



Primary

Focus

Science

EXERCISE 14

Parent Objective

To encourage your child's natural fascination with scientific experimentation.

"The environment must be rich in motives which lend interest to activity and invite the child to conduct his own experience."

Dr. Maria Montessori



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Judy Laidlaw

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Maria Montessori's Education of the Inquisitive Mind

Separating Chemicals



Materials:

- A clean, clear glass
- $\frac{1}{4}$ cup water
- 1 tsp. salt
- Green and red food coloring
- A strip of paper towel, about 1" wide
- Pencil

Preparation:

Gather the above materials with your child.

Instructions:

1. Invite your child to "separate chemicals."
2. With your child, mix together a drop of each the red and the green food coloring.
3. About 1 inch from the bottom of one end of the paper towel strip, make a small dot of the food color mixture.



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4. Let the spot dry.
5. Pour the water into the glass and stir in the salt.
6. Position the pencil across the top of the glass.
7. Hang the paper towel strip over the pencil so that the end with the dot just dips into the water.
8. The water will slowly climb up the paper towel.
9. The spot will gradually separate into patches of red, yellow, light green, and blue.
10. Enjoy!

Scientific Explanation:

- Food coloring is a mixture of different colored chemicals. As the salt water climbs up the paper towel, it dissolves the chemicals. Some chemicals rise higher than others. When the chemicals are separated they can be identified.
- Separating chemicals this way is called chromatography, which literally means "write with colors."