



How to Make an Adobe Brick

What is *adobe* and how was it used?

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?



Indigenous people lived in Arizona for centuries, building homes out of natural materials. One of the main materials they used was the soil, rich with *caliche**, a material that is good at helping adobe bricks stay solid and strong. 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 – mixed together and dried in the sun. Adobe bricks are much cheaper than clay brick, and helps homes to stay cool because of the way they distribute heat (it has high thermal mass). Adobe can be considered a “green” building material; though, 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, then, many clay brick buildings had high ceilings for hot air to rise, like Rosson House. Houses also had “sleeping porches.” During the summer, families in Phoenix would sleep outside on their porch. Some families even put water on their sheets to help keep cool.

**Caliche* (pronounced ka-lee-chee) is the name for calcium carbonate deposits That make up much of the soil in Arizona, making digging very difficult.

Adobe Brick/Block Activity

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

Materials

- Brick mold (good examples are a clean milk carton, take-out box, or favor box)
- Sandy or caliche-rich soil
- Straw or dried grass)
- Water

Steps for Making a Brick/Block

1. In a container, mix two parts of sandy or caliche rich soil to one part water and a half part straw.
2. Stir the mixture until it is the consistency of wet play-dough – add more water, dirt, or straw as needed.
3. Pat the mixture into a mold (half of a clean and empty milk carton works well).
4. Place the mold in a sunny and/or warm place. Allow to dry until the edges of the block pull away from the mold, which should take 2 to 3 days.
5. Cut or tear the mold away from the block.
6. Congratulations - You made an adobe block!



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