



Firework Bottles

Ages 2 years—3 years

Objective: The child learns about cause and effect, through exploration and experimentation.

Materials needed:

Empty water bottles (2—more are optional)
3 tablespoons Baking Soda
1 tablespoon Vinegar
Sprite (fill up bottle half way with it)
Food-Coloring (red and blue) - A few drops per color in each bottle (Other colors are optional)

Procedures:

1. Before hand: Put all ingredients listed above inside the empty water bottle. Add in the red food coloring. Do the same thing with the second water bottle, add in all ingredients and add a few drops of blue food coloring. Let child help.
2. Superglue the lid to the bottle so your child can not open the bottle to avoid mess!
3. If you have more than 2 water bottles, make multiple of different colored ones for your child to explore and experiment with.



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4. With your child, let them shake, turn upside down, and explore the bottle. When shaking it, watch with your child what happens. How the actions they make with the bottle causes the reactions of the inside.

5. Teach them the colors inside of each bottle they see. Red, blue, and any other color bottles you wish to make. Have them mix colors in the bottles, learning how two colors make a new color; such as red and blue, make purple.

6. Remember to use action-describing words to explain to your child what is happening inside the bottle or what they may see. (I.e. "It is making bubbles" OR "The red color is exploding like a firework.") Ask child what they see happening?

Milestones to meet:

The child can explore how their actions causes a reaction. The child discovers colors.

Evaluation:

Did this lesson work for your child? Why or why not?