

Kit list



To carry out these explorations you will need

- ✓ 200g potato or potato peel
- ✓ sharp knife
- ✓ Food blender
- ✓ Jug (about 500ml)
- ✓ Pair of old tights or a pop sock.
- ✓ Washing up bowl or similar

Time: 30 minutes

Important words to use:

Please talk to your child about what you are doing together, using plenty of descriptive words. You may use words such as *liquid* and *solid*, even though your child may not use them.

Just as important are words like runny, gloopy, pour, trickle, mix, mixture, wet, and squeeze.

Getting messy

Oobleck can get messy at times so be prepared ...

- Know your own tolerance levels; make oobleck on a day when you are feeling relaxed, so that the mess does not frustrate or upset you or your child.
- Teach your child to help you tidy up any mess as it occurs.
- Be prepared with flannels and towels to hand so that you and your child can clean up quickly.



Working Together at home and school

The initial activity of extracting starch from a potato will need a lot of adult support so may well work better at home. If you take photographs of the activity your child could show them in school to aid their recounting of the experience

Making Oobleck



- "Oobleck" is made by mixing corn-starch and water. You and your child are going to make it with the starch that comes from a potato rather than corn.
- If using a whole potato, cut it into roughly 2cm³ chunks and place it into a food blender with about 400ml water.
- Blend the potato and water until you have a white mixture, and the potato is completely broken down. Add more water if necessary so that the mixture is pourable.
- Pour the liquid into the foot of an old pair of tights or pop sock.
- Now your child starts to have fun! Hold the tights over a bowl, and squeeze until all the liquid is in the bowl and a solid is left in the tights. You may need to help to make sure that every drop of liquid is squeezed out.
- Pour the liquid into a jug and let it stand for about 10 minutes.
- You will notice that a white sediment forms on the bottom of the jug. Slowly pour the water (including any froth or scum) down the plug hole leaving the sediment behind.
- This white sediment is oobleck.
- This liquid is great fun to explore (for adults as well as children). It behaves in surprising ways when poured and squashed. Try making marks in a thin layer. Can you finish writing your name or drawing a picture before the first mark has disappeared?

We are scientists!

Children will be fascinated to learn that lots of the ingredients that we use in everyday life are found in surprising places. For example, flour comes from wheat, sugar from cane or beet and some medicine even comes from tree bark! Over the years scientists have discovered these hidden ingredients and investigated how to get them out so that we can use them today.

Watch out!

- The first part of this activity, cutting the potato and blending it with water, will need to be carried out by an adult with the child watching.
- Using a large bowl to catch the liquid squeezed from the tights will reduce the likelihood of spillages. However, make sure that any spills of water or oobleck are mopped up quickly to reduce the chance of slipping on wet patches.



IndusTRY IN SCHOOL!

Working with home

This activity could be carried out either at home, in school or in both settings. Depending on your circumstances, you may wish to extract some potato starch at school, and mix this with samples brought in by children. If so, blend the potato chunks/peel in advance, and begin the school activity with children squeezing out the liquid through the tights, as described overleaf.

Your photographs of the process can be collated and shared with any children bring in from home.

Child initiated play

Let children explore a range of substances such as oobleck, shaving foam, dry rice, lentils, water-absorbent beads, etc.

A tuff tray is ideal and allows several children to access the material and discuss it with each other. Adult support will help them to describe the materials as well as supporting any children who are nervous about 'getting dirty'.

Career Links and role play

Referring to children as scientists as they carry out child and adult led investigations can help them to understand that a scientist is someone who works to find things out by testing and experimenting. Giving appropriate dressing up clothes and props, such as lab coats and safety goggles can help to reinforce this positive message. Consider setting up an investigation area in the classroom which includes things to investigate and props such as hand lens and lab coats.

BUT

Avoid reinforcing the stereotype that ALL scientists work in laboratories and wear lab coats all of the time. Palaeontologists work in the field digging up fossils, marine biologists might wear scuba diving gear as they examine sea life and astronauts wear space suits. Many scientists spend a lot of time working at a computer wearing a shirt and trousers/skirt! Make sure that you are giving balanced messages about science to the children in your class.



TAKING IT FURTHER

Follow up activities:



- Children investigate what happens if the oobleck is left to dry out. After a few days there will be a white powder which is the same as cornflour (starch extracted from corn instead of potato). They can then add water to the powder and observe that it will become oobleck again. They can compare this with adding water to corn flour.
- Children investigate what happens when you mix water with other white powders such as icing sugar, talcum powder and white powder paint.

Things to wonder ...



- I wonder what will happen if we add more water.
- I wonder if we can trickle oobleck down a slope?
- Do you think that it will be runnier than honey? ...than shampoo? ...than vinegar?
- I wonder what will happen if we leave the oobleck to dry out?
- I wonder what will happen if we mix some sand into our oobleck?

