Day 1 Centrifugal Force

Items needed:

- Bucket with a handle that can be lifted and held easily when person is standing
- Enough water to fill bucket about half full

1. Stand, holding the bucket by your side. Make sure there is nothing around you. This is best done outside or someplace where spilled water could be easily cleaned up.
2. Hold your arm straight and spin the bucket quickly in a windmill motion. The water should stay in the bucket with little to no spillage.
3. Experiment with spinning the bucket in slower circles to see if the water will stay in the bucket.

Day 2 Static Electricity

Items needed:

- 3-4 Tablespoons of regular table salt
- 1 Teaspoon of black pepper
- Glass or ceramic plate
- Plastic spoon
- Clean dry terrycloth towel or washcloth

1. Pour the salt onto the plate.
2. Put the pepper on the plate and gently mix the salt and pepper with your fingers.
3. Spread the salt and pepper so that they are in a thin layer.
4. Gently rub the rounded back of the spoon on the cloth.
5. Without touching the salt or pepper, slowly hover the spoon over the plate, moving in a back and forth motion. The pepper should hop onto and stick to the back of the spoon.

Day 3 Water surface tension and Magnetic North

Items needed:

- Steel sewing needle
- Shallow non metal bowl with water in it
- Small pieces of paper
- Magnet

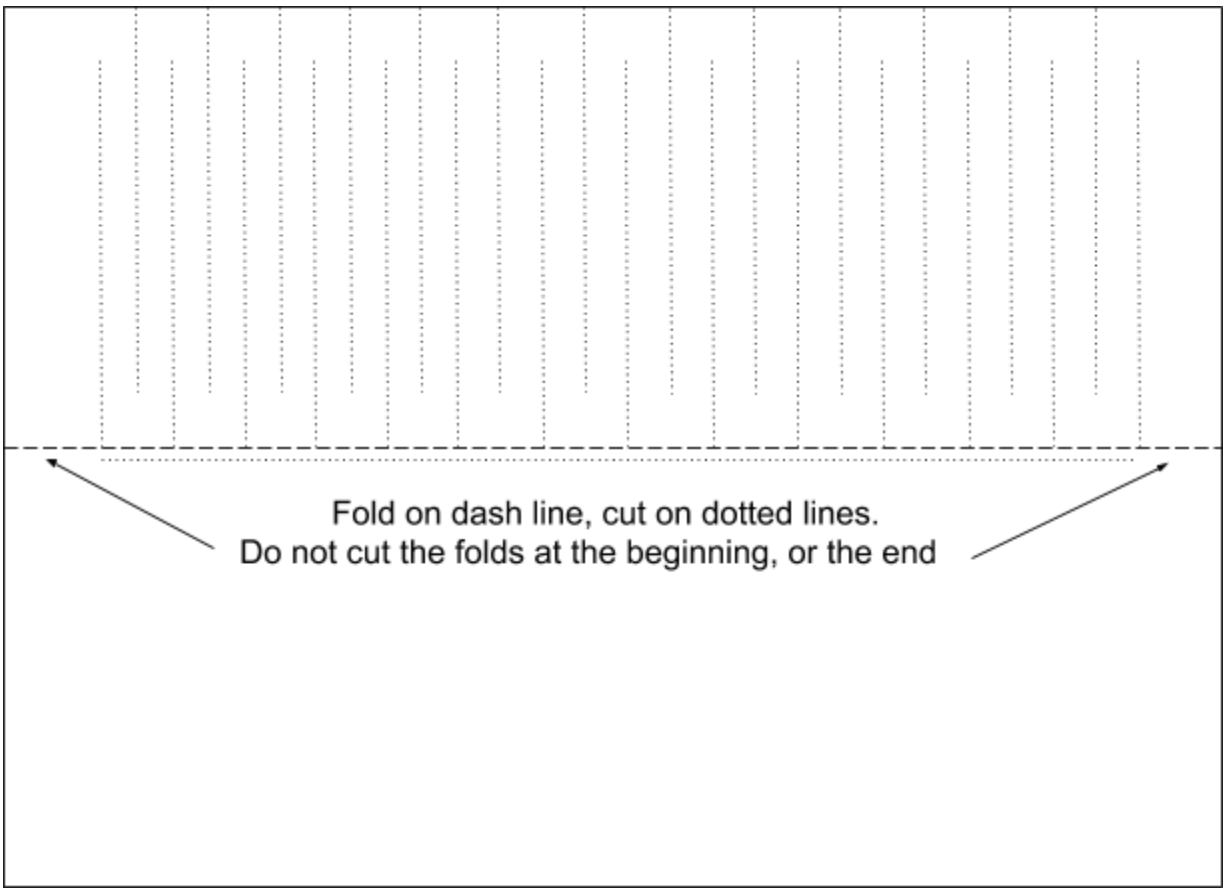
1. Lay the needle on the magnet to make sure it is magnetically charged.
2. Lay the needle on a small piece of paper that is only slightly larger than the needle itself.
3. Gently lay the needle and paper on top of the water. If the needle slides off, pull it out, dry it off, and try again.
4. Either wait for the paper to absorb the water and sink, or very gently use a non-metal object and poke at the paper to encourage it to sink. The paper should sink while the needle stays floating.
5. If there is no metal near your bowl, the needle should float in a line that points north and south.
6. Experiment with moving the magnet close to the needle, then removing it. The needle should return to pointing north and south.

Day 4 Doorway through paper

Items needed:

- Sheet of paper
- Scissors

1. Fold the paper in half, lengthwise.
2. Cut lines from the folded end to almost the other side.
3. Carefully then the paper and cut lines in the opposite direction, this time toward the fold, between the cuts you just made. Again, do not completely cut to the end.
4. Skipping the first and last fold, snip all the other folded parts of the paper.
5. Open the paper to reveal a giant loop, all in one complete circle.



Day 5 Subzero temperatures

Items needed:

- Salt, about ¼ cup
- 6 cups of ice
- Gallon size sealable plastic bag
- Sandwich size sealable plastic bag
- Fruit Juice, about 1 cup
- Drinking straw or spoon

1. Pour the juice in the sandwich sized bag and seal it, squeezing out as much air as possible. Invert the bag, making certain that you have a good seal.
2. Add the ice to the gallon size bag, then add the salt.
3. Nestle the juice-filled sandwich bag into the ice and seal the gallon bag.
4. Shake, shake, shake! Shake until the juice freezes into a soft slushy consistency.
5. Remove the slushy and rinse the salt off the outside. Eat with a spoon, or slightly open the top and insert a straw and drink.