



## PUMPKIN SCIENCE

*At this time of year, you will see a lot of pumpkins around, especially on front porches. They're often carved or painted, but what else can we do with them?*

**This week's activities: Exploding Pumpkin Experiment – Decomposing Pumpkin**

## Exploding Pumpkin Experiment

### Suggested Materials:

- Pumpkin of any size/water bottle
- baking soda
- vinegar
- food coloring (optional)
- dish soap
- waters



### Directions:

1. Carve your pumpkin. No pumpkin? Decorate an empty pop bottle like a pumpkin and use it instead (you won't need another container then).
2. Find an open container to put inside your pumpkin.
3. Fill container 3/4 the way with water.
4. Add 4-5 drops of dish soap.
5. Add a few tablespoons of baking soda.
6. Take your pumpkin somewhere you can make a mess.
7. Add 1/4 cup of vinegar to the container and enjoy the eruption.

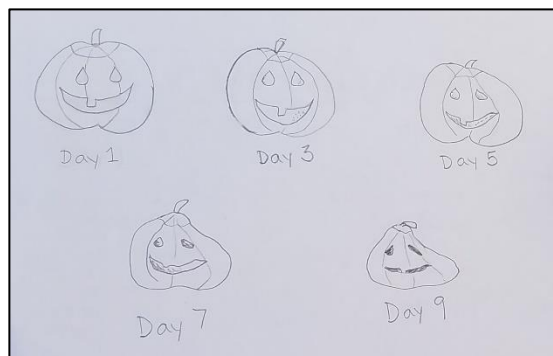
The science behind the explosion: baking soda is a base and vinegar is an acid. When combined, they create a chemical reaction. This produces carbon dioxide (a gas), which fizzes and bubbles.

## Decomposing Pumpkin

During the fall, you see a lot of decomposition (think of all of those falling leaves and plants getting ready for winter). This seems like a mystery as organic material (some examples are leaves, pumpkins, and apple cores) slowly dissolve and turn into soil. With this experiment, get a closer look at what's happening when a pumpkin decomposes.

### Suggested Materials:

- Pumpkin
- Magnifying glass
- Measuring tape
- Paper
- Pencil



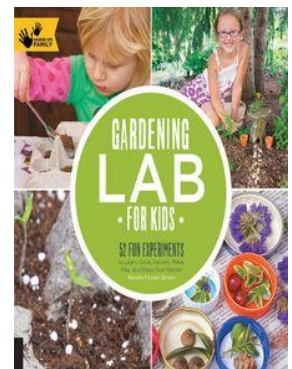
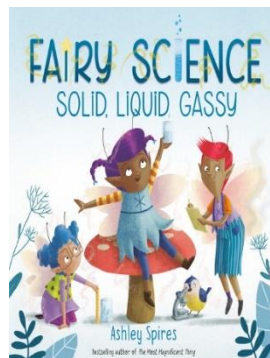
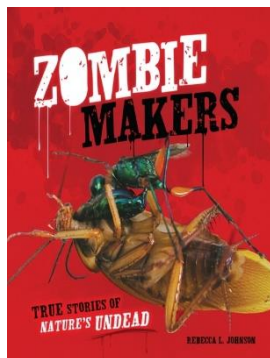
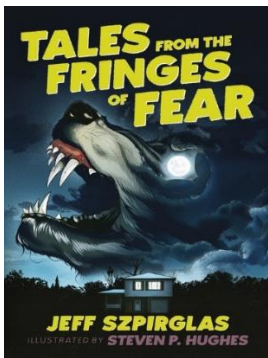
## Directions:

1. Measure your pumpkin. How tall is it? How round is it? Record your measurements.
2. Carve your pumpkin. You can put it on your porch or somewhere you can easily check on it (put it on a tray so you can easily move it).
3. Each day, check on your pumpkin. Has it shrunk? Is it still firm? Do you notice anything growing on it? Every time you check on your pumpkin, record or draw what you notice.
4. You might see mold growing on your pumpkin. Where is it growing? Do you see it on the carved areas or inside? Is there any on the outside of your pumpkin?

So, what is happening? Your pumpkin is decomposing (or rotting). The pumpkin's cells break down over time. Mold and bacteria (and insects like worms) help it to decay. When you're finished with your observations, you can put your pumpkin on a compost pile (or in your green bin).

## Links to eResources:

Check out our [eBooks](#) on these topics:



[Pumpkins](#) | [Fungus](#) | [Science Experiments](#)

On **Hoopla Kids**, learn more about decomposition in *Decomposers* by Megan Lappi. Read *Pumpkins* by Robin Nelson and learn more about the life cycle of a pumpkin.

Head to **KanopyKids** to watch Episode 2 (*Trebuchet*) and Episode 5 (*Geodesic Dome*) of *Science Max* Season 3, to see how else you can use pumpkins.

You can get a library card at [hpl.ca/online-registration](http://hpl.ca/online-registration).

*If you would like to share one or all your creations, please take a picture and post it to social media using the hashtag, #HPLmakesomething.*



#HPLmakesomething

[hpl.ca/kids](http://hpl.ca/kids)

