Activity	Materials	Reasoning	Directions
Friday			
Balloon Rocket	Balloons Plastic straw String – yarn Tape	Wind power can provide a lot of energy. Energy is the ability to do work. In this example the balloon is moving due to the What makes the balloon travel? The air blow up inside the balloon is trapped with your fingers holding the end of the balloon. The balloon has a lot of potential energy just waiting for the air to escape. When you release your fingers all of the air inside the balloon rushes out of the balloon and creates a forward motion called Thrust. Thrust is a pushing force created by energy. The potential energy is now turned into kinetic energy. In this experiment, the thrust comes from the energy of the balloon forcing the air out. Real rockets work in a similar way. A rocket engine is powered by exploding fuel inside of a chamber that is open at the bottom. The force of the explosion creates an opposite force that pushes the rocket up and into space	1. First, cut a long piece of string to reach from one side of the room to another. You can also tie the string from the back of two chairs. 2. Tape or tie one end of the string to the wall or chair. 3. Third, thread your straw on the string, and then from six or seven feet away, tape the other end of the string to the wall or chair. (note: you can easily test out different lengths of string later) 4. Next, add two strips of tape to the straw close together. I recommend using duct tape or painter tape for this. 5. Attach your balloon without tying the end of your balloon. 6. Make sure the end of the balloon faces the opposite way you want your balloon to travel. 7. Blow up the balloon, hold it with your fingers. 8. Let go and observe what happens!
Glow Stick	Glow sticks Warm water Cold water	Thermal energy, or heat, is measurement of how fast molecules are moving. Molecules move faster when warmer, move slower when cold. Glow sticks create light as a result of a chemical reaction. When the molecules move faster, the chemical reaction happens faster, which means that the glow stick will glow brighter. When it is cooler, the glow stick will give off less light because the reaction will happen slower. The glow stick will last longer though because the reaction happens more slowly. That is you can put a glow stick in the freezer to make it last longer.	1. Fill one large cup or bowl with warm water (not too hot, you don't want to melt the plastic on the glow stick-warm water from the sink will work just fine), and the other one with ice water. 2. Follow the directions on your glow sticks to get them to glow. 3. Place one glow stick in the warm water and the other in cold water 4. Compare the brightness of the two glow sticks.
Wind Powered Car	empty paper towel roll, cardboard, tape, markers to decorate, scissors	Renewable energy, often referred to as clean energy, comes from natural sources or processes that are constantly around. For example, sunlight or wind keep shining and blowing, even if their availability depends on time and weather. All of us around the world come across renewable energy in our day to day lives. In this activity we will be creating a car made from recycled materials in our house to create a car.	1. On the cardboard cut out 4 small circles 2. On the empty paper towel roll, tape two small circles on each side of the toilet paper roll. In total you should have two in the front two in the back just like a car. 3. After you can decorate your car using markers, crayons, or colored pencils. 4. Next, go outside and using the wind watch your car travel