



WEATHER EXPERIMENTS

We experience weather daily: rain, snow, sunshine — sometimes all in one day. Usually, we have colder weather in winter and hotter weather in summer. Let's do some experiments and bring the weather inside.

This week's activities: Tornado in a Jar – The Great Cloud Experiment

Tornado in a Jar

Suggested Materials:

- Jar with lid (a water bottle or another clear container that can be closed)
- Water
- Dish soap
- Optional: glitter or food colouring

Directions

1. Fill your jar almost to the top with water.
2. Add a drop or two of dish soap. If you have glitter or food colouring, add a little bit now.
3. Close the lid tightly.
4. Shake the jar quickly in a circular motion to get the water to swirl.
5. Stop shaking to see a "tornado."



The science behind it: The tornado in your jar is caused by centripetal force. Centripetal means "centre seeking." The water twisting to the centre of the jar creates the twister. When an actual tornado forms, air is being pulled to the centre (or core) of the tornado.

The Great Cloud Experiment

Suggested Materials

- Shaving cream
- Clear jar
- Water
- Food colouring

Directions:

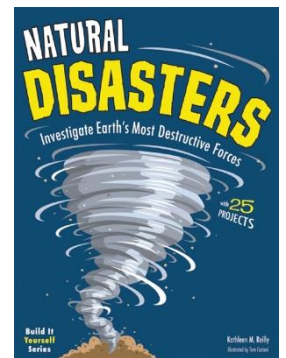
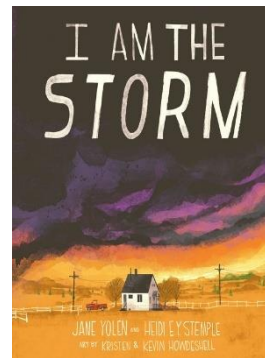
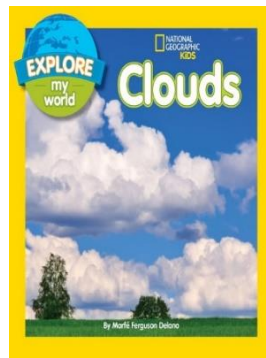
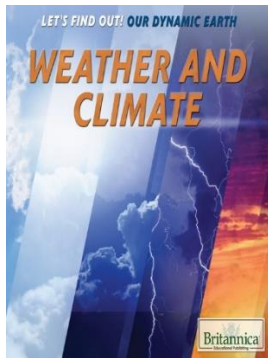
1. Fill your clear jar with water about $\frac{3}{4}$ full.
2. Add a thin layer of shaving cream. The shaving cream will sit on top of the water and be your clouds.

3. Add a couple of drops of food colouring on top of your shaving cream (the food colouring will be your rain). Did the color break through the shaving cream? If not, keep adding drops of food colouring.

The science behind it: The sun causes the water (in lakes, oceans, and even puddles!) to turn to a vapour through EVAPORATION. As the vapour goes higher it begins cooling off and turns into CONDENSATION (it turns back into water droplets). When clouds get heavy with these water droplets, we get rain.

Links to eResources:

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



[Weather](#) | [Clouds](#) | [Science Experiments](#)

Read *The Science of Tornadoes* by Carol Hand on HooplaKids. Search for 'tornado' to find many more books.

You can get a library card at 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

