

Sow, Grow and Farm

Within this topic you will acquire the knowledge and skills to:

**Sustain and improve the environment.
Appreciate the benefits of diversity.**

Sow, Grow and Farm

Farming in the UK

Farming is the business of growing crops and rearing livestock. Up to 70% of the land in the UK is used for farming. There are three main types of farming in the UK. These are arable, pastoral and mixed.



Arable farming is growing crops, such as cereals and vegetables.



Pastoral farming is rearing animals, such as cows and sheep.



Mixed farming is both growing crops and rearing animals.

The type of farming depends on the climate, the quality of the soil and the topography of the area. For example, the flat, nutrient-rich land in the east of England is perfect for arable farming, whereas the wet and windy hills of central Wales are most suited to pastoral sheep farming.

Food miles

Consumers in the UK have come to expect that they can buy most foods all year round, regardless of the growing season. This means that some foods are transported from where they are grown to where they are eaten. The distances food travels is known as food miles. However, this movement of goods means more energy is being used to transport the food and keep it fresh, which can add to pollution and contribute to climate change.

Glossary

carpel	The female part of a flower, consisting of the stigma, style, ovary and ovules.
climate	The general weather conditions found in a place over a period of time.
fertiliser	A natural or chemical substance that is spread on the land or given to plants to make them grow successfully.
irrigation	The practice of supplying land with water so that crops and plants will grow.
livestock	Animals and birds that are kept on a farm, such as cows, sheep or chickens.
pesticide	A chemical substance used to kill animals and plants that are harmful to crops.
stamen	The male part of a flower, consisting of a thin stem, called the filament, and the anther that is covered with pollen.

North and South America

The continents of North and South America can be divided into environmental regions based on their physical features, climate and soil types. The characteristics of these environmental regions determine which type of farming will thrive in that area.

Citrus farming in California

The climate in California, on the west coast of North America, is hot and sunny in the summer and mild in the winter. The soil is fertile and well drained. This suits the growing of citrus fruits, particularly oranges. Several different types of orange are grown and sold in the United States or transported around the world.



orange grove

Coffee growing in Peru

Peru, in South America, has a cool to warm, tropical climate with frequent rainfall and rich soil. This makes ideal growing conditions for coffee. Growing and processing coffee is a difficult and time-consuming task because most of the work is still done by hand. The Fairtrade Foundation offers training to farmers to improve how they process coffee, so they can earn a better living.



coffee plant

Allotments

Allotments are small pieces of land that individuals can rent to use for growing fruit, vegetables and flowers. The location of allotments in the local environment depends on many factors, including soil quality, drainage, transport links, availability of water and local facilities.



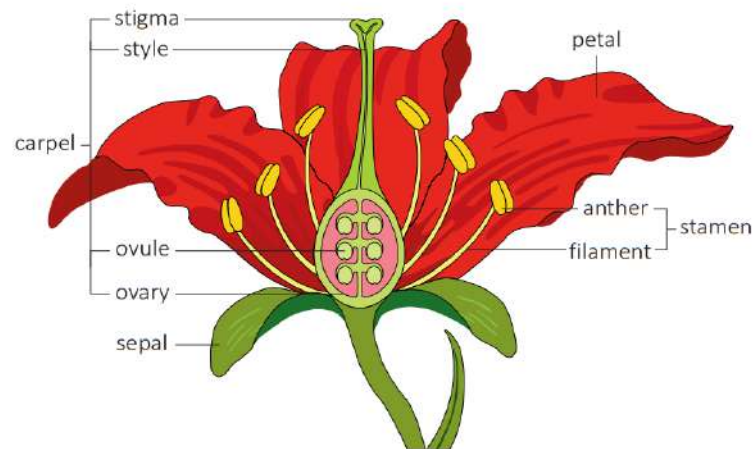
During the Second World War there were food shortages and rationing. The Dig for Victory campaign encouraged people to grow fruit and vegetables on open land, increasing the number of allotments by over 70%.



Plant life cycles

Plants can reproduce in one of two ways. Firstly, by sexual reproduction where two parent plants are needed, and the offspring are genetically different to either parent. Secondly, by asexual reproduction where only one parent plant is needed, and the new plants are genetically identical to that parent. Some plants can reproduce in either way.

Flowers are needed for sexual reproduction. Flowers have both male and female parts. Pollen from the male stamen gets transferred to the female carpel in a process called pollination. Following pollination, the ovules are fertilised and seeds are produced.



Modern farming techniques

Some farmers use modern farming practices, including new machinery, technology and scientific discoveries, to produce more food. Whilst this has increased food production there have also been some negative effects on the environment.

Modern farming techniques include chemical pesticides, synthetic fertilisers and irrigation technologies.

Climate zones

The world is divided into five main climate zones. These are areas of similar average temperature and average rainfall. Mountains have variable climates depending on altitude.



The **polar zone** is cold and dry with long, dark winters. Average temperatures are 10°C to -55°C.



The **temperate zone** has warm summers, cool winters and year-round rainfall. Average temperatures are 0°C to 20°C.



The **Mediterranean zone** has hot summers and mild, rainy winters. Average temperatures are 15°C to 30°C.



The **desert zone** is hot year-round and has very little rainfall. Average temperatures are 25°C to 40°C.



The **tropical zone** has a wet season and a dry season. It is hot and humid. The average temperature is around 31°C.



Mountains have changeable climates with colder temperatures and more rainfall as the elevation increases.