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| Static Electricity 1 |
| Static electricity is the buildup of electrical charges on an object. By rubbing two objects together, you can create more static electricity because they are touching in more areas. Try this.   1. Blow up one balloon. Rub that balloon one time with a wool cloth. 2. Place the balloon on top of a pile of puffed cereal and record how many pieces it picks up. 3. Repeat steps 2 & 3 four times, increasing the number of rubs by one. 4. Draw a table to show your findings.  |  |  | | --- | --- | | **Number of Rubs** | **Pieces of Cereal Attracted** | | **1** |  | | **2** |  | | **3** |  | | **4** |  | | **5** |  |   Did this attract more cereal? Explain why or why not. What might be contributing to this difference? |

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| Static Electricity 2 |
| Hair is a great place to find static electricity. Try this.   1. Cut a piece of paper into tiny squares. 2. Place a comb over the paper and then over puffed cereal and record how many were attracted. 3. Comb your hair. 4. Place the comb over the pieces of paper, then the puffed cereal and record how many were attracted to the comb. 5. Create a table to show your findings.  |  |  |  | | --- | --- | --- | | **Items** | **With Static Electricity** | **Without Static Electricity** | | **Paper Squares** |  |  | | **Puffed Cereal** |  |  |   Did one attract better to the comb? Why or why not?  At Home  Take your comb and comb your hair. Hold the comb next to a faucet with a small stream of water coming out and see what happens. |

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| Magnetism 1 |
| Magnets are objects that can attract certain metals and produce magnetic fields.  For this activity, explore the different poles of the magnets and how they interact.   1. Using two magnets with the poles labeled, discover how the north and south poles of the magnets interact. 2. Then, use the disk magnets and the wooden rod to show this phenomenon. 3. Use one of the magnets provided to see discover what the magnets will attract.   Draw a diagram showing how the poles of the magnets react to one another. Then, complete the given activity sheet.  At Home  Walk around your house and see if you can find different objects that use magnets. Magnets can be found in many household items that we use every day! |

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| Magnetism 3 |
| Compasses use the Earth’s magnetic field in order to help us find our way if we are lost. The needle of the compass always points north because the Earth’s magnetic North Pole attracts the needle.  For this activity, create a homemade compass using a clear container, pencil, 2 needles, paper, magnet, tape, scissors and string.   1. Magnetize the needles by stroking them gently with a magnet. Only stroke in one direction or it will not work. This creates a magnet. 2. Then place them both on either side of your folded paper. 3. Tape a length of string to the paper. Tie that string to a pencil to place over the mouth of the container. 4. Once the paper stops spinning, mark North and South on the paper according to the direction it is pointing.   Why have compasses been so important in discovering America and other lands that were previously “undiscovered?” |

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| Electricity 1 |
| Electricity runs through electric circuits to provide energy to our homes, schools, and businesses. There are two kinds of circuits: series and parallel circuits.  For this activity, construct a series circuit and a parallel circuit.  Materials needed battery, 2 cut old string lights   1. Use the given parts to construct each circuit. 2. Diagram the circuits and label the three parts.   Power source: provides the power for the circuit, such as a battery.  Load: object the source powers.  Connectors: carry the electrical charges between the power source and the load.  Describe the key differences between the two circuits. Why is it important to have fuses and circuit breakers in our homes? What might happen without these safety devices? |