

## Acid Rain Experiment

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<b>Category</b>	Activities
<b>Advancement</b>	Water Safety
<b>Time to allocate (mins)</b>	10
<b>Outcome</b>	To show the effects of acid rain on plants 3 jars water
<b>Resources</b>	white distilled vinegar OR lemon juice 3 single flowers (carnations, gerbera daisy, etc)
<b>Instructions</b>	<p>Pollution is a problem in our world. We pollute the water and ground by littering paper, plastic, glass, and other garbage on the ground or into the water. Pouring chemicals such as motor oil and gas into water or runoff from weed killers used on our lawn make their way into our water and must be filtered. Factories, homes and cars pollute the air by burning coal, gas, and other chemicals. The smoke travels through the air and into the atmosphere where it gets trapped in the clouds with the moisture that naturally evaporates from the earth's surface. When clouds get full of water, they empty by raining (or snowing) bringing the pollution along ; this is called acid rain. Not all rain is acid rain. Acid rain is the rain that has a high ph level (acid level).</p>
	<p>So, what's the big deal – that's the Earth's way to filter and provide water, right? Well the problem is that when we produce too much pollution that rains down and becomes part of the water source for plants – the acid rain can harm plants (and animals in high enough concentrations). Normal rain has a PH of 5.6. At 4.3 acid rain starts to have harmful effects headaches, coughs, and throat irritations in humans. Fish will begin to die at a ph of 4.2. When people eat toxic plants and animals that have been contaminated with acid, they can have kidney problems, brain damage, and more.</p>
	Acid rain experiments
	Start by labeling your 3 jars and adding the solution indicated:
	water (just water)
	little acid rain (1/4 cup vinegar OR lemon juice and the rest water)
	lot of acid rain (1 cup vinegar OR lemon juice and the rest water.
	Add a flower to each solution. Point out how all the flowers are healthy and look about the same.
	Observe the flowers. DO you notice a difference in the flowers. (24 hours later, share photos or can check on them the following week).

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