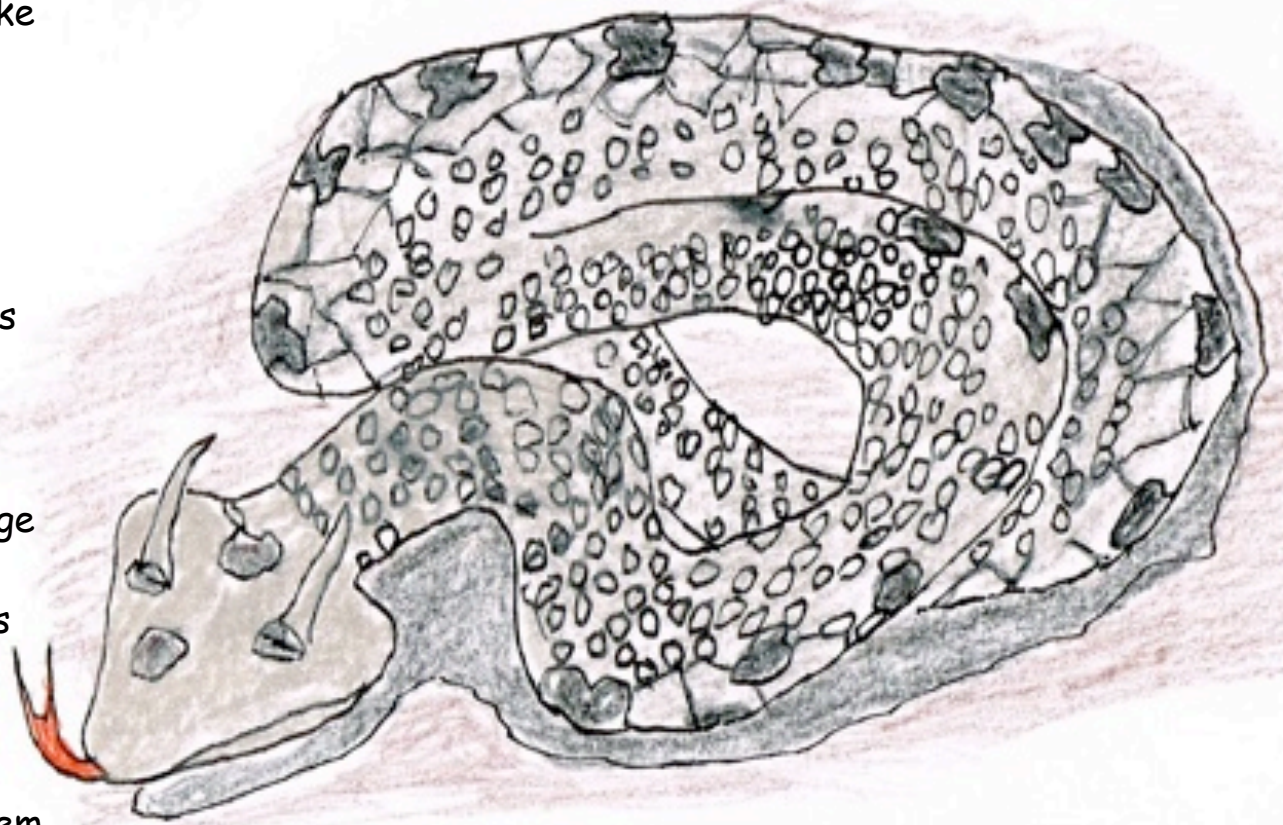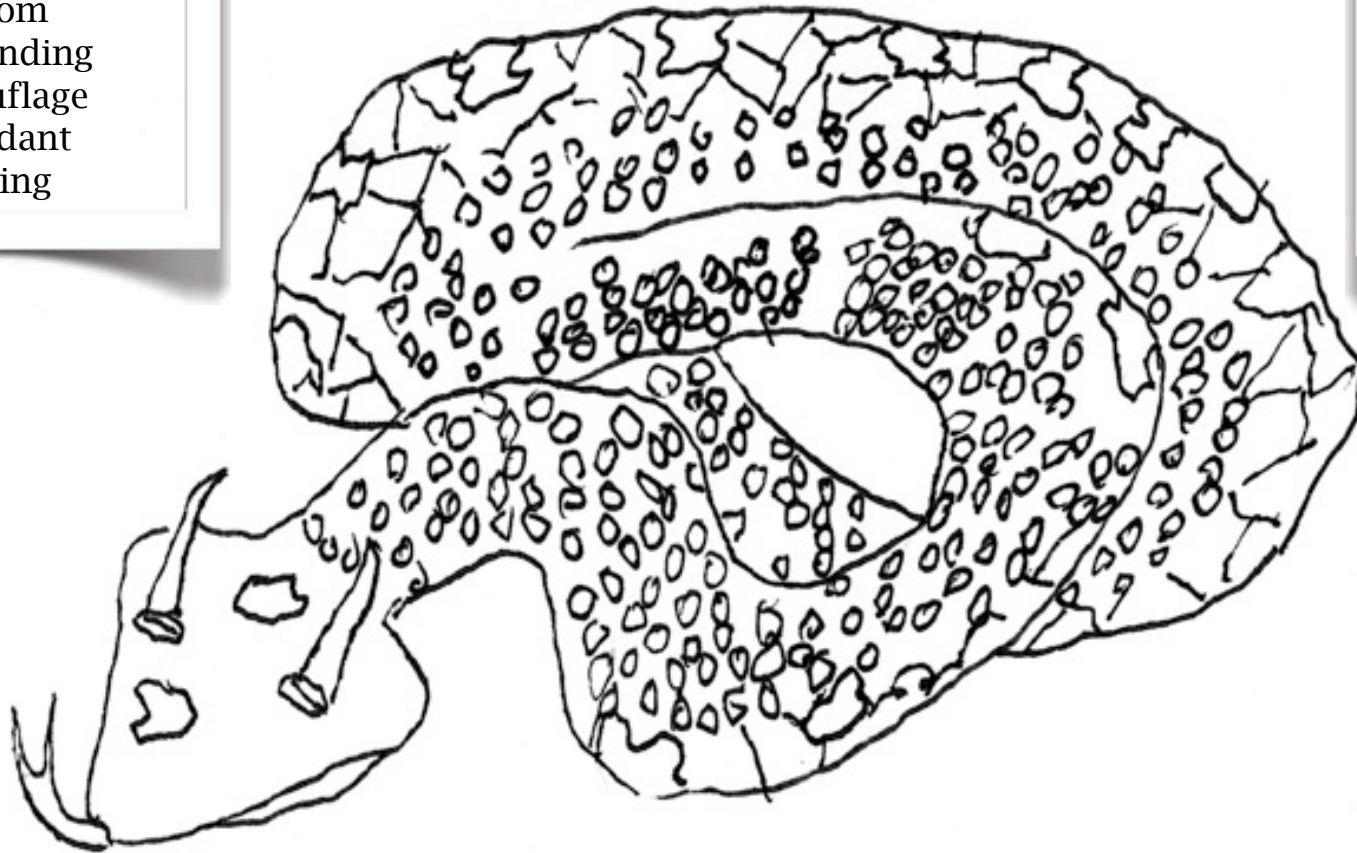
He is extra scary!

Sahara Horned Viper VOCABULARY

venomous
stout
scales
snout
horns
burying
flat
hibernation
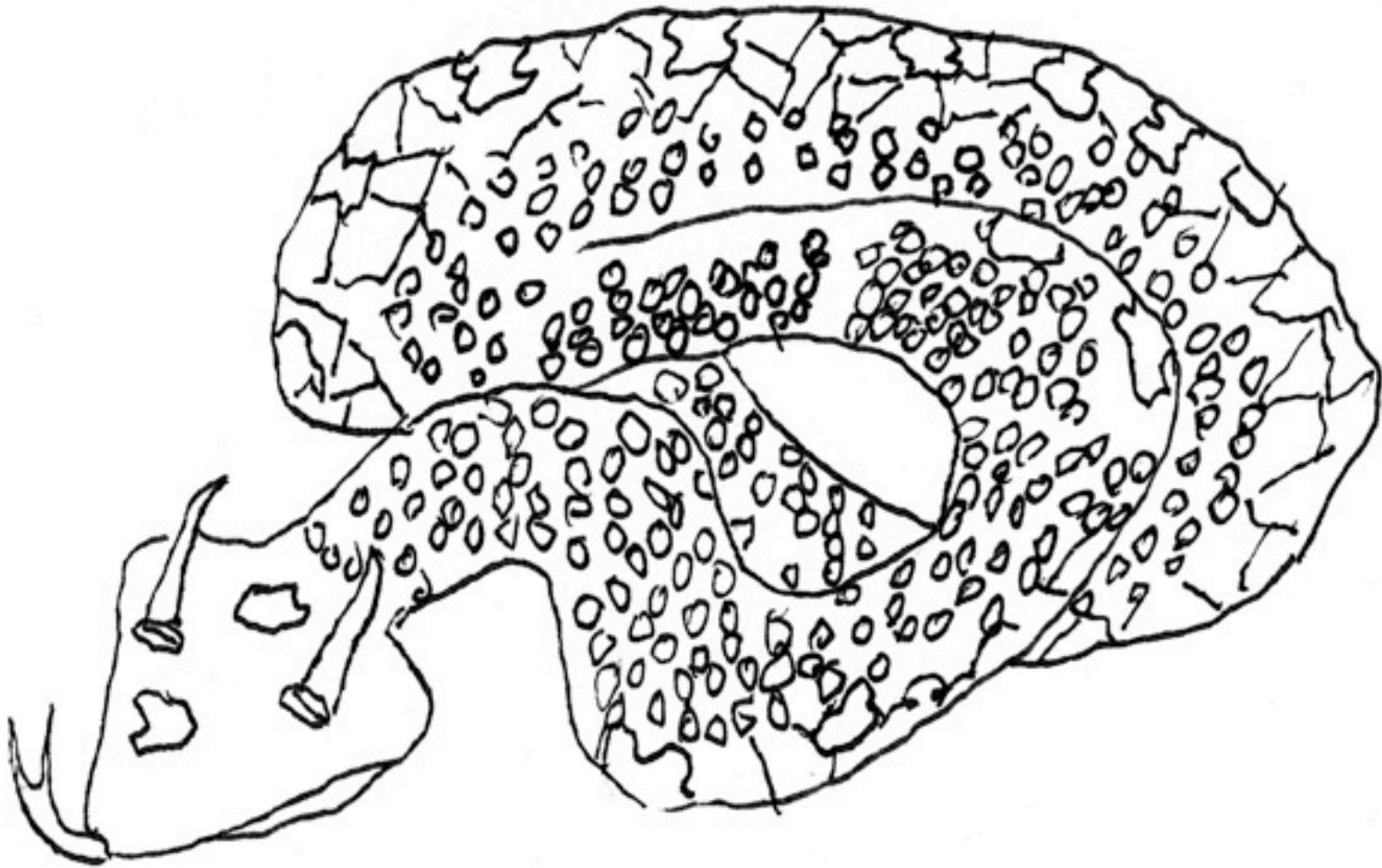coils
eggs
venom
sidewinding
camouflage
abundant
hissing

Desert Horned Viper

Sahara Horned Viper SPELLING

venomous
stout
scales
horn
spine
nocturnal
terrestrial
sidewinding
bury
placid
rasping
crackling
stridulation
quick
coiled

Desert Horned Viper

SAND STORMS are common in desert regions that are made up of sand. Sand storms do not occur in desert areas formed primarily of dirt, rock or ice.

Heavy winds can carry the finest pieces of sand also cause fine particles to break off from larger grains of sand. These are taken up by the wind and can cause major problems with visibility. When the winds settle, this wind blown sand can mound in very high dunes. In the deserts of the Sahara and the Arabian peninsula, the wind that carries sand is called the SIMOOM.

ON THE OASIS!

This photo shows an OASIS in the Libyan part of the SAHARA DESERT.

At left you can see where the country of LIBYA is located on the continent of AFRICA.

What other countries in AFRICA are part of the SAHARA DESERT?

Do some research about what an **OASIS** is!
Can you write about what makes an oasis special?

What is a GUELTA?

Use the news reporting approach, and answer the words
WHO
WHAT
WHEN
WHERE
WHY
to write your essay about these desert places.
Make your essay colorful!

ON THE EDGE...

The geographic area south of the Sahara is called the SAHEL.

It is a semi arid landscape, with more water and vegetation than the SAHARA. It stretches in a band from east to west across the continent. It is an area of transition between the dry Sahara and the areas of greater vegetation south of it.

Do some research to find out what other geographic areas south of the SAHEL are like and what they are called.
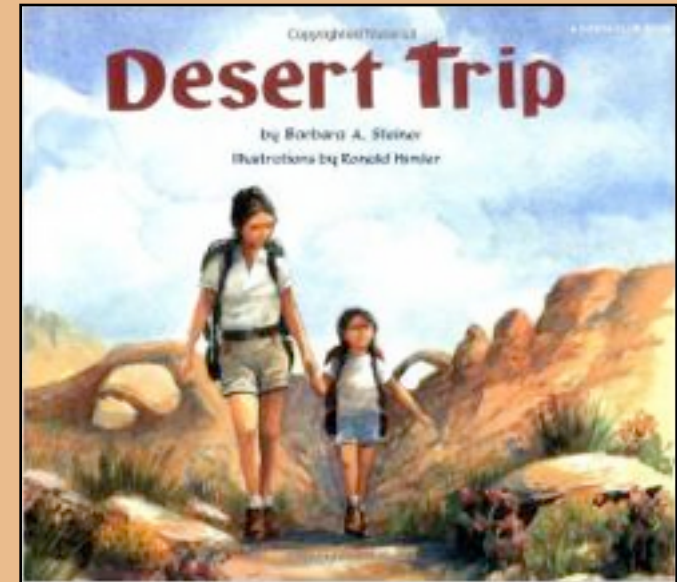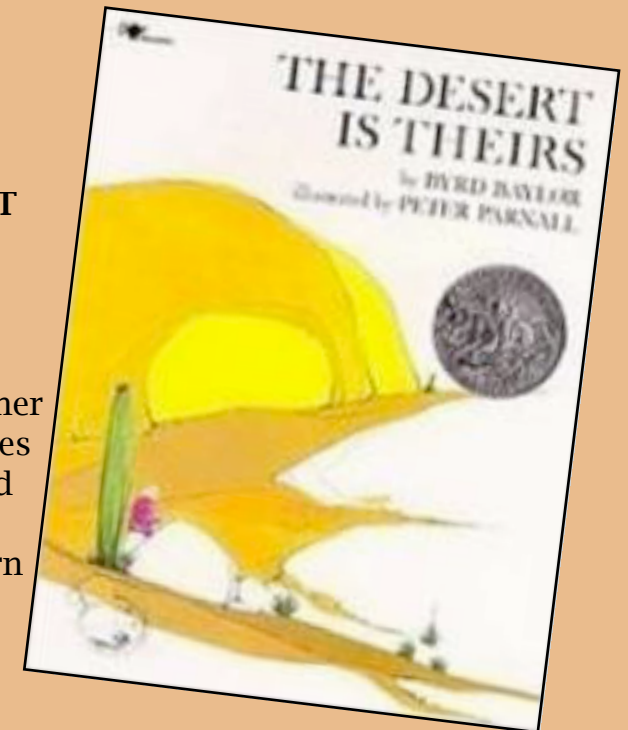
DATES

Nomadic people who live in the areas around the Sahara eat dates as part of their diet. Many kinds of dates are grown in the Sahel region. Dates a re moist fruits that hand in bunches from Date Palm trees. The fruit is then dried.
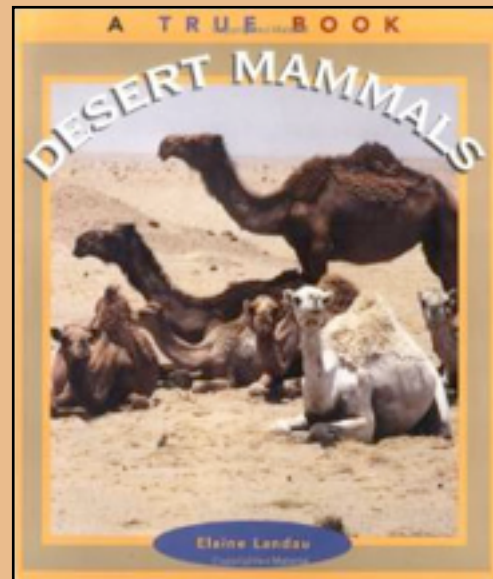
DESERT READING!

The Golden Dream of Carlo Chuchio
by Lloyd Alexander
The young adventurer Carlo Chuchio encounters many curious people while seeking hidden treasure on the Road of Golden Dreams in the desert.
With Baksheesh, the world's worst camel-puller, Carlo leads a caravan through the realm of Keshavar and risks his life for a prize that may not even exist.

A girl and her mother plan a walking trip through the southwestern desert of the United States.

DESERT MAMMALS
by Elaine Landau
Students can learn more about all the animals that thrive in desert environments.

THE DESERT IS THEIRS
by Byrd Baylor

A prize-winner that describes the flora and fauna of the southwestern American desert.

AFRICA

Places and Geographic Features

Welcome to Africa! Africa is the second largest continent on Earth. It is about three times the size of the United States. Africa has mostly tropical climate, with some variations. There are enormous deserts, huge lakes, thick tropical forests, the longest river in the world, and even snow-capped mountains.

This map shows the boundaries of countries on the continent. The capitals of each country are labeled, as well as the bodies of water that surround Africa. The bold lines divide Africa into its five major regions. Refer to the activities alongside the map to create a more detailed map of Africa.

MAP KEY

- ○ Capital
- • City (red or black)
- ▲▲ Mountains (brown or green)
- Desert (light brown)
- Forest (green)
- River (blue)

Earthworm's Cartographic Activities

Your job as cartographer is to fill in some details not shown on this map. Refer to an atlas or encyclopedia. Be neat when labeling and drawing in details. Colored pencils work best. Shade very lightly so you don't obscure other features. Refer to the map key for symbols and suggested colors.

1. **Countries:** Fill in the remaining letters for each country name.
2. **Capitals:** Highlight each capital name with a yellow pencil.
3. **Cities:** Locate and label two other cities in each country.
4. **Oceans:** With blue, shade along dotted coastline areas.
5. **Large lakes:** Label and shade the large lakes with blue.
6. **Major rivers:** Locate and draw in the Nile, the Congo, the Zambezi and the Orange Rivers. Add other rivers too.
7. **Suez Canal:** Locate and label this man-made waterway.
8. **Desert:** Shade and label the Sahara, Kalahari and Namib Deserts.
9. **Latitude lines:** With a sharp pencil, draw the lines for the Equator, Tropic of Cancer and Tropic of Capricorn.
10. **Major regions:** Label the North, East, West, Central and Southern regions separated on this map by bold lines.
11. **Mountains:** Locate and draw in Mt. Kenya, Mt.Kilimanjaro and the Atlas mountain range.
12. **Compass Rose:** This feature indicates direction. On this map, the cardinal directions are already marked. Label the intermediate directions: NW, NE, SW, and SE.
13. **Decoration:** Color the AFRICA title, Earthworm and the Compass Rose.

Many unique animals live in Africa. They live in and around the deserts, savannahs and tropical rain forests.

Many animals are finding it very hard to survive. Illegal hunting reduces their numbers. Also, human populations are increasing. People need land for crops, livestock and firewood. This makes animal habitats smaller and smaller. Scientists and environmentalists are trying to find a way to protect the animals of Africa.

MAP of the MONTH