

Grinding grain



Location

Ground floor, Food exhibition

In a nutshell

Make your own flour to take home with you using our Grinding Grain exhibit.

What to do

Place a pot on the grill then turn the handle to grind some grain, use the scales to check your progress. Finish with a sticker
Take the flour home and try a recipe from exploremore.wethecurious.org/grinding_grain.

Time Required

KS1 & KS2 2 minutes per student.

What's happening?

Wheat grains are seeds. To make the flour those seeds must be broken up into many parts; Bran - the hard outer shell, Wheat germ - the plant embryo, this part would produce the new plant and Endosperm - the energy store of the grain, meant for the new plant. Traditional mills used stone wheels to grind the seed, but modern mills use large stainless rollers to cut the grain and separate it into the separate parts using sieves. White flour is made only from the finely ground endosperm. Brown flour will have some of the germ and bran added back into the white endosperm. Wholemeal flour will have all of it added back in. Calcium, iron and the B vitamins must be added by law to white and brown flour. They are already in wholemeal flour.

Two million hectares of wheat are harvested every year in the UK – an area the size of Wales!

The World Bank estimates that global wheat production will have to increase by 60 percent between 2000 and 2050 to meet rising demand. The UK produces over 13 million tonnes of wheat a year.

Curriculum links

Curriculum links	
KS1/2	<p>Science - Forces</p> <ul style="list-style-type: none"> - recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect <p>Mathematics - Number – number and place value</p> <ul style="list-style-type: none"> - (Yr1) read and write numbers from 1 to 20 in numerals and words - (Yr2) read and write numbers to at least 100 in numerals and in words - (Yr2) choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit, using scales. - (Yr3) measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) <p>Design & Technology - Key stage 1</p> <ul style="list-style-type: none"> - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products <p>Design & Technology - Key stage 2</p> <ul style="list-style-type: none"> - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] <p>Cooking and nutrition - Key stage 1</p> <ul style="list-style-type: none"> - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from <p>Cooking and nutrition - Key stage 2</p> <ul style="list-style-type: none"> - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • Choose Health (KS2 upper) • Digest this! (KS2) 	<ul style="list-style-type: none"> • How My Body Works (KS2) 		<ul style="list-style-type: none"> • World of Food • Fuel your body • Milk Machine • Honey Factory

