



Science Lessons by Mr. M



Magnets

Magnetic or Non-Magnetic Sort

Gather a collection of magnetic and non-magnetic items (paper clips, crayons, scissors, toothpicks, tissue, pennies, etc). Invite the children to use a magnet to pick up each item. Have the children sort the object onto two trays labeled, magnetic and non-magnetic. Discuss and explain that items containing iron are attracted to magnets. The magnet pulls the iron, picking it up.

Rescuing Paper Clips

Put a steel paper clip in a clear glass of water. Ask the children to suggest ways to get the paper clip out of the water. After several ideas are presented, ask the children to suggest ways to get the paper clip out of the water **WITHOUT** putting anything into the water, spilling any water, or getting their hands wet. After discussion, suggest a magnet, if not already suggested. Let the children experiment until they discover the solution. They will be able to move the paper clip with the magnet to the top of the glass where the paper clip will "jump" onto the magnet. Discuss that water is not a "shield" for magnets. Magnets work through water.

Magnetic Shields

Further the paper clip experiment by adding different elements. Have the children predict and then experiment to see if the paper clip will move with the magnet through plastic, glass, paper, wood, etc.

Magnetic Shield Puppet Show

After concluding that a paper clip will move through paper with a magnet, let the class put this knowledge to use. Use a shoebox or paper plate to make a diorama for a puppet show (great family project)! If you use paper plates, use one for the base. Fold two other plates into fourths. Partially unfold them and attach as a backdrop to the base. It could be a zoo scene, school scene, home scene, etc. They should make two or three characters from paper or tag board. Fold and create a bottom flap on each character. Attach a paper clip on the flap. The children can now move the characters by running a magnet underneath the shoebox or plate, as they tell their story. A third option would be to use felt or paper characters (attach a small piece of strip magnet to the back). Then use a simple piece of decorated construction paper as the backdrop.

Magnetic Review Discussion

People use magnet in different ways. They use them for play and for work. They use them to pick things up, to hold things together, and to move things around.

Magnification

Observation Skills

Provide instruction in using magnifying glasses to improve observation skills. Use a variety of objects and different magnifying glasses. Discuss the exact distance that the glass should be from the object. Experiment and practice magnifying objects correctly.

Milk

Milk in Motion Fill a clear pie pan with room temperature whole milk. Add several different colors of food coloring into different section. Pour clear liquid soap around the edge of the pan. The colors will swirl on their own. How long before the reaction starts? How long does the colorful explosion last? Or you can add

the food coloring down the sides of the pan then squirt a little detergent in the middle. Your choice...same result. This color explosion happens because milk, like water, also has surface tension that is disrupted by the soap. The soap breaks the skin-like layer of the milk surface and the colors are carried along.

Five Senses

Ideas for Review

Smelling

- Use film canisters or similar containers. In each canister put an object with a distinguishing smell, such as cinnamon, cocoa, coffee grounds, lemon wedge, garlic, etc. Put a cotton ball on top so you can't see the object. Put a picture of the item on the bottom of each canister. Mix up the containers, then have children close their eyes, open, smell, and identify what is in each.

Hearing

- What is sound? Stretch a rubber band. Now keep your eye on the rubber band as you pluck it. What do you see? The rubber band is shaking back and forth very fast. What do you hear? A sound. A low soft "pling". The very fast shaking back and forth (vibration) makes the sound. All sounds are made from vibration.
- Sound Travels The shaking back and forth (vibration) travels through the air in waves much like waves travel through water. Fill a pan with water. Drop a pebble in it and watch the waves travel. This is how sound travels.
- Match That Sound Hide a variety of musical instruments. Play one at a time. Children guess which instrument made the sound.
- Outside Go for a walk outside. Relax with the class, close your eyes and listen. What do you hear?
- Who Am I? The class sits in a half circle. All eyes are closed. The teacher chooses a student to stand behind the

class. They say, "Who am I?" Without looking, the students guess whose voice was heard.

Touching - Use feely boxes or sock to explore a variety of textures.

Taste

- Taste Test Hold a peeled onion up to your nose. While you are smelling the onion, bite into an apple. How does the apple taste? The apple tastes like an onion. **Your sense of smell is stronger than your sense of taste.** Try tasting ice cream or biting into a piece of chocolate while you smell the onion. What happens?