



Year 5 Curriculum Overview
Term 2.1

Teaching Team:

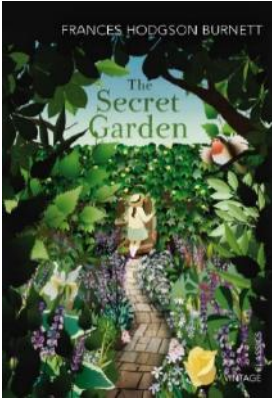
Mr Johnson, Miss Fisher, Miss Harrison, Mrs Patel

SLT: Mrs Saboor

PE Day: Tuesday

Homework: Homework is set on Friday and returned by Wednesday.

Please see below an overview of the main themes, knowledge and skills we will be covering this half term.

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| Enquiry Question | What is the importance of agriculture in the United Kingdom? |
| Significant People | Stephen Hawking (Linked to the value of curiosity) |
| Class Texts | The Secret Garden by Frances Hodgson Burnett  |

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| | <p>(Themes: Nature, Magic, Self-Awareness, Secrets, Childhood, Belief and Class Differences)</p> |
| Reading | <p>Reading Domains</p> <p>2b retrieve and record information / identify key details from fiction and non-fiction</p> <p>2h make comparisons within a text</p> <p>Children will continue focussing on word reading, in particular how suffixes change the meaning of a word and identify words with the same suffix. They will be focusing on their retrieval skills and developing their ability to read a question carefully and identify the key words to support their skimming and scanning. To coincide with their writing, children will be exploring characterisation and how feelings are conveyed through the language the author uses. They will then move onto applying their</p> |

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| | <p>ability to compare characters behaviours, actions and motives through the author's language choices. The children will explore the themes from the book and focus on looking at the choice of language used and the intended effect on the audience.</p> |
| Writing | <p>This half term, children will be using a specific example of an adventure narrative to apply a range of descriptive language choices and to build up characterisation. Children will be using specific skills and writing for different purposes. They will begin with descriptive writing to entertain before exploring and creating their own journalistic reports, which is writing to inform. Following this, children will then be introduced to narrative poetry and using powerful language choices to entertain and engage the reader.</p> |
| Maths | <p>During this half-term, children will be focusing on fractions and applying their previous learning of the four operations to</p> |

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| | <p>identify equivalent fractions. They will be comparing fractions before exploring different types of fractions such as mixed number fractions and improper fractions. Further to this, the children will be adding and subtracting fractions, where they will apply their previous learning of equivalent fractions to convert fractions, so that the denominators match. Throughout all their Maths learning, children will continue daily retrieval practice to develop their long-term memory and ensure that previous learning can be applied. Further to this, children will continue to solve worded problems and develop their skills of reasoning, which will involve children being introduced to SATS based questions to prepare them for Year 6.</p> |
| Geography | <p>This project teaches children about the features and characteristics of land use in agricultural regions across the world, including a detailed exploration of significant environmental areas. We will be</p> |

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| | learning about agriculture and farming in the UK, grid references, a farmer's year, impact of modern farming, potato farming, climate zones and North and South America. |
| Science | This half term children will be learning about the forces of gravity, air resistance, water resistance and friction, with children exploring their effects. They will learn about mechanisms, their uses and how they allow a smaller effort to have a greater effect. They will also be learning about materials and conducting a variety of investigations to test/sort materials. The half-term will conclude with a Lab Session linked to our previous topic (from Autumn 2). |
| Art | This project teaches children about the visual qualities of line, light and shadow. They explore the work of Pablo Picasso and Rembrandt and are introduced to a range of shading techniques. They take black and white photographs and use pencil, pen and |

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| | ink wash to reimagine their photographs in a shaded drawing. |
| Music | This half term the learning will be focussed on the song, 'Make You Feel My Love' by Bob Dylan – a Pop Ballad sung by Adele. The material presents an integrated approach to music where games, elements of music (pulse, rhythm, pitch etc), singing and playing instruments are all linked. As well as learning to sing, play, improvise and compose with this song, children will listen and appraise other Pop Ballads. |
| Computing | During this half term, children will be using an app on the IPAD called 'vectornator'. They will be learning about what vector drawings are and will be creating their own vector drawings on the IPAD. |
| PSHE | Our unit this half term is called health and well-being. During this half term, children will be learning about changes to their body. Some of these sessions will be split into boys and girls. |

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| RE | In RE, the topic is 'being open, honest and truthful'. Children will be exploring how different religions show openness, honesty and truthfulness. |
| PE | Children will be taking part in Yoga and Volleyball sessions. |

Knowledge Organiser:

Geography-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.

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%.



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 technology.

Potato farming in Jersey.

The warm climate, sloping topography, good transport links and seaweed fertiliser make Jersey an ideal place to grow Jersey Royal potatoes. Only potatoes grown on Jersey can be called Jersey Royals.

The potato famine in Ireland.

The Great Famine also referred to as "The Great Hunger", that lasted between 1845 and 1849 was arguably the single greatest disaster that affected the Irish history.

The potato was the staple diet for the Irish people at the time and was the only food that was affordable for the masses. Over a million of its population would die from disease and starvation and through forced emigration, Irelands' population was reduced by almost a further two million people.



Tea growing in India.

India is one of the world's leading countries in tea production and it grows some of the very best. Though it produces all varieties of tea, it is best known for its black teas, including Assam, Darjeeling, and Nilgiri.

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

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| Species | A group of living things that can produce living things of the same kind. |
| 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. |

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.

Book Knowledge Organiser – The Secret Garden by Frances Hodgson Burnett

Important Information

Plot

Mary Lennox is a sour and disagreeable 9-year-old girl who lives with her father (a British statesman) and mother (always partying and socialising) and is left to be raised by Ayah. When all three die from a cholera outbreak, she is forced to move in with her uncle. She soon realises the servants will not do everything for her and she is left to develop her own independence and imagination. After meeting Colin and Dickon, they explore a secret garden locked by Archibald Craven after his wife's death.

Themes

Nature, Magic, Self-Awareness, Secrets, Childhood, Belief and Class Differences.

Setting

Mary starts the story in India, travels by boat to England and ends up in the Yorkshire Moors at her uncle's manor house. There are many scenes of large, empty houses or rooms which accentuate the loneliness felt by many of the characters.

Characters

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| Mary Lennox | Protagonist – Young rich girl living in India catered for by servants until her parents die and she moves to her uncle's in Yorkshire. |
| Colin Craven | Ten-year-old boy and son of Archibald Craven. He is made to believe he is sick until he meets Mary and Dickon. |
| Dickon Sowerby | Younger brother of Martha and a down-to-earth farm boy. |
| Archibald Craven | Mary's uncle and master of Misselthwaite Manor whose wife died 10 years earlier, thus avoiding the secret garden and even his own son. |
| Lilias Craven | Was the wife of Archibald Craven. Died in the secret garden. |

Name of Book: The Secret Garden

Date Published: 1910

Author: Frances Hodgson Burnett

Reading 'Reconsidered' Spine: Archaic Text

Genre: Historical Fiction

What Can the Book Teach Us?

Think less about yourself and more about other people.

Things which appear lifeless can come back to life with proper care.

Quotes

“Mary had worn her contrary scowl for an hour after that, but it made her think several entirely new things.”

“When new beautiful thoughts began to push out the old hideous ones, life began to come back to him,”



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| Ben Weatherstaff | Groundskeeper at Misselthwaite Manor who befriends Mary. |
| Susan Sowerby | Mother of Martha and Dickon who is generous and warm. |
| Martha Sowerby | Mary's main servant at her uncle's estate who is kind yet blunt. |
| Mrs. Medlock | Housekeeper and servant at Misselthwaite Manor. |
| Dr. Craven | Cousin of Archibald and serves as Colin's doctor. |
| Mr & Mrs Lennox | Mary's wealthy parents who leave their daughter to be raised by a nanny. |
| Aya | Mary's main servant in India who does everything for her. |

Secret Garden Facts

- 1.) In 1898 Burnett rented Great Maytham Hall in Kent. The gardens inspired the book.
- 2.) The original title was *Mistress Mary*, the name coming from the nursery rhyme 'Mary, Mary, quite contrary'.

Context – The British Raj was the rule by the British Crown on the Indian subcontinent from 1858 to 1947 where rule was passed to Queen Victoria. Mary Lennox is an Anglo-Indian child, which means that her parents are both English but she was born in colonial India. She becomes used to beating and kicking her Indian nannies (called "Ayahs") without any kind of punishment at all. The book clearly does not approve of Mary's behaviour yet it tends to overlook the strong history of Indian resistance to British rule from the 1857 Rebellion of the Indian army towards the British. By 1910, when the book was published, Mahatma Gandhi was already working for Indian liberation. There are some stereotypes and clichés to be wary of, along with plenty of descriptions of these two contrasting regions to unpick and analyse.

Key Vocabulary

| | |
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| abasement | a state of depression, degradation or humiliation |
| contrary | opposed / the opposite |
| doleful | filled with or expressing grief / mournful |
| draught | current of air coming into a room or vehicle |
| embowered | shelter with foliage |
| enshroud | to cover as if with a shroud / to hide from view |
| harangue | strong feeling or expression / non-stop tirade |
| hasten | to move or act swiftly |
| hobnail | short nail used for nailing soles of heavy boots / shoes |
| imperious | arrogant and overbearing in manner |
| impudent | shameless or brazen |
| moor | an uncultivated expanse of open rolling land |
| obsequious | full of or showing compliance / obedience / following |
| Rajah | prince or ruler in India |
| renumeration | payment for work that has been done |
| sallow | having a yellowish and unhealthy-looking colour |
| trifle | something of little importance or value; a small amount |
| veranda | porch/balcony extending along the outside of a building |



Vocabulary

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| numerator |
| denominator |
| unit fraction |
| non-unit fraction |
| whole |
| equivalent |
| mixed number |
| improper fraction |
| simplest form |
| multiple |
| common denominator |
| common numerator |

To find equivalent fractions, we multiply or divide the numerator and denominator by the same number.

$$\frac{1}{2} = \frac{5}{10} = \frac{50}{100}$$

Diagram showing multiplication by 5 and 10, and division by 5 and 10.

We can compare and order fractions by using common denominators.

$$\frac{11}{8} > \frac{5}{4} = \frac{10}{8}$$

Mixed numbers contain a whole number and a fraction.

whole \rightarrow $2\frac{1}{4}$ \leftarrow fraction

An improper fraction has a numerator which is greater than or equal to the denominator.

$$\frac{5}{3}$$

Converting fractions

$\frac{9}{4}$ $9 \div 4 = 2r1$ $2\frac{1}{4}$

Divide the numerator by the denominator.

This shows you the whole number and the fraction.

Multiply the whole by the denominator to make an improper fraction.

$$2\frac{5}{6} = \frac{12}{6} + \frac{5}{6} = \frac{17}{6}$$

Add the fractions together.

To add or subtract fractions with denominators that are multiples of the same number, we must change one fraction to have the same denominator.

$$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$$

$$\frac{4}{5} - \frac{3}{5} = \frac{1}{5}$$

$$\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8}$$

$$\frac{5}{6} - \frac{2}{3} = \frac{5}{6} - \frac{4}{6} = \frac{1}{6}$$

Adding and subtracting fractions

Prior knowledge from previous year groups:

Things move differently on different surfaces.
 Magnets have two poles and they attract and repel materials.
 Forces are pushes and pulls.
 Most forces need contact between objects, but magnets can act at a distance.
 Magnets are made of materials that create a magnetic field (the area in space where the force of magnets can be detected).
 Forces are shown by arrows in diagrams. The bigger the arrow, the bigger the force.
 When forces are unbalanced, objects can speed up, slow down, or change direction.

What will the children know by the end of the unit?

What is force?
 Forces are **pushes and pulls** which make things move and stop moving.
 When forces are **unbalanced**, objects can speed up, slow down, change shape or change direction. There are a number of different forces that affect us in our daily lives:
Applied force: The force placed on an object by a living creature.

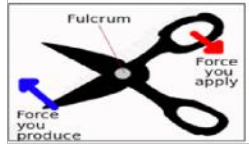
What is gravity and who discovered the theory?
Gravity attracts all matter towards each other. The bigger an object's **mass**, the more gravity it will have. The smaller the **mass** of an object, the less gravity it will be subject to.
 The force of gravity acting between the Earth and an **unsupported object with a smaller mass** causes the object to fall to the Earth. (towards the Earth's centre/ core)
 The **moon's gravity** causes our ocean tides on Earth. The **Sun's gravity** keeps Earth in orbit around the Sun.
 We don't actually "feel" gravity. We only feel the **effects** of trying to overcome it by jumping or when we fall.
Sir Isaac Newton discovered gravity around 300 years ago. The tale is that he saw an apple fall from a tree, and wondered what force made it fall to the ground.

What is the effect of friction on movement?
Friction is a force that acts when an object moves over another.

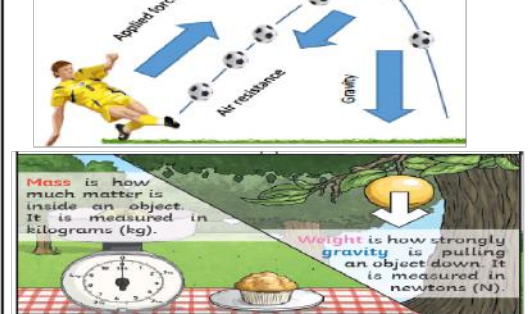
What are the effects of air resistance?
Air resistance is a type of friction force that pulls against an object travelling through the air. Some objects are more 'streamlined', meaning that the air pulls on them less, and they travel faster.

What are the effects of water resistance?
Water resistance is the friction force on objects floating or moving in water. Some objects are more 'streamlined', meaning that the water pulls on them less, and they travel faster.

How is movement affected by levers, pulleys and gears?
 Some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.



Levers give us extra pushing or pulling force and help us lift greater weights.
 Gears are different sized cogs which work together to give a machine extra force.
 Pulleys are wheels and ropes that work together to lift heavy objects.



Examples of forces in action:

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| swimmer's force water resistance | gravity air resistance | cyclist's driving force friction |
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Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

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| Pulleys | Gears/Cogs | Levers |
| Pulleys can be used to make a small force lift a lighter load. The more wheels in a pulley, the less force is needed to lift a weight. | Gears or cogs can be used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other. | Levers can be used to make a small force lift a lighter load. A lever always rests on a pivot. |

Opportunities for cross-curricular links.

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| Literacy | Making a Prediction – what will be the outcome of an experiment Forming a Hypothesis - Forming an opinion and justifying own views (APE response) Non-chronological report on a scientist |
| Maths | Creating tables for results. |
| D&T | Design and possibly make products that use levers, pulleys, gears and/or springs and explore their effects. |
| History | Research how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation. Also a link to work in previous unit on Space |

Vocabulary

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| air resistance: | This force is also known as drag. It is the force that acts on objects as they fall through the air. |
| area: | The size of a surface. |
| balanced force: | This happens when two forces are of the same size but are acting in opposite directions. |
| compression: | The squashing of particles. Gases can be easily compressed because there are spaces between the particles. |
| drag: | A type of force which acts on an object that is moving through air or water. |
| equilibrium: | Balanced. |
| extension: | This is the increase in length when something like a spring or elastic band stretches. |
| force: | A push, pull or twist. Measured in newtons (N). |
| friction: | This occurs when two objects move past each other. Friction slows objects down. |
| gravity: | The force of gravity prevents everything from floating away from earth. |
| Hooke's law: | A law that states that if you double the force of an object, the extension will also double. |
| lubrication: | Oil is a good lubricator - it reduces the effect of friction. |
| magnetic field: | The area around a magnet. |
| mass: | The amount of stuff (matter) something is made of. Measured in kg. |
| moment: | This is a turning force. |
| newton: | Unit of force, symbol N. |
| newton metre: | An instrument used to measure the force acting on an object. |
| parachute: | Used when jumping out of an aeroplane to slow the fall down. The forces acting on a parachute are often used in exam questions. |
| Pascals: | The unit of pressure (Pa). |
| pressure: | How much force in a certain area. Equation: pressure = force ÷ area. |
| streamlined: | Shaped to travel through air or water with as little resistance as possible. |
| unbalanced: | When two forces are acting on an object and one of the forces is greater than the other. |
| water resistance: | Acts on an object as it moves through water. |
| weight: resistance: | This is a force acting on an object's mass. Weight is measured in newtons (N). |

- Investigate!**
- Discuss what we know about forces and **what a force is**.
 - Identify the force acting on an object and label **diagrams** with the appropriate names of forces.
 - Discover the difference between **weight and mass**. Use Newton metres to measure the mass of objects and compare this to their weight.
 - Investigate the **theory** gravity and **Sir Isaac Newton** - answer comprehension questions.
 - Use an experiment about **friction** to make a hypothesis and predictions about **surfaces, friction and distance travelled**.
 - Conduct an investigation to **compare materials** used to make a parachute. Observe how **air resistance** can have an **effect on parachute design and effectiveness**.
 - **Design, make and test** a boat to assess the **effect of water resistance** on movement.
 - Research and explore simple mechanisms in order to design a machine using pulleys, gears and levers.

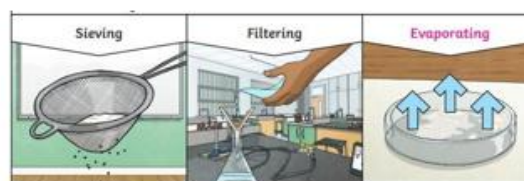
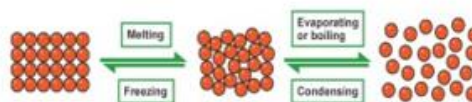
WHAT SHOULD I ALREADY KNOW:

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius.
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

WHAT WILL I KNOW BY THE END OF THIS TOPIC

- The uses of different materials based on their properties
- Identify materials that are thermal conductors and insulators.
- Give reasons for the uses of thermal conductors and insulators.
- Identify electrical conductors and insulators.
- Explain that some materials are better conductors than others.
- Describe dissolving and explain the difference between melting and dissolving.
- Identify materials which will dissolve in water.
- Identify different ways materials can be mixed together.
- Identify and explain irreversible chemical changes.
- Describe the new materials created in irreversible chemical changes.

DIAGRAMS



Reversible and Irreversible Changes



VOCABULARY

| | |
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| natural | Existing in or a consequence of nature. |
| man-made | Made or caused by human beings. |
| properties | The properties of material include any qualities that can be measured, such as mass, length, melting point, temperature and more. |
| conductors | A material that <u>heat</u> or electricity can easily travel through. |
| insulators | A material that does not let heat or electricity travel through them. |
| dissolving | To become part of a liquid. |
| melting | The process of heating a solid until it changes into a liquid. |
| soluble | Able to be dissolved, especially in water. |
| insoluble | Incapable of being dissolved. |
| filtering | A process used to separate solids from liquids or gases. |
| evaporating | When a liquid turns into a gas or vapour. |
| condensing | When a gas, such as water vapour, cools and turns into a liquid. |
| irreversible | Not able to be undone or altered. |
| chemical changes | Any change that causes a new substance to be formed. |
| reactant | The substances that are used to bring about the chemical reaction. |

Home Learning

- This half term our school value will be 'Curiosity'. Please discuss what this means with your child.
- Please talk to your children about the Knowledge Organisers and the key information and vocabulary.
 - Please ensure that your child reads at home daily.
 - Please return the reading books by Tuesday so they can be changed.
- Year 5 have their spelling test every Friday. Please ensure that your child is practicing their words in readiness for their test.

Useful Links:

[KS2 Geography: Food and farming - BBC Teach](#)

[Farming Fortnight | Countryside Classroom](#)

[51 Farms, Barns & Rural Life Art Lessons ideas | art lessons, state fair, rural life \(pinterest.com\)](#)

[Food and farming | TheSchoolRun](#)