



WATERING

KARTCHNER CAVERNS

Water is the life of a limestone cave, it creates the cave, it decorates the cave, and it can also be the end of the cave. The cycle starts with rain.

Rainwater seeps into the limestone and picks up carbon dioxide. It turns into carbonic acid, which is the same thing as carbonated water. This weak acid starts to corrode the rock making holes. These holes get bigger until eventually you get a cave!

This process is very slow, it could take thousands of years just for a formation to grow! Soda straws are some of the fastest growing formations, and in Kartchner Caverns, they take 100 to 1,000 years to grow 1 single inch!

Eventually, water can erode away so much of the rock around the cave, that eventually it will collapse, creating a "cave-in". Although many parts of the cave may still exist, this is usually the end of a cave. Once the cave has reached this stage, the

Next, the water picks up calcite in the limestone. When it enters the formed cave, it releases the carbon dioxide and drops leaving behind the calcite and creating the decorations. Watch Wandering Willie Waterdrop to see our fun version of this process. Also follow this link for another video representation by Pei Chi: youtu.be/UE20_4mlyHo



normal processes of water building formations get harder, mostly because the air getting inside can dry the cave out. This makes the water evaporate instead of dripping like it should. No need to worry about Kartchner Caverns though, this won't happen here for an EXTREMELY long time.

ACTIVITIES:

Kids, make your own stalactites at home, visit: sciencekidsathome.com/science_experiments/growing_stalactites.html

Learn more about Kartchner Caverns at AZStateParks.com/Kartchner

WATER PERCOLATION MAZE

Help the drop of water get through all the rock layers to one of the cave formations!



Note: There are numerous ways for the drop to travel! The jagged route with cracks is called a fault. Do you think water would go faster or slower through a fault line than through solid rock? Looking at the maze, is the route through the fault easier?