LEAF SALT CRYSTAL EXPERIMENT

LABELS FOR MASON JARS

PLASTIC LEAF HOT WATER	**PLASTIC LEAF** COLD WATER
PAPER LEAF HOT WATER	**PAPER LEAF** COLD WATER
REAL LEAF HOT WATER	**REAL LEAF** COLD WATER
PIPE CLEANER LEAF HOT WATER	**PIPE CLEANER LEAF** COLD WATER

LEAF SALT CRYSTAL EXPERIMENT

Name: _____ **Date:** _____

This experiment has just a few simple ingredients. You just need salt, water, and leaves. Yet it yields some pretty extraordinary results! The experiment relies on two important factors. First, that's the amount of salt (a lot). Second, that's the temperature of the water (warm).

Loading all that salt into the water creates what's known as a supersaturated solution. "Saturated" means flooded, soaked, or packed full. *Super*saturated means something's *really* bursting. In this case, the mixture of water and salt – called a *solution* – is so full of salt particles it can't hold any more. Having an oversaturated solution is necessary for the salt crystals to form.

Now, here's where the temperature comes in. In cold water, water molecules close together. Therefore, there's no room to add enough salt to create a supersaturated solution. When the water is warmed up, though, the molecules move further apart. This allows you to add more and more salt until supersaturation occurs. You'll know it happens when the salt stops dissolving, and the water turns cloudy. At this point, there's too much salt in the water to successfully bond with the water molecules.

You might be wondering. Where do the crystals come from? The extra, loose salt particles in your supersaturated solution will cling to the surface of the items you've inserted into it. Over time, the water will evaporate. As it does, it leaves behind more and more salt particles to cling to your leaves or to the salt particles that have already attached themselves.

One last thing: take a close look at the crystals. They're cubes! Different kinds of crystals bond into different kinds of shapes. Sodium chloride crystals (a fancy name for salt crystals) always form into cubes.

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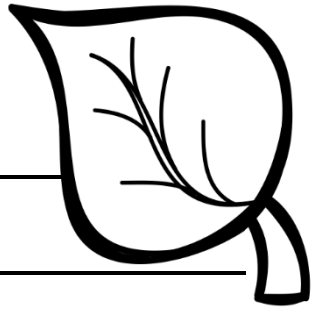
Name: _____ **Date:** _____

1. What are the two factors that this experiment relies on?



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2. Why is the mixture in this experiment called *super*saturated?

_____

_____

_____

3. Why should you use hot water and not cold water?

_____

4. Where do the crystals come from?

_____

_____

_____

LEAF SALT CRYSTAL EXPERIMENT

ANSWERS

1. What are the two factors that this experiment relies on?

The amount of salt and the temperature of the water.

2. Why is the mixture in this experiment called *super*saturated?

The solution of water and salt is so full of salt particles it can't hold any more.

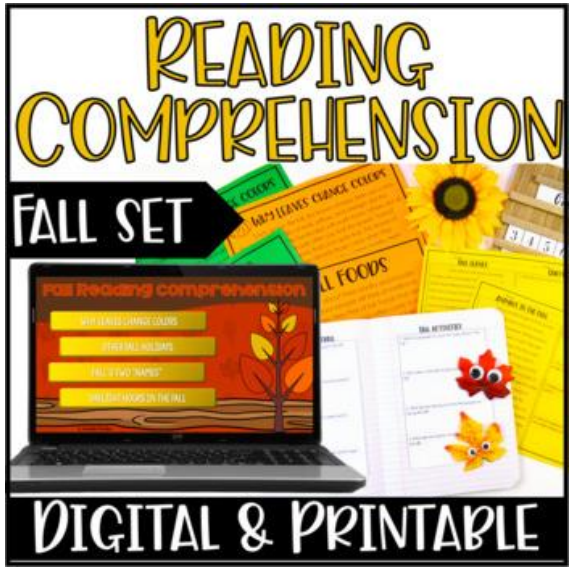
3. Why should you use hot water and not cold water?

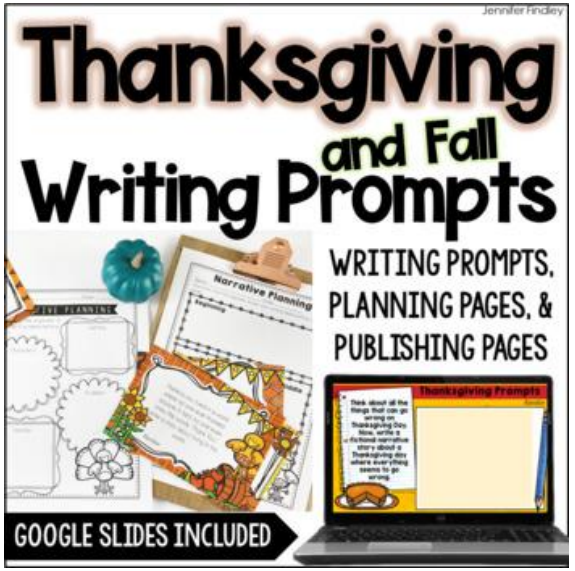
In warm temperature, the water molecules move apart and there is more room to add salt.

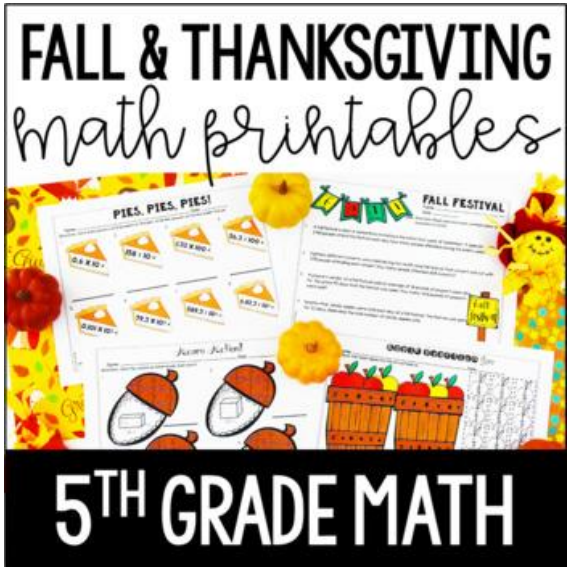
4. Where do the crystals come from?

The salt particles in the solution will cling to the leaf and as the water evaporates, more and more salt particles to cling to each other.

WANT MORE FALL RESOURCES?







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