Objective

By the end of this lesson, the student will understand the geological features of caves, the science behind waterfalls, and the historical significance of Ruby Falls. The student will also develop a creative project to express their learning.

Materials and Prep

- Notebook and pencil for taking notes and drawing
- Access to a computer or tablet for research (if available)
- Art supplies (colored pencils, markers, or crayons) for the creative project
- Books or articles about caves and waterfalls (if available)
- Map of Tennessee highlighting Ruby Falls

Before the lesson, familiarize yourself with the basic facts about Ruby Falls and its geological features. Review the water cycle and how waterfalls are formed.

Activities

- **Research and Discovery:**

  Have the student research Ruby Falls online or in books. They should look for information about its formation, history, and any interesting facts. Encourage them to take notes and highlight key points.

- **Waterfall Model:**

  Using art supplies, the student will create a model or drawing of Ruby Falls. They can include features like the cave, the waterfall, and the surrounding area. This will help them visualize the location and the geological elements involved.

- **Water Cycle Activity:**

  Discuss the water cycle and how it relates to waterfalls. The student can draw the water cycle and label each part, showing how water travels from the ground to the sky and back again, eventually forming waterfalls.

- **Creative Writing:**

  Ask the student to write a short story or a descriptive paragraph about what it would be like to visit Ruby Falls. They can include sensory details like what they would see, hear, and feel.

Talking Points

- "Did you know that Ruby Falls is located inside Lookout Mountain? It’s one of the tallest underground waterfalls in the United States!"
- "Caves are formed over thousands of years through a process called erosion. Water slowly wears away rock, creating these amazing spaces!"
- "Waterfalls are created when water flows over a cliff or steep drop. The water tumbles down, creating a beautiful sight!"
- "Ruby Falls is named after a woman named Ruby, who was the wife of the man who discovered it. Isn’t that a neat story?"
- "The water you see at Ruby Falls comes from rain and snow melting, which is part of the water cycle. Can you explain the water cycle to me?"

- "Caves often have unique ecosystems. Can you think of some animals that might live in caves?"
- "The temperature in caves is usually cooler than outside. Why do you think that is?"
- "When you visit a waterfall, you can often feel the mist on your face. That’s because the water splashes and creates tiny droplets in the air!"
- "Ruby Falls has been a popular tourist destination for many years. What do you think makes it so special to people?"
- "What do you think it would be like to explore a cave? Would you be excited, scared, or both?"