**Key message:** Outline where and how wheat is farmed and processed in the UK.

**Objectives:**
- Explain the structure of a wheat plant and a grain.
- Investigate wheat farming in the UK and identify the key stage of primary and secondary processing.

**Resources**
- Samples: ear of wheat and grains
- Wheat and grains PowerPoint presentation
- Wheat and grains worksheet
- [Wheat farming Video](#)
- [Wheat into flour Video](#)
- [Industrial bread process](#)
- Wheat processing worksheet
- Wheat farming in the UK presentation

**Introduction**
- Explain the structure of wheat to pupils. Use examples or the Wheat and grains PowerPoint presentation. Highlight the 'ear', which contains (on average) 40-50 grains. Grains are milled into flour. A grain comprises three parts: Bran, wheat germ and endosperm. Pupils could use the Wheat and grains worksheet.

**Activity ideas**
- Ask pupils to describe primary and secondary processing – this will help them better understand the processes involved in the 'grain chain'.
  - Primary production: growing, raising, cultivating, picking, harvesting, catching food;
  - Primary processing: milling, malting, milk pasteurization;
  - Secondary processing: mixing, mincing, baking, canning.
- Introduce pupils to the main stages of the 'grain chain' growing (primary and secondary processing) of wheat by watching the Wheat farming and Wheat into flour videos. Challenge pupils to recognise the main steps (primary and secondary processes) involved. Use the Wheat Processing worksheet to support.
- Set pupils the challenge to investigate wheat farming in the UK, including the main primary and secondary processing steps, through independent study of the Wheat farming in the UK PowerPoint presentation. Ask them to develop a short report.
Round up

Recap the learning by questioning the pupils:

- Describe the structure of wheat and a grain.
- What are the three part of a grain?
- What is the difference between primary and secondary processing?
- Give four examples of primary and secondary processing techniques.
- Describe the main 'grain chain' steps involved in producing wheat for flour.

Extension ideas

- Ask the pupils to outline the Wheat farming year, explaining what happens in Autumn/Winter, Spring and Summer.
- Explain the term 'extraction rate'.
- Find out more about flour improvers and why they are added to flour.

Fact file

Cereals are the grain or seeds of cultivated grasses; the main cereals are wheat, rice, oats, corn (maize), rye and barley.

The grains of barley, oats and rice are covered with a protective husk which must be removed before they can be used for food. Wheat, corn and rye do not have this protective husk.

85% of flour in the UK is milled from wheat also grown in the UK.