

Episode 4: Marvellous Moulds

What are curds and whey anyway? Rachael is mixing and experimenting with milk and vinegar to make curds and whey. Discover your 'whey' and learn how the soft mixture can harden into moulds that you can paint and decorate.



Scientific concepts:

1. Creating mixtures and chemical reactions.
2. Physical characteristics of solids can change.

Science process skills:

Measuring, observing and classifying.

Let's investigate:

What liquid ingredients can be mixed to make a hard mould?

Materials

- 2 x cups warm milk
- 8 x tablespoons vinegar
- 2 x bowls
- Ice or biscuit moulds
- Spoon
- Sieve
- Paper towel
- Paint



Experiment procedure

1. Pour warm milk into a bowl. Add the vinegar and mix. Watch the milk curdle and the vinegar separate to create liquid whey.
2. Strain this mixture through a sieve into a bowl, to separate the curds and whey.
3. Place the milk curds onto some paper towel and pat dry to remove any excess whey.
4. Press the curd mixture into the moulds.
5. Place these soft mixture moulds outside in the sun for a few days and allow the curds to set.
6. Remove from the hard, set Marvellous Moulds and decorate with paint!

How it works: By adding the vinegar to the milk, a chemical reaction is created which makes the milk separate into two parts – a solid (the curds) and a liquid (the whey). The curds are a milk protein called casein, which allow the soft mixture to bend and move into different shapes and harden.

Early Education links

Episode themes relate to [EYLF Learning Outcomes](#) 4.1, 4.2, 5.1 and 5.4. Support children's mathematical understandings by using measuring cups and spoons to prepare quantities of the liquid ingredients. Encourage children to feel the curd mixture and use verbal language to describe the differences between the solid soft curd mixture and hardened moulds. Develop science process skills by asking children to classify liquids and solids.

Follow-up learning

- Make child safe cornflour slime and investigate how mixing other liquids together can create a cool chemical reaction.
- Discover more fizzy, wizzy science experiments with [Play School: Through the Windows](#).

