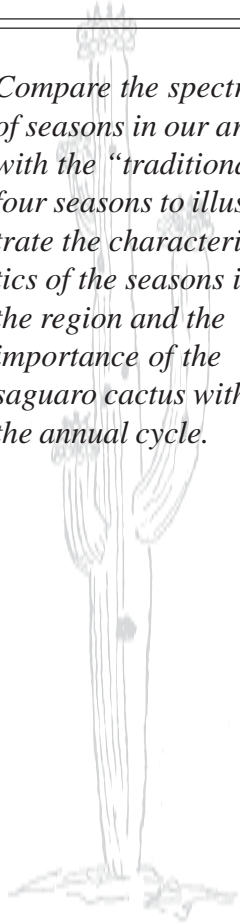


SAGUARO SEASONS

Compare the spectrum of seasons in our area with the “traditional” four seasons to illustrate the characteristics of the seasons in the region and the importance of the saguaro cactus within the annual cycle.



**ARIZONA SCIENCE
STANDARDS**
SC00-S6C3-02

OBJECTIVES

Students should:

- Identify the seasons.
- Describe the characteristics of each season.
- Describe the importance of the saguaro’s flowering and fruiting cycles within the summer season.

BACKGROUND

The Arizona-Sonora Desert Museum is located in the Arizona Upland subdivision of the Sonoran Desert which encompasses south-central Arizona and portions of the state of Sonora, Mexico. It is the highest and coldest part of the Sonoran Desert. Characterized by saguaro cacti and leguminous trees like palo verdes, mesquites, and ironwoods, the region is also called the saguaro-palo verde forest.

Tucson is the only major city located in the Arizona Upland. (Although Phoenix is not within its boundaries, it still exhibits many of the seasonal characteristics of the Arizona Upland.) Residents who moved to this city from temperate climates often complain about the lack of seasons. Actually, the Arizona Upland has five seasons, which, though more subtle than the traditional temperate four, are distinct if one learns what to look for:

- **Summer monsoon or summer rainy season** (early July to mid-September): The year traditionally begins with the most dramatic weather event of the region - the often abrupt arrival of the summer rains. A tropical air mass adds humidity and moderates June’s extreme temperatures; frequent thunderstorms; main growing season for many of the larger shrubs and trees. (Monsoon is an Arabic word for a wind that changes directions seasonally. Be aware that it does not refer to rain or storms in any way. The word is often misused, even by some weather forecasters.)
- **Autumn** (October & November): Warm temperatures; low humidity; little rain; few species in flower, but beginning of growing season for winter

annuals in the rare years with enough rain. Autumn and late summer occasionally receive heavy rains from the remains of Pacific hurricanes (tropical storms).

- **Winter** (December & January to early February): Mostly sunny, mild days, with intermittent storms with wind, rain, occasional snow, and cool to cold temperatures; February often warm and dry, more spring-like.
- **Spring** (From early to late February through April): Mild temperatures; little rain; often windy; main flowering season for annuals, shrubs and trees; winter annuals may bloom in February in warm, wet years.
- **Foresummer drought** (May & June): High temperatures; very low humidity; no rain in most years; May is very warm and often windy; June is hot and usually calm. There is little biological activity except for the flowering and fruiting of saguaro. Nearly every living thing is in basic survival mode until the rains arrive.

GETTING READY

- 1) Prepare the materials as listed in the left margin of the next page.
- 2) Make a sample “Saguaros in May, Saguaros in June” picture so the children can see the finished product. Divide the large sheet of paper in half by folding it lengthwise. Write May at the top of the left half of the page and June on the right. Draw and color two similar saguaros, one beneath each month.
- 3) Take the white tissue paper and make small balls out of it. Glue them to the tips of the arms on the May cactus. Color the centers of the tissue paper flowers yellow with a marker. Cut out red felt or fabric circles about the size of a quarter and glue them onto the tips of the arms on the June cactus. (You may want to prep these fabric pieces for the children depending on their age level.)

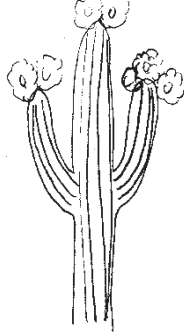
SAGUARO SEASONS



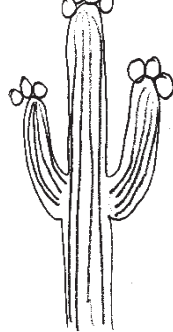
MATERIALS

- Scissors
- Glue
- A large sheet (around 11"x17") of white or tan construction paper for each student and for your demonstration
- White tissue paper
- Yellow markers
- Red felt or other fabric
- Markers or crayons

SAGUAROS IN MAY



SAGUAROS IN JUNE



DOING THE ACTIVITY

SETTING THE STAGE

- 1) Begin the activity by asking the students, "What season are we in right now?" Follow the traditional four seasons around the annual cycle, asking the children to name them and give their characteristics.
- 2) Make a classroom wall chart with the students that depicts these four seasons. Then simplify the background information above to illustrate how the seasons in the eastern Sonoran Desert are distinct.
- 3) Point out how summer has two parts in our area of the Sonoran Desert (the dry foreshummer drought and the monsoon.) Correlate the months to the seasons in which they fall. Ask the students:
 - "Does rain fall in every month or every season in the Sonoran Desert?" (no)
 - "When is it coldest?" (January and February.)
 - "When is it hottest and driest?" (Late May, June, and early July.)
 - "What season or months do you think would be the most difficult for

plants and animals to try to survive here? Why?" (Summer, but specifically late May, June, and early July are difficult months because of a lack of water and food.)

- 4) Explain that winter rains and the growth they brought with them are long gone. May and June are hot and dry. Luckily, though, most saguaro cacti run like a perfect time clock each year. In May, the tips of the arms grow green buds, and the white flowers start to bloom. A month later, in the hottest and driest time of the year, they turn into lots of juicy, red fruits.

SAGUAROS IN MAY, SAGUAROS IN JUNE

Show the children your sample picture. Explain how you made it, demonstrating the labeling of months, the coloring of the saguaros, and how to make flowers and fruits. Distribute the materials and have them create their own pictures.

DISCUSSION

Ask the students why they think saguaro's consistent flowering and fruiting cycle is important in the Sonoran Desert.

EXTENSION

Make a large oaktag classroom chart of the five seasons of this region of the Sonoran Desert. Refer to it throughout the school year, having students illustrate and add examples of weather conditions or any interesting animal or plant behavior associated with the seasons.