**Atoms and molecules
Science Wednesday**

1. Atoms are made of tiny particles that are constantly in motion.
2. These particles have electrical charges – a little zing! – and attract particles from other atoms & molecules.
3. FOR EXAMPLE: Magnets are made of elements that have a strong positive charge on one side and a strong negative charge on another.
4. DID YOU KNOW: Water molecules are a tiny bit magnetic too. Notice how water molecules stick to each other and to anything you dissolve in water.

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| Challenge 1: Try out a magnet: 1. Use any of the magnets on the table to connect to other magnets or to pick up pieces of metal
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| Challenge 2: Make a cup of tea: 1. Dissolve tea in a cup of warm water
2. THINK LIKE A SCIENTIST: Imagine that each water molecule and each water droplet is like a magnet, attracting the particles of tea.
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| Challenge 3: Over-fill a container with water1. Use a dropper to fill up a container with water.
2. Keep adding more water to see if you can fill the container higher than the edges without spilling.
3. THINK LIKE A SCIENTIST: Why does this work?
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| Challenge 4: Make an electromagnet:1. Wrap wire around a straight piece of metal (bolt or nail).
2. BRIEFLY attach both ends of the wire to a battery
3. Test to see if the electromagnet will pick up a paperclip
4. Quickly disconnect the electromagnet before it gets too hot.
5. Use cardboard to design a frame for the electromagnet.
6. THINK LIKE AN INVENTOR: How could you use an electromagnet to make something useful?
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| Challenge 5: Un-make a cup of tea: 1. Can you use some type of filter to turn the cup of tea back into clear water?
2. THINK LIKE AN INVENTOR: How can you use filters to make something useful?
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