

## Explore Task

### Secret Messages

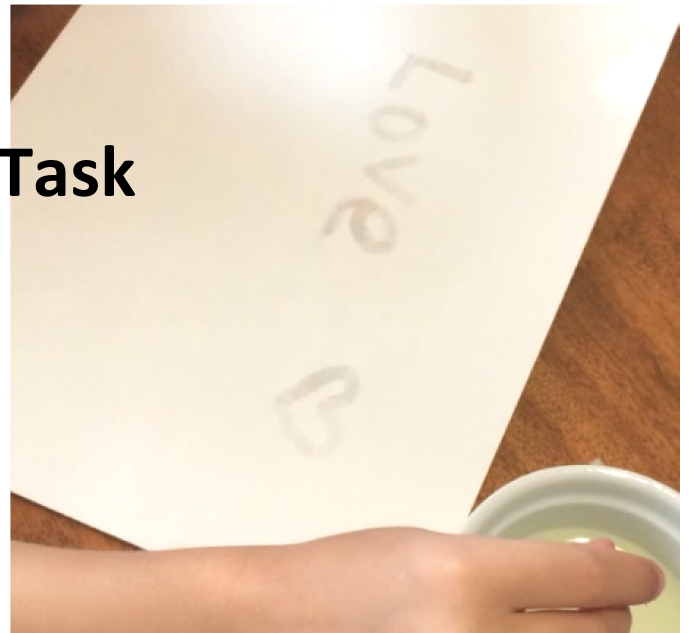
#### Materials:

Small bowl

Cotton swab

White construction paper

Blow dryer



#### Instructions:

First, pour the lemon juice into your small bowl. Then, dip the cotton swab into the bowl and use it to write your secret message on the white construction paper.

As you write or draw, you'll see the juice begin to fade as your message seeps into the construction paper.

Once you're done, use your blow dryer on low speed to see your message come back to

life! If you use **freshly squeezed lemon juice**, your message will turn brown. If you use **Real Lemon juice**,

your message will become visible when held up to the light.

To keep the fun going, try

**experimenting** with different fruit juices or other liquids you could find in the kitchen (like milk or vinegar!) and see how the message clarity compares to your lemon juice message!

### How it Works:

When you heat up the lemon juice, it decomposes and releases carbon. Once the carbon touches the air, it oxidizes and allows you to see the message when you hold it up to the light!

Voila! Invisible ink reveals secret message. **Oxidation** is what causes apples and avocados to turn brown. It's also the process that causes items left outside to get rusty.