Make Your Own Speleothems!

Materials (per student, pair or group):
2 glass jars
2 nails
2 15in. pieces of heavy string
Epsom salts
water
food coloring
sheets of cardboard or tag board (1 sq. ft. each)

Procedure:
Make a saturated solution of Epsom salts and water. Add a drop of food coloring to this solution. Fill both of your jars with the solution. Now, securely tie the two pieces of string together. Tie a nail to each end of the string. Put one nail into one of your glass jars and the other nail into the other jar. Carefully place your set-up so that the glass jars are separated enough to make the strings taut. Make sure the nails are completely submerged in the solution. Place your cardboard sheet under your string. Evenly place it between your two jars so that any solution that drips off the string will land onto the cardboard. Record your observations daily.

Analysis:
Please answer the following questions based on your lab experience.

1. What happened to the solution from your jars? _____
_____.

2. What do you see collecting on the string and on the cardboard ? _____
_____.

3. What type of speleothems are you creating ? _____
_____.

4. Explain how your experiment is similar to how speleothems develop in a cave _____
_____.

5. Explain how your experiment is different from how speleothems develop in a cave ___
_____.

6. How are the strings of your experiment like the lifeline of a cave ? _____
_____.