

FLORIDA'S CAVES

A learn-along activity sheet
to accompany the
Gillespie Museum's
CAVES videos/resources

CAVE BASICS

A **cave** is a natural cavity in the ground which extends beyond the reach of direct sunlight, and is large enough to hold a person. The scientific study of caves is called **speleology**.

The two main types of caves that occur in nature are **primary** and **secondary**.

1. Which of these types forms at the **same time** as the surrounding rock is hardening?

2. Which of these types forms by the erosion and dissolving (*dissolution*) of the surrounding rock, **after** the rock has already solidified? _____

Solution caves are **secondary caves**, and the most common variety of cave.

In Florida they form when groundwater dissolves carbonate rock like **limestone**.

They often contain **cave formations**. Scientists call cave formations, **speleothems**.

Speleothems can be divided into **four general categories**, based on how water (containing dissolved *calcium carbonate*, or *calcite*) **enters and moves inside a cave**.

3. Draw lines to match the **categories of speleothems** with the **conditions** that form them.

Water **dripping** from cave walls or ceilings can form...

Water **flowing** along cave walls or surfaces can form...

Water **seeping** from cave walls or ceilings can form...

Water **pooling** on cave floors or surfaces can form...

FLOWSTONE

POOL DEPOSITS

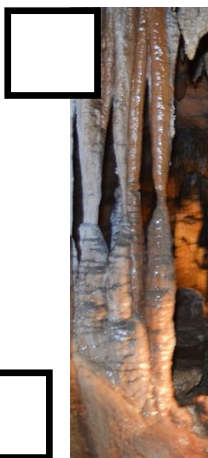
DRIPSTONE

PORE DEPOSITS

IDENTIFYING CAVE FORMATIONS

Dripstone formations are created by dripping water, falling in small drops from the roof of a cave, leaving behind deposits of calcium carbonate.

4. Match the **dripstone** types with their names, by putting the letters (A-D) in the boxes.

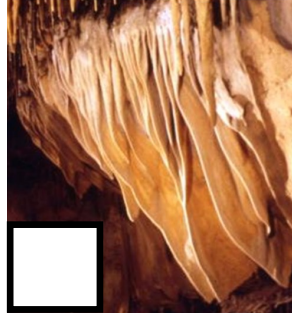
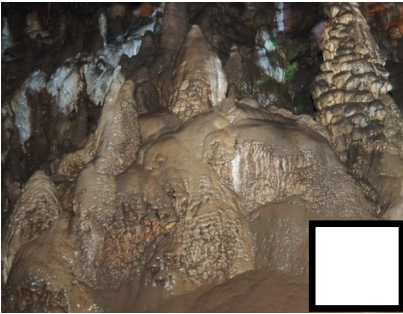


- A. **Straws** are hollow, skinny dripstones that start as small rings of calcite crystals.
- B. **Stalactites** grow from cave ceilings, getting bigger as more water drips down.
- C. **Stalagmites** are dripstones that grow up, from water dripping onto a cave floor.
- D. **Stalagnates**, also called **pillars** or **columns**, form when growing stalactites and stalagmites meet each other.

IDENTIFYING CAVE FORMATIONS (continued)

Flowstone formations are created by water flowing down the walls or over the floors of a cave, building up layers of calcium carbonate.

5. Match the **flowstone** types with their names, by putting the letters (A-B) in the boxes.



- A. **Flowstone** grows as calcite layers build up, forming thick deposits on walls and floors.
- B. **Shawls**, or **draperies** or **curtains**, are a variety of flowstone that grows where trickles of water down a rockface form thin calcite sheets at an angle to the wall. They often have wavy folds & color bands.

Pore deposits develop when water slowly seeps—rather than drips or flows—into caves, through pores and fractures in the rock.

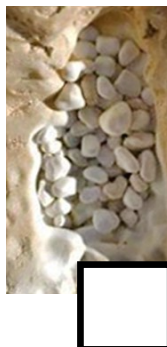
6. Match the **pore deposit** types with their names, by putting the letters (A-B) in the boxes.



- A. **Helictites** are calcite pore deposits of twisted and curving tubes, formed by special "capillary" forces & wind currents.
- B. **Cave coralloids**, or **cave popcorn**, grow as knobby bumps in globular layers.

Pool deposits form where water is able to collect and pool in cave floors.

7. Match the **pool deposit** types with their names, by putting the letters (A-E) in the boxes.



- A. **Cave pearls** are round, pebble-like calcite deposits, that grow on sand grains.
- B. **Rimstone dams**, or **gours**, are walls that build up as cave pools overflow their edges.
- C. **Dogtooth spar** is pointy, clear crystals of calcite that form in very still cave pools.
- D. **Water-level crystals**, or **shelfstones**, are layers of pointy calcite crystals that form around existing dripstones or pool edges.
- E. **Water-level crusts**, or **calcite rafts**, are stacks of sheet-like calcite layers formed when dripwater hits the surface of a pool.