

How did people live in Arizona without Air Conditioning?



Most people in Arizona did not have air conditioning in their homes until after World War II (1945). That means for most of Arizona's history, people lived here without air conditioning. So how did people stay cool in Arizona?

American Indian people lived in Arizona for centuries building homes out natural materials; one of the main materials they used was the caliche* rich soil found in central Arizona. When the area that is now Phoenix was resettled during the 1860s, many people lived in houses made of adobe blocks.

Adobe is made from dirt, water and straw that is mixed together and dried in the sun. Adobe is much cheaper than brick and helps homes to stay cool because of the way it spreads heat (it has high thermal mass). Adobe can be considered a "green" building material; however, it requires a lot of upkeep and can turn into mud when it rains.



Later in 19th century Phoenix, people started making houses out of clay bricks, which are not as good at keeping homes cool.

To help stay cool, many houses had high ceilings to pull hot air up. Many houses also had a "sleeping porch". During the summer, families in Phoenix would sleep outside on their porch. Some families even put water on their sheets to help keep cool.

Learn about your history

Questions to help learn about history

1. Ask your grandparents when they first lived in a house with air conditioning.
2. Ask your grandparents when they first owned a car with air conditioning.
3. Ask your grandparents what their first home was made of.

* Caliche is the term for calcium carbonate deposits that makes up much of the soil in Arizona, making digging very difficult. Caliche also helps to hold adobe bricks together.

Adobe Brick/Block Activity

This activity teaches children historic building materials through the creation of a miniature adobe brick/block. For homes made of adobe there is a precise ratio of clay, sand and straw. For this exercise sandy soil can be used instead of clay.

Materials

- Brick mold (partial milk carton, take-out box, favor box)
- Sandy or caliche rich soil
- Straw
- Water

Steps for Making a Brick/Block



1. Mix 2 parts of sandy or caliche rich soil to 1 part water to a half part straw

2. Stir the mixture until it is the consistency of wet play-dough (add water/dirt/straw as needed)

3. Pat the mixture into a mold (half or an empty milk carton works great)

4. Place the mold in a sunny/warm place. Allow to dry until the edges of the block pull away from the mold (2-3 days)



5. Cut/tear the mold away from the block

6. Tada! You have an adobe block!

