



Science: Crystal Letters (Activity for Two Days)

Description: The children will create a suspension using borax and water to form crystals.

Time: 15-20 minutes

Materials

16 oz. glass or plastic container
White pipe cleaners
Food coloring
Fishing line or yarn
Wooden skewers
9 tablespoons of borax
Measuring tablespoon
Measuring cup
Wooden stick
Hot water

Vocabulary

- **Chemical Reaction** is when two or more elements are combined to form new element.
- **Prediction** is a statement of something that we think will happen in the future.
- **Dissolve** is when a solid is mix with a liquid and it disappears.
- **Suspension (in chemistry)** is a mixture that has solid particles large enough for sedimentation.
- **Sedimentation** is the process of forming or settling out.
- **Crystalize** to change into a solid that is made up of crystals.



Science: Crystal Letters

Lesson- Day One

1. Say to the children, "Today we are going to do an activity title Crystal Letters. A crystal is formed when a liquid turns into a solid. Today we are going to make crystals".
2. Give each child a pipe cleaner and assist the children on forming the first letter of their name.
3. Explain to the children that we will suspend the letter into the container without touching the container; therefore the letter needs to a medium size.
4. Once each child forms their letters assist them on tying the letter to the Popsicle stick using fishing line or yarn.
5. Add one cup of hot water to the container; explain to the children the water is hot and we need to be careful so we don't get burned.
6. Bring out the borax and ask the children if they know what it is. Explain to the children borax is a crystalline mineral powder and we cannot taste it or eat it because we can get sick.
7. Have the children assist you by adding 3 tablespoons of borax per cup of water. Finish by adding food coloring.
8. Using a tablespoon, have the children assist you on mixing the ingredients.
9. Engage in a brief discussion as to why they think the borax is dissolving.
10. Explain to the children that borax is a powder and when mixed with water there is a chemical reaction causing the borax to dissolve. When a solid is mix with a liquid it disappears; it **dissolves**.
11. Say to the children, "We are going to make a **prediction**. A **prediction** is a statement of something that we think will happen in the future. What do you think will happen when we suspend the letter into container?" Engage in a brief discussion about their predictions.

Tip: The process may take up to 24 hours; take this time for your children to document their observations.



Science: Crystal Letters

Lesson- Day Two

1. Remind the children what was their predictions.
2. Bring out the containers and engage on a brief discussion based on their observations.
3. Bring out the letter from the container and ask the children to verbalize what they are seeing and why they think this happen.
4. Explain to the children when the borax is dissolved in the water it creates a suspension. A suspension (in chemistry) is a mixture of solid particles large enough for sedimentation; which means to settle out. When the suspension goes through sedimentation is crystallizes the surface it comes in contact with. The longer the sedimentation, the more crystals it will build on top of the existing borax crystals.

