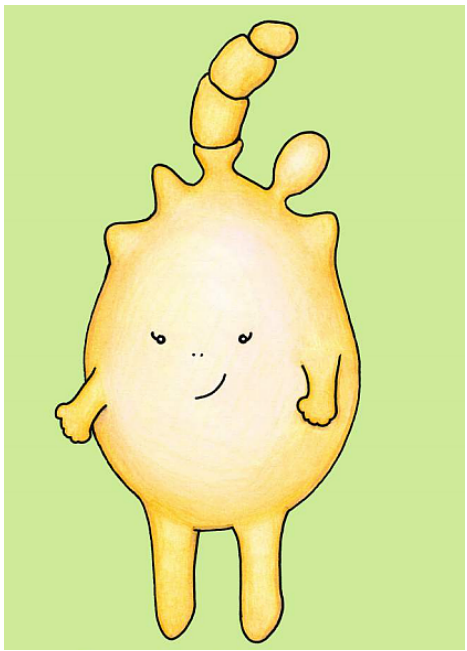
Microbes on the Menu – making sour dough

Microbes have helped us make food for thousands of years and one great example of this is sour dough, a type of leavened bread. Making sour dough starts with the helping hand of a number of microbes, termed a 'starter culture'. With gradual addition of water to flour that naturally contains bacteria and yeast, sugars are formed that bacteria such as *Lactobacillus* feed on, producing lactic acid that gives the bread a sour taste. Yeasts that are also present, can tolerate the acid and start producing carbon dioxide that causes bread to rise.
Making starter cultures requires feeding the microbes with water and flour for a few days, but once they're ready to make bread, only part of it needs to be used and the rest of it can be passed to friends to do the same!

Materials

- 220 ml of pasteurised skimmed milk
- Around 5 tablespoons of 'live' yoghurt (probiotic yoghurt)
- 900g strong white flour
- Water



Method

Making the starter culture

1. Gently heat 175ml milk in a saucepan and stir into the yoghurt. Be careful not to heat the milk too much to avoid killing the microbes in the yoghurt! Leave in a warm place overnight.
2. Stir in 120g of strong white flour and leave covered at room temperature for two days.
3. Add 180g of strong white flour, 100ml water and 40ml milk to the mixture. Leave for 1 day. The culture should now be very bubbly and smell pleasantly sour.
4. Discard half the culture and add 150g strong white flour and 150ml water, mix and leave for 1 day. The starter culture is now ready to use!

Making sour dough

1. Combine 375g strong white flour, 250g of starter culture, 7.5g salt and add 150ml of slightly warm water to make a dough. Knead the dough on an oiled surface.
2. Put the dough into an oiled bowl, cover with cling film and leave to rise in a warm place until double the size. Knead again, knocking air out of the dough, and dust with flour. Leave to further rise for 6-8 hours.
3. Pre heat the oven to 220C/425F/Gas7. Place the dough on a baking tray and bake for 30 minutes. Reduce the heat to 200C/400F/Gas 5 and bake for 15-20 minutes.