

Tempe: Distinct, Diverse, Dynamic

Surviving in the Desert

Questions About Our Future

Fifth Grade Program of the Tempe History Museum

Desert 101: A Beginning Course

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Finding out more about Tempe will help you find out more about yourself, your history and the history you are making today. When you go to the Tempe History Museum you will get to see a section about Surviving in the Desert.



photo credit: Larry Mishler

You should plan to be a historian, to find out what has happened to our desert in the past and then what might happen in the future.

Being a good historian you should start your research with a question you want answered.

It should help you come up with a good question to guide your visit...

Let's start by seeing what you already know

What is a desert?

What is the name of the desert we live in?

What are its special characteristics?

Have we changed our desert?

Is that good or bad?



Check out your answers in the text that follows.

Deserts Around the World

There are about twenty major deserts on our planet. Some are hot; some are cold. All deserts, hot or cold, are very dry. With so little water, there are few living things in deserts most of the time.

Plants, animals, and human beings have learned to live in many deserts even if the water is so scarce and unpredictable.

We live in the Sonoran Desert. It is similar to deserts around the world, but it has some special features such as the amount of rainfall and the temperatures.



Sonoran Map with copyright.

The Sonoran Desert covers about 100,000 square miles. It is so large that it is divided into different areas.

The Phoenix area is part of the Lower Colorado River Valley subdivision.

What is unusual about the Tempe landform?

Tempe, on the banks of the Salt River, is on a stretch of land with very high bedrock. Bedrock is the rock below the top soil. Having this bedrock just under the surface of the soil makes Tempe and our part of the Salt River a good place to settle.

The bedrock makes a safe place for a river crossing. Further, the high bedrock forces the groundwater table in Tempe closer to the surface. That makes it easier to drill wells for drinking water.

Surrounded by low mountains, our river and broad basin of rich flat land is good for farming. Tempe is a good place for humans to live.



What's so Special About THIS Desert?

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Temperatures, rainfall, and plants.

The Valley is the most “desert-like” part of the Sonoran Desert. It can be over 110 degrees in the summer, but our winters are mild.

Many deserts have only one rainy season, or no rainy season. We have two rainy seasons, one in the summer, and the other in the winter.

This makes the Sonoran Desert one of the lushest in the world, a place where many plants can grow.



photo credit: Larry Mishler



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But the extreme summer heat means that without irrigation only plants that need very little water, such as creosote bushes and white bursage, can grow here.

Trees such as cottonwoods, and mesquites grow along the Salt River and near desert washes and arroyos. These are places where water runs after a rainstorm. Then as the land gets higher around the low mountains, palo verde trees, and cacti such as saguaros and barrel cacti grow naturally.

But...if the Sonoran Desert is so hot and dry...

...why have people settled here?

People in the Desert

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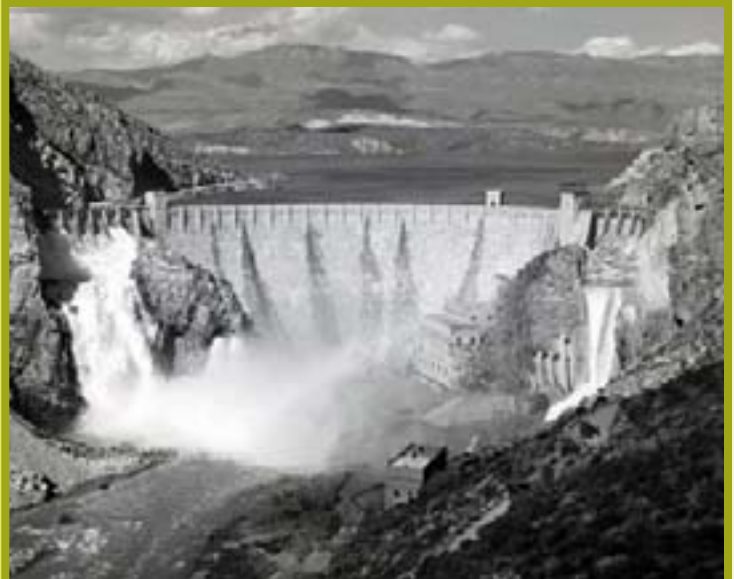
Before World War II much of the valley was used for farming.

What did the farmers do to make it possible to farm in the desert?



The life-giving waters of the Salt River and the many acres of flat land first drew the Hohokam to the Tempe area. The Hohokam Indians were the first to irrigate the Valley. Later they were followed by the Pima and Maricopa Indians. Then in the late nineteenth century, the Hispanic and Anglo farmers and ranchers moved to the Valley.

These farmers and ranchers wanted to make certain the water in the Salt was there year round for irrigation. They also wanted to make certain the river didn't flood the area.



They built the Roosevelt Dam that made it possible for many people to move to Central Arizona.

Think Back...

What grows in the desert without irrigation?

Changing This Desert

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What changes have we humans made to our portion of the desert?

American Indians lived in the Sonoran Desert for at least 12,000 years. They used irrigation to farm but they made few other changes to the desert.

In most cases these changes were not harmful.

However, since the 1860s, people living in the Salt River Valley have brought many plants that do not belong here.

After World War II, thousands of people moved to the Valley. They replaced the farms and ranches with homes.

Today, very little of the native Sonoran Desert remains in Tempe. The land is covered with lawns, flowers and trees as well as non-native plants such as ocotillo, agave, prickly pear and palm trees.



How can the desert supply all of the water we use when it does not rain very much?

The answer is that it cannot.

Each person living here uses 300 gallons of water per day. Tempe has 160,000 residents and there are over 4,000,000 people living in the Valley.

That means we use 1,200,000,000 gallons of water a day – and that doesn't include such things as our many golf courses!



The Future of the Desert

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What does the future hold for the Valley?

People come here with no idea of what it should look like. They want a grassy lawn and fruit trees, but those plants really do not belong here.

The ways we have changed the desert have not always been wise.



Things to think about...

After World War II, air conditioning became available and many people moved to the Valley. What changes did they make to the desert? *How have those changes impacted the desert?*

How have the changes made to the desert not always been wise?

Questions for the Group...

If we don't have enough water, what can we do?

What questions would you like to have answered as you go through the museum?

Be sure to write your questions on your Question Sheet so that you can remember to ask them when you come to the museum.