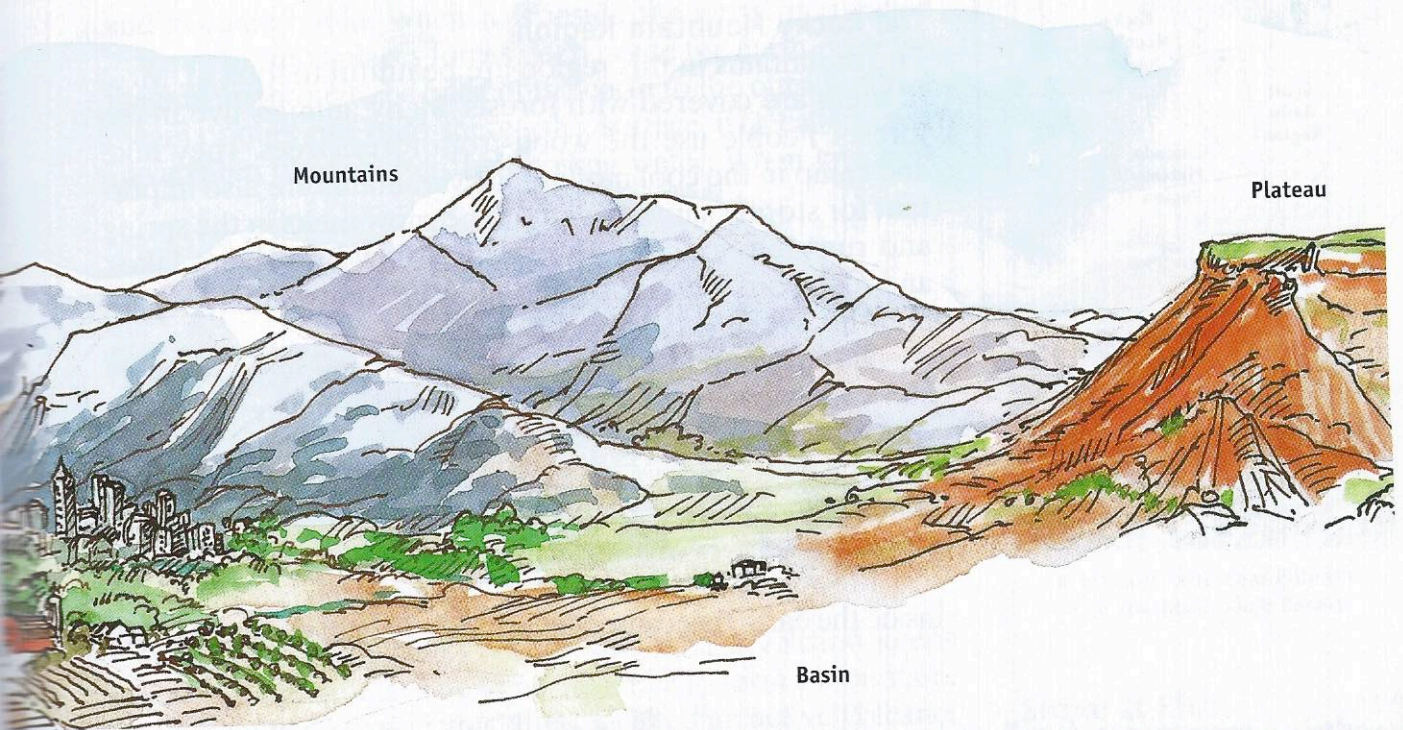


Landforms

A landform is a feature of the earth's surface. Three main kinds of landforms are found in Utah—mountains, plateaus, and basins. All of these are the result of powerful forces moving inside the earth. They are also the result of wind and water wearing away the earth's surface. This is called **erosion**.



Mountains are very high land formations. A hill is like a mountain, but it is not as high.

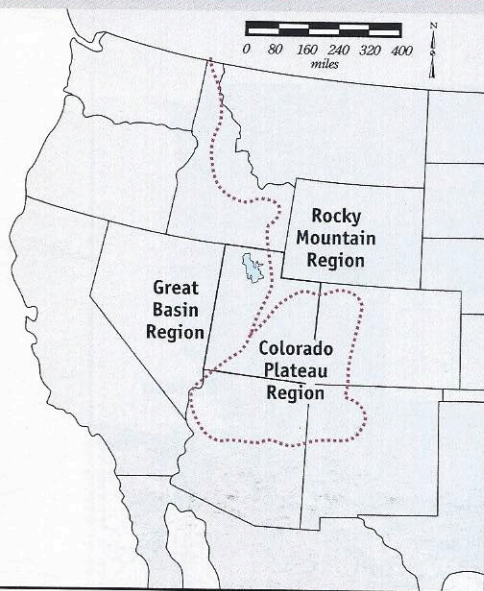
Basins are very large, low, flat areas of land that are surrounded by mountains or high plateaus. They are shaped like huge bowls.

Valleys are much smaller basins found between two mountain areas.

Plateaus are high, wide, flat areas that often end with steep cliffs or mountains. They look like tables or wide steps many miles across. Sometimes they are called "table lands."

Wind and water often cut deep canyons or strange shapes into plateaus.

Land Regions



Landform Regions

Utah is divided into three land regions. Each land region has mostly one type of landform, such as mountains, plateaus, or basins. The three main land regions in Utah are the Rocky Mountain region, the Colorado Plateau region, and the Great Basin region.

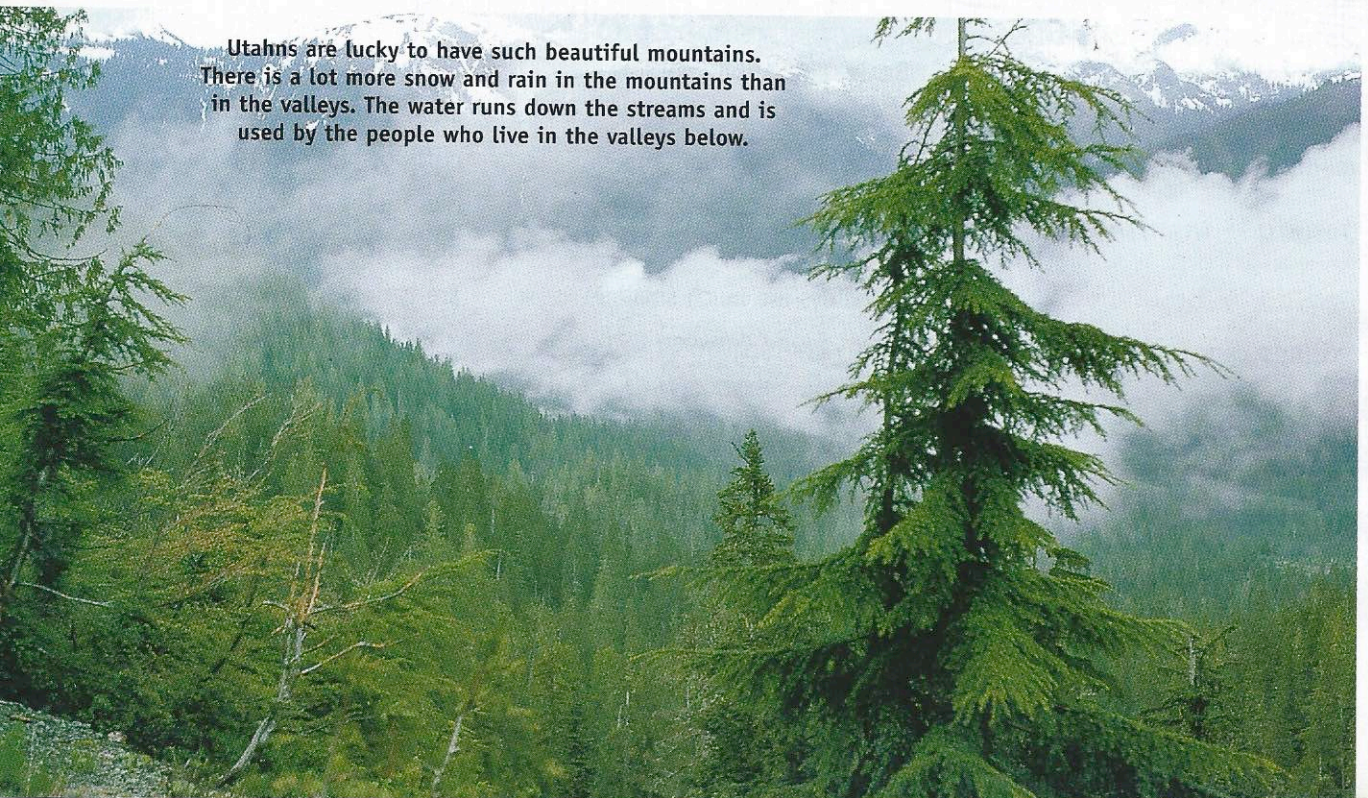
The Rocky Mountain Region

The mountains in this region are beautiful to look at. Most of them are covered with forests. Many animals live in the forests. People use the wood from forest trees. They hike and camp in the cool mountains. Mountains are also important for storing snow in winter. The snow melts in the spring and runs into streams. The streams flow into rivers, lakes, and reservoirs. This is how the snow provides water for people who live in valleys.

Do you wonder how these mountains were formed? Have you wondered how long they have been here? They are very old. Scientists think they were formed millions of years ago. The youngest mountains have tall, jagged peaks. Mountains that are older are more rounded, because the wind and rain have worn them away. This is a type of erosion.

Most of the mountains in Utah were formed by forces inside the earth that caused huge blocks of land to squeeze into

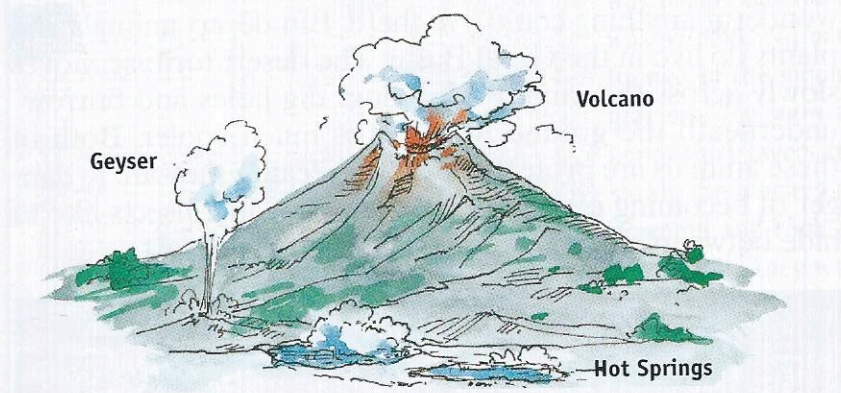
Utahns are lucky to have such beautiful mountains. There is a lot more snow and rain in the mountains than in the valleys. The water runs down the streams and is used by the people who live in the valleys below.



each other from opposite directions. This caused some parts of the land to rise up, and even fold over on top of each other.

Some of Utah's mountains were formed by forces inside the earth that pushed up the land from underneath. The Henry and LaSal Mountains were formed this way.

Another way mountains were formed was by volcanoes. The inside of the earth is made of rock so hot it has melted and become liquid. When it is inside the earth, it is called magma. In some places forces deep inside the earth push the magma up through the crust of the earth to the outside. Once magma pours out onto the earth's surface, it is called lava. Lava is ten times hotter than boiling water. When lava gets

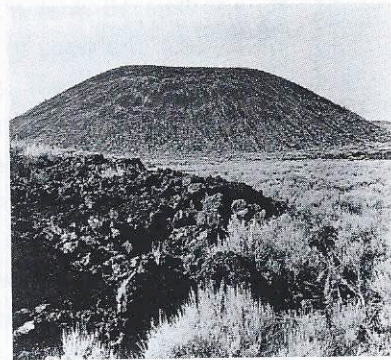


into the air, it cools and becomes hard. If a volcano keeps erupting, layers of lava build up around it to form a mountain.

A volcano that erupts often is called an active volcano. A volcano that is quiet for many years is called a dormant (or sleeping) volcano. If scientists think it will never erupt again, it is called an **extinct** (or dead) volcano.

Volcanoes are found all over the world. Utah has extinct volcanoes near Fillmore in the Black Rock Desert and north of Santa Clara.

Pressure inside the earth also makes geysers, hot springs, and boiling mud pools. Inside the earth, water gets very hot. Sometimes it shoots up through the earth's crust and into the air. Fountains of hot water and steam are called geysers. There are no active geysers in Utah today. Hot springs form when the hot water flows out of the ground. They are found throughout Utah. One, called Iron Springs, is near Ogden. There are also hot springs in Salt Lake City, Castilla, Grantsville, Lehi, the Sevier Desert, Midway, Monroe, Milford, and near the Virgin River.



A volcanic cone near Fillmore is in the Black Rock Desert.

Strike It Rich!

Did you know there is a rich supply of silver, gold, copper, and other minerals in Utah mountains?

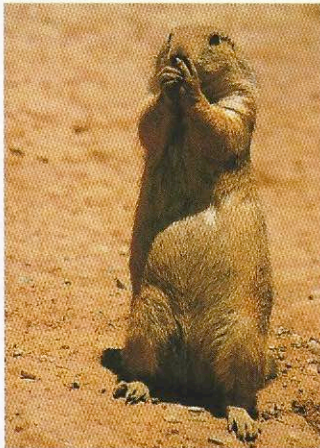
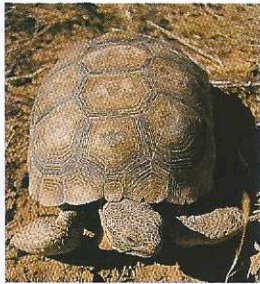
You use copper more than you might think. If you have electric wires, a television set, or a computer, then you use copper! A lot of the coins in your bank are made of copper. Silver and gold are used for rings and other jewelry but they are used in other important ways, too. Do some research to learn more about Utah's minerals.

**"If there is magic on
this earth it lies in water,
and nowhere is water so
beautiful as in the
desert, for nowhere else
is it so scarce. . . .
In the desert each drop
is precious."**

—Edward Abbey



▲ Gila Monster
▼ Desert Tortoise



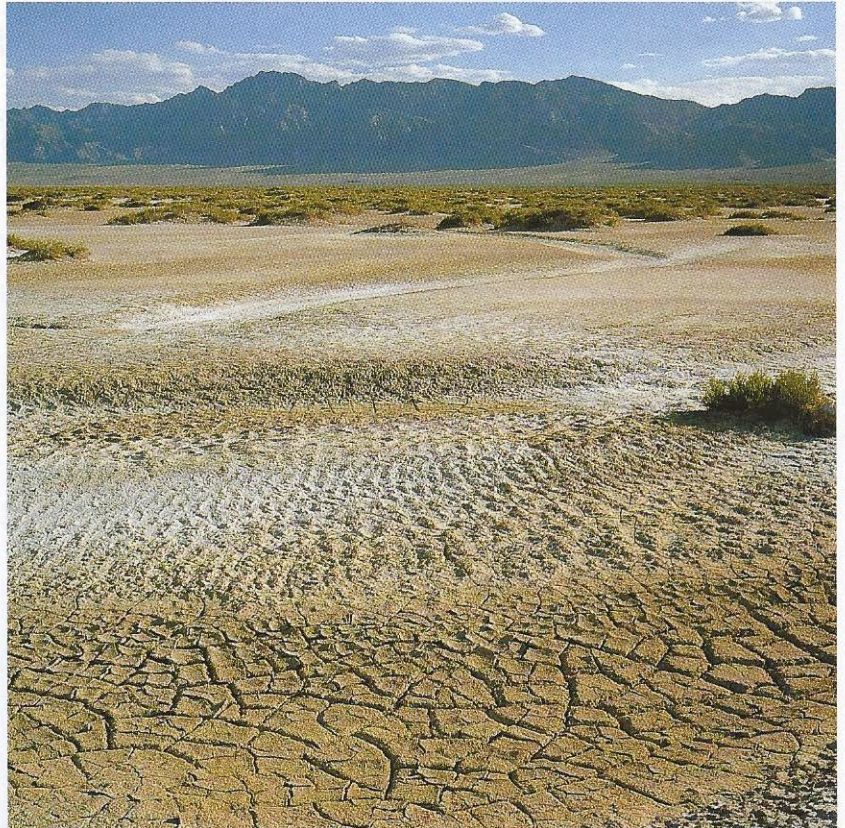
▲ Prairie Dog

The Great Basin Region

Another large land region is the Great Basin. Most of the area is hot and dry. It is one of the driest deserts in the United States. Even though it has a desert climate, the Great Salt Lake and Utah Lake are in this region. Mountain streams run into them. There are some mountains in the Great Basin, too. But it is mostly flat, like the bottom of a smooth bowl.

Most of Utah's people live in the Great Basin. Why would they live in such a dry desert? They live on the edges of the basin near the mountains. Here the land is flat, which makes good places for cities and farms. It is near the mountains, whose streams supply water.

In some places the deserts seem so hot and dry you wonder if anything could live there. But desert animals and plants do live in the Great Basin. The desert tortoise moves slowly across the sand. Prairie dogs dig holes and burrow underneath the ground, where it is much cooler. Both of these animals are protected by laws because they are in danger of becoming extinct. Lizards, snakes, and insects like to hide between rocks and under plants in the desert.

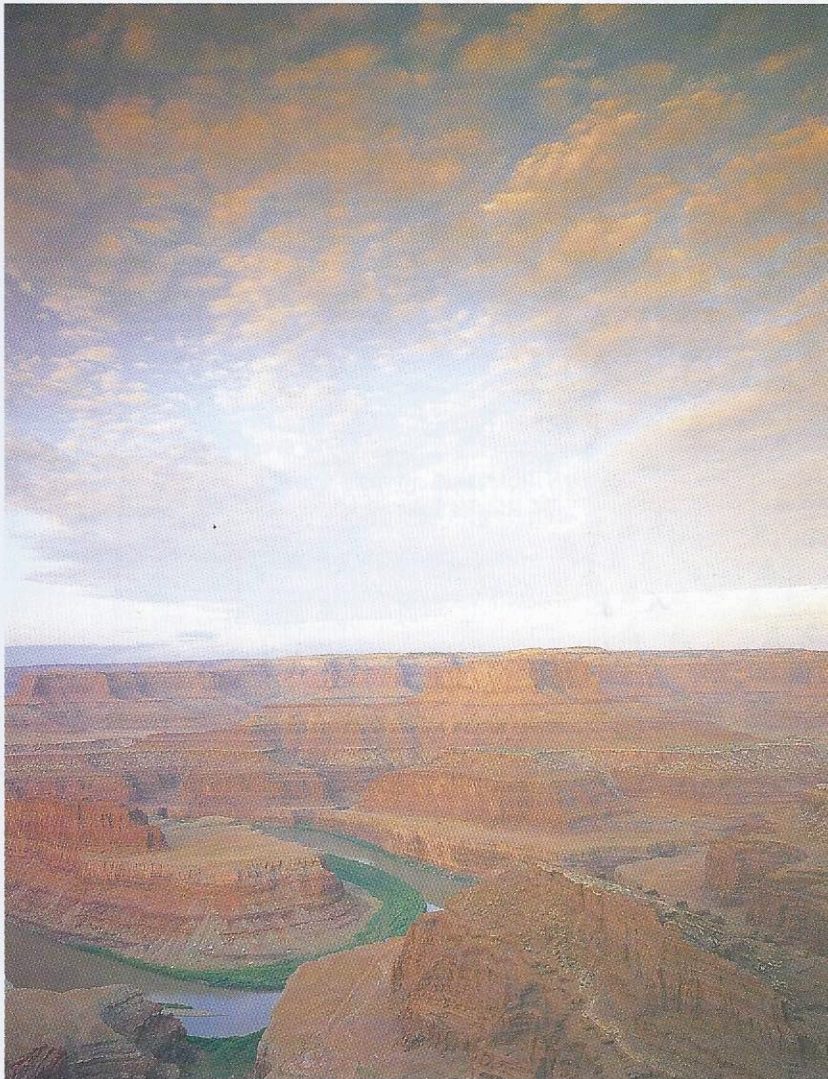


Sagebrush and cactus, salt and sand are common in the Great Basin.

The Colorado Plateau Region

Another of Utah's large land regions is the Colorado Plateau. It is a broad space of high land that is hard and rocky. Some of Utah's most beautiful scenery is found in this region. Over millions of years wind and rain have carved wonderful rock formations. Colorful cliffs rise a thousand feet above the valley floor and stretch as far as a hundred miles. All five of Utah's national parks are in the Colorado Plateau. People come from all over the world to visit them.

Two mighty rivers have cut deep and beautiful canyons through this region. They are the Colorado River and the Green River. They are the only major rivers in Utah that go all the way to an ocean.



At Dead Horse Point State Park you can see the Colorado River winding through sandstone cliffs.

Sedimentary Rock

The Colorado Plateau is made up of layers of rock called **sedimentary** rock.

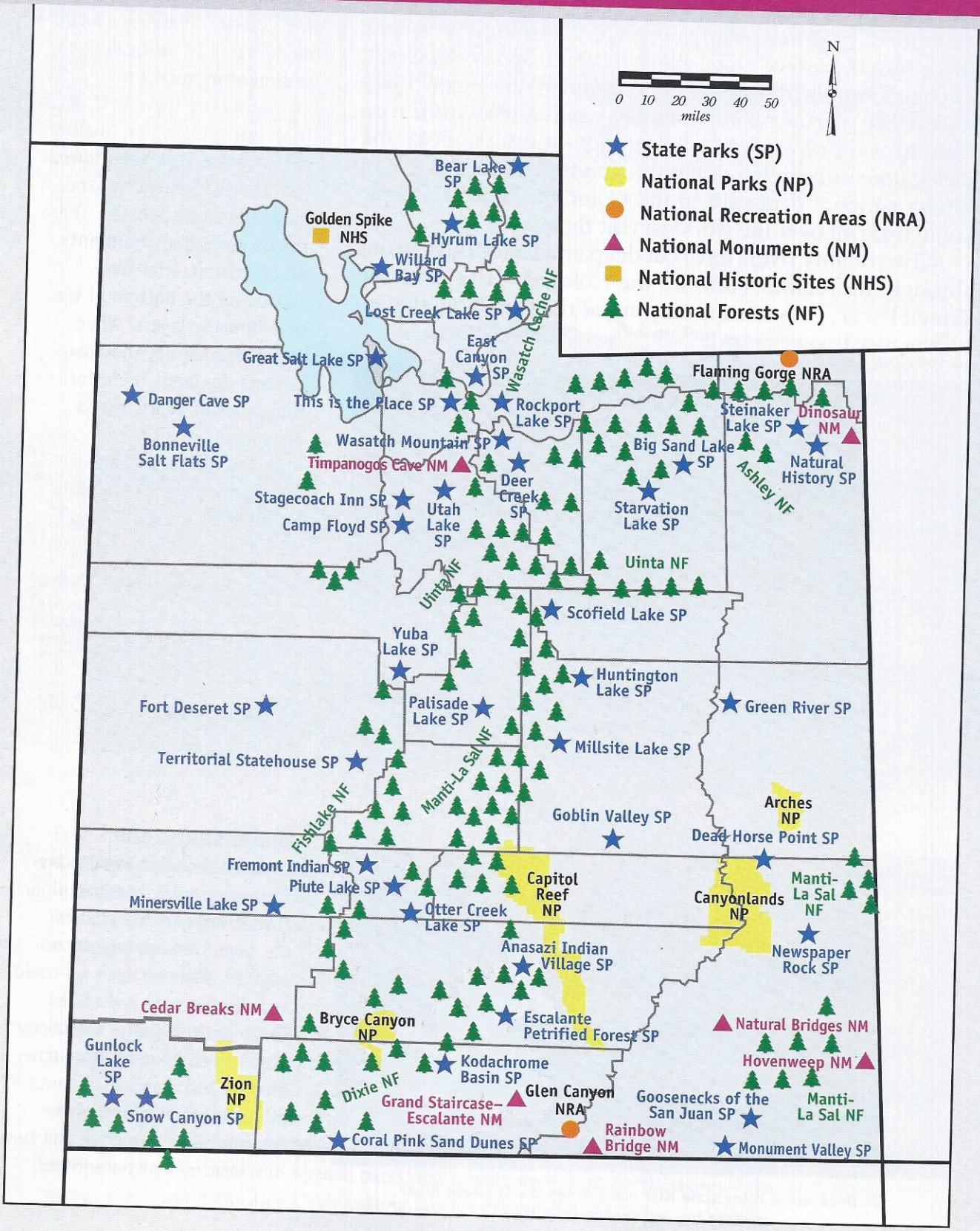
For a long time most of Utah was underwater. Shallow seas covered it. Rivers flowed into the seas, carrying sand, mud, and small pebbles. These things are called **sediments**. All of this material then settled on the bottom of the seas in many layers. When the seas dried up, the area became dry land. Then, for thousands of years, winds blew hundreds of feet of sand onto the rock layers and formed the bright red colors of the cliffs we see today.

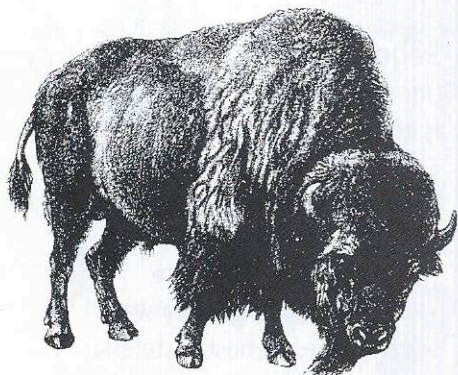


Under the Ground

Coal, oil, and natural gas are an underground treasure in our state. They provide heat for our homes and energy to run engines. Without them we could not run our cars and trucks. Today most of Utah's electricity is produced by generators powered by burning coal. Important minerals are also part of the treasure. Be a detective and find out what minerals are in our rocks and dirt.

Utah's Parks and Monuments





Today Utah has only two herds of buffalo. One herd is on Antelope Island in the Great Salt Lake. The other is in the Henry Mountains. There used to be many more buffalo here.

It is up to everyone to help conserve natural resources and protect the environment. Even children can help. They can stop littering. They can recycle cans and paper. They can turn off lights and televisions when they aren't using them. Everyone can help prevent wildfires caused by humans. Everyone can be careful to take care of Utah.

1983 was a very wet year. There were mud slides and floods all over the state. This Bountiful neighborhood was near a mountain. Mud slid down and covered roads and yards. It went into the basements of people's homes. They had to work together to clean up the damage.

Our Changing Land

Utah's land is always changing. Some change is very slow. You already know how erosion slowly wears away rock and soil. Natural events such as mud slides happen fast. Sometimes when there is a lot of melting snow or rain, mountain clay gets so wet it breaks loose and slides down into the valley below. If there is a stream in the valley, the mud acts as a dam and water floods out over the land. Rock slides, avalanches, and earthquakes also change Utah land quickly. Our state has over seven hundred earthquakes each year, but most of them are too small to even feel.

People also change Utah's land. They build cities and freeways. They dig irrigation ditches to bring water to crops and orchards. In the mountains they make roads, cut trees, and build campgrounds. They plant new trees. They build huge dams that make reservoirs and new lakes. They dig into the ground to get the coal, oil, and copper. These things can be important for people. They provide homes, food, fuel, and jobs.

If people and industries are not careful, though, they can harm the environment. Many years ago, people often did not take care of the land very well. They thought people could never use up all the grass, trees, animals, and other resources. They thought there would always be plenty of fresh air and clean water.

Then, about the time Utah became a state, people began to think about using natural resources wisely. They passed laws to make it illegal for people or factories to pollute the air and water. They set aside some land for state and national parks, national forests, and wildlife refuges. Later, wilderness regions were set aside. There can be no roads or buildings there. People have to hike in or ride horses. They must be careful to leave no trace that they have been there. Today, most people are working together to keep our state a good place to live.

