

Title - **MAGIC BALLOONS, DANCING PAPERDOLLS, CURLING WATER**

By - Judy Schneider

Primary Subject - Science

Secondary Subjects - Science

Grade Level - 5 - 8 (adaptable)

SCIENCE PROJECT OF THE WEEK

MAGIC BALLOONS, DANCING PAPERDOLLS, CURLING WATER

PROBLEM: Can electricity be made to do work?

RESEARCH: In a science textbook read about static electricity and about work. Write three paragraphs about what you learned.

HYPOTHESIS: Using your understanding about static electricity and work, explain how electricity can be made to do work.

MATERIALS:

1 balloon
tracing paper
a sweater
a plastic comb
plastic wrap
a steady stream of water
four large books
a head of hair

PROCEDURE:

1. Blow up the balloon and tie it closed.
2. Rub the balloon on the sweater several times.
3. Place the part of the balloon that you rubbed against the wall.
4. Let the balloon go and in your notes describe what happens.
5. Comb dry hair until the comb can make the hair move.
6. Turn the faucet on very low until a steady, thin stream of water comes out.
7. Put the comb close to the water, but do not touch the water.
8. Describe what happens as you pull the comb away from the water. Draw a picture.
9. Draw a small human body shape on very light paper to make two dancing dolls. Cut out the dolls and decorate them.
10. Set up the books in two stacks with two books in each stack. Leave about 25 cm between the two stacks.
11. Cut a piece of clear plastic wrap long enough to wrap around the top book in each stack. Place the two dancers under the wrap.
12. Rub a woolen cloth back and forth on the stretched wrap.
13. Slowly raise the wrap and the two top books. Describe what happens to the two dancers.
14. Enrichment: Turn on the water so the flow is harder. Repeat steps 7 and 8.
15. Turn the water down to a drip. Repeat steps 7 and 8.

16. Enrichment: Repeat steps 7 through 10 using a brush instead of a comb.

DATA: Make a data table to record your observations and inferences for each step.

CONCLUSION: This is not optional. You must explain what you learned by doing this activity. Remember that you must answer the question you asked in your original problem statement.

NOTE: BE SURE TO HAVE YOUR PARENT OR GUARDIAN SIGNS YOUR WORK.
PARENTS: YOUR SIGNATURE SHOWS YOUR STUDENT HAS DONE THE WORK.

TEACHER SECTION:

POSSIBLE HYPOTHESIS: The static electricity will cause the balloon, the water, and the dancing dolls to move.

POSSIBLE CONCLUSION: The student should discuss work and how the electricity caused work to be done.

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