

The Halloween Science Activity Kit

A printable companion to 10 at-home Halloween science activities

Print this kit and keep it with your baking soda. It gives you the shopping list, the reaction ratios, a one-page reference for all ten setups, the age guide, a session run-sheet and a clean-up table — everything you need to run these activities without scrolling back through the article.

Shopping List

Section	Item	On hand?
Pantry	Baking soda — buy the big box, you will use cups of it	
Pantry	White vinegar — at least 1 litre	
Pantry	Vegetable oil (for the lava lamp)	
Pantry	Granulated sugar, honey, corn syrup (for the brittle)	
Pantry	Popcorn kernels or a bag of plain popped corn	
Pantry	Molasses, butter	
Baking	Flour, brown sugar, peanut butter, egg, baking powder	
Baking	Pumpkin puree, pumpkin pie spice, buttermilk, maple syrup	
Baking	Chocolate malted balls and candy eyes	
Craft	School glue (12 oz) and saline contact solution	
Craft	Washable glitter paint, glitter, plastic gems	
Craft	Food colouring — several colours, plus glow-in-the-dark if you can find it	
Craft	Dish soap	
Kit	Clear glass jars or bottles, a small plastic cauldron	
Kit	A shallow plastic tub for the sensory bin	
Kit	A turkey baster	
Kit	A metal baking tray or lasagna dish to catch the overflow	
Kit	Plastic spiders, bugs and small Halloween figures	

Section	Item	On hand?
Kit	A candy thermometer	
Kit	A UV black light bulb (optional, but it makes the lava lamp)	

Buy baking soda by the bag, not the small box. A single afternoon of these setups can use two cups, and running out mid-reaction is the one thing that ends the fun early.

The Reaction Ratios

Every fizzing setup in this kit runs on the same reaction. These are the proportions that give a good show without flooding the tray.

Setup	Baking soda	Vinegar or acid	Add
Lava lamp	3 tbsp	Enough to fill the last third of the bottle	Oil to two-thirds; food colouring in the vinegar
Witch's cauldron	1 tsp per cauldron	1/2 cup per colour	Food colouring in the vinegar
Puking pumpkin	1/4 cup (up to 1 cup for a big pumpkin)	1/2 cup per 1/4 cup soda	A squirt of dish soap; food colouring
Fizzy sensory bin	1 cup	1 cup	Food colouring; toys buried underneath
Potion class	1 tbsp	3/4 cup	Food colouring in the vinegar
Skeleton brittle	2 tsp	None — heat does the work	Sugar, honey, corn syrup, water to 300 F

More baking soda and more vinegar means a bigger eruption, not a longer one. If you want the fizz to last, add the vinegar in small pours rather than all at once.

All Ten Setups at a Glance

#	Setup	Time	Mess	Best age
1	Spooky lava lamp	10 min	Low	4+
2	Glow-in-the-dark slime	15 min	Medium	5+
3	Skeleton brittle candy	1 hr 20 min	Medium	8+ with an adult
4	Spider cookies	45 min	Medium	4+
5	Bubbling witch's cauldron	10 min	Low	3+
6	Puking pumpkin	20 min	High — do it outside	3+
7	Fizzy sensory bin	15 min	High	2+
8	Potion class	10 min	Low	4+

#	Setup	Time	Mess	Best age
9	Caramel corn	30 min	Medium	8+ with an adult
10	Pumpkin pancakes	30 min	Medium	3+ helping

Age Guide

Age	What they can do	What you do	Good picks
Under 2	Watch, splash, grab	Everything — keep it in a tub on the floor	Sensory bin, cauldron
2 – 3	Pour with help, bury toys, stir	Measure the soda, hold the cup	Sensory bin, cauldron, potions
4 – 5	Pour, choose colours, press cookie toppings	Set up, handle the tray	Lava lamp, slime, spider cookies
6 – 8	Measure, mix, follow steps, predict	Supervise the heat and the tray	All the fizzing setups, pancakes
9 – 12	Run the whole thing, then change a variable	Stay nearby for heat and knives	Brittle, caramel corn, pancakes

Session Run-Sheet

1. Pick two setups, not ten. One fizzing and one making is the combination that holds attention.
2. Cover the table with a plastic sheet or a bin bag before anything comes out. This is the step that saves the afternoon.
3. Lay out every supply first, in the order you will use it. Interrupted setups are the ones that end in tears.
4. Say the boundary out loud before the first pour: the soda stays in the tray, the vinegar stays in the cup.
5. Run the fizzing setup first while attention is fresh, then move to the making or baking one.
6. Let them change one thing on the second run — more soda, a different colour, warm water. That is the actual science.
7. Stop while they still want more. Ten minutes of wanting to continue beats twenty minutes of being done.
8. Clean up together. Rinsing the jars is part of the activity, not a chore after it.

Safety Check

- Vinegar and food colouring are away from eyes — no touching faces with coloured hands.
- An adult handles all heat: the 300 F sugar syrup, the griddle, the oven.
- The tray or lasagna dish is under every fizzing setup before the first pour.
- The puking pumpkin is set up outside or on a hard floor, never on carpet.
- Small parts — malted balls, candy eyes, plastic spiders — are out of reach of anyone under three.
- Glow-in-the-dark slime is kept away from hair, upholstery and pets.

- Everyone washes hands after handling slime or raw egg dough.
- A towel and a bowl of warm water are within arm's reach before you start.

Clean-Up and Storage

What	How to clean it	Keep it?
Fizzing jars and cauldrons	Rinse with warm water, then air dry upside down	Yes — reuse all season
Sensory bin	Tip the liquid outside, rinse the toys in a sieve, dry on a towel	Yes — toys and bin
Slime	Store in an airtight container in the fridge	Up to 2 weeks
Brittle and caramel corn	Break into pieces, store in an airtight tin with parchment between layers	Up to 1 week
Spider cookies	Cool completely, then a tin with parchment between layers	Up to 4 days
Pancakes	Cool, then freeze flat with parchment between them	Up to 2 months
Pumpkin after the puking	Rinse the inside, dry it, then compost it	No — compost it

Setups We Actually Did

Write down what you ran and what you changed. The second run is where the real learning happens — more soda, a different colour, warm water instead of cold.

Setup _____ Date _____ What we changed _____

Setup _____ Date _____ What we changed _____

Setup _____ Date _____ What we changed _____

Setup _____ Date _____ What we changed _____

Setup _____ Date _____ What we changed _____

Setup _____ Date _____ What we changed _____

Next Year's List

- Restock baking soda and vinegar before October — buy the big bag.
- Save the jars, the cauldron and the sensory tub instead of recycling them.
- Try the one setup we skipped this year.
- Buy glow-in-the-dark food colouring early; it sells out by mid-October.
- Photograph the tray setup so next year's version is faster to build.
- Pick one baking setup to do as a gift for a neighbour or grandparent.

savorydiscovery.com — By Elowen Thorn. Printable for personal use.