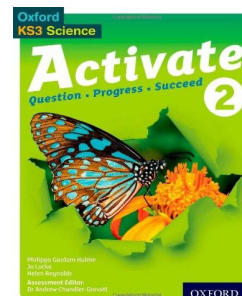




Science Overview

Term: Autumn
Year: 8
Teacher: Ms Fatima Mamache
Textbook title: KS3 Science Activate Book 2



What will we be covering this term?

1st Half Term:

Health and lifestyle: In this unit students will compare the effects of healthy and unhealthy lifestyles on their body. Students will be learning about why nutrients are essential and different types these nutrients enter our bodies. Students will know how deficiencies develop and treatments these might require. Students will investigate how microbes are used in the food and drink industries and details of these chemical reactions. Pupils will understand different drug types and these effects including disorders and their treatments.

Ecosystem processes: They will look at why organisms need energy to function effectively. Students will learn different energy levels in a food chain and their key features of each animal type. They will investigate how important photosynthesis is to our own existence and learn the details of the process. Students will learn different types of respiration and their applications.

Finally, they will investigate the differences that exist between organisms, and why this is important for their survival.

2nd Half Term:

The periodic table: Students will learn about the different types of elements that make up key blocks and details of each. Pupils will learn and investigate; what are metal compounds and their properties, what are periods and groups, Properties of Group 1, 7 & 0.

Separation technique: Students will learn; what are the differences between mixtures and compounds, what methods can separate mixtures of different states. Students will investigate how solvents and solutions work together to separate mixtures in methods such as chromatography and filtration. Pupils will learn how to separate solute and solvents using evaporation and distillation.

Metals and acids: By the end of this unit, students will be able to compare the reactions of different metals with dilute acids. They will be able to describe an oxidation, displacement, or metal acid reaction with a word equation. They will use particle diagrams to represent



oxidation, displacement, and metal-acid reactions. They will identify an unknown element from its physical and chemical properties.

Teacher's Marking Key:

Mark code	Means
SP	Spelling error
//	New paragraph needed
Work underlined	Indicate a word or phrase does not make sense
?	Not clear. Rewrite this section again to improve the expression.
FS	Write in full sentences
EX	Develop your explanation further using scientific keywords.
D	You need to add more detail.
EBI	Even better if
www	What went well
GR	Grammar error
P	Punctuation error

How will my child be assessed this term?

There will be at least 2 assessed pieces this term. In more detail;

1st Assessment- Health and lifestyle & Ecosystem processes

2nd Assessment- The periodic table & Separation technique

At the end of the term there will summative exam that will test their knowledge for what they've covered during the course of the entire term.

How can I help my child in this subject?

- Ensure homework is complete; you can track students' homework assignments at <https://www.showmyhomework.co.uk>
- Encouragement, praise, ensuring that they do their homework; and checking their student planner.
- Encouraging them to read around the subject.
- Their notes must be in order; discipline is essential.

Resources

Useful Websites

For independent study the following websites are recommended:

- KS3 Biology: <http://www.bbc.co.uk/education/subjects/z4882hv>
- KS3 Chemistry: <http://www.bbc.co.uk/education/subjects/znxytyrd>



- KS3 Physics: <http://www.bbc.co.uk/education/subjects/zh2xsbk>
- Link 4 science: <http://links4science.blogspot.co.uk/>

Communications

Who do I contact if I have concerns about my child's progress in this subject?

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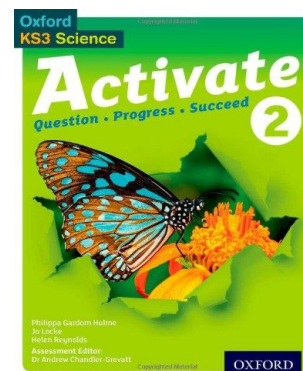
Science Overview

Term: Spring

Year: 8

Teacher: Ms Fatima Mamache

Textbook title: KS3 Science Activate Book 1



What will we be covering this term?

1st Half Term:

Electricity and magnetism: By the end of this unit, Students will be able to explain how objects can become charged, and how charged objects interact. They will be able to describe what is meant by an electric field. Students will be able to describe how current changes in series and parallel circuits when components are changed. They will be able to describe what happens when charged objects are placed near to each other or touching. Students will be able to use a sketch to describe how an object charged positively or negatively became charged up. They will use a diagram to explain how an electromagnet can be made and how to change its strength. They will explain the choice of electromagnets or permanent magnets for a device in terms of their properties.

Energy: By the end of this unit, students will be able to explain the advantages and disadvantages of different energy resources. They will be able to describe how the energy of an object depends on its speed, temperature, height or whether it is stretched or compressed. They will be able to calculate the useful energy and the amount dissipated, given values of input and output energy. They will be able to explain how energy is dissipated in a range of situations. Finally, they will be able to explain how a method of thermal insulation works in terms of conduction, convection and radiation.

**2nd Half Term:**

Adaptation and inheritance: By the end of this unit, students will be able to describe how a species' population changes as its predator or prey population changes. They will be able to explain effects of environmental changes and toxic materials on a species' population. They will be able to explain whether characteristics are inherited, environmental or both. Students will plot bar charts or line graphs to show discontinuous or continuous variation data. They will use a diagram to show the relationship between DNA, chromosomes and genes. They will be able to explain how a change in the DNA (mutation) may affect an organism and its future offspring.

Heart: Students will learn the basic structure and function of the heart.

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How will my child be assessed this term?

There will be at least 2 assessed pieces this term. In more detail;

1st Assessment- Electricity and magnetism & Energy

2nd Assessment- Adaptation and inheritance



At the end of the term there will be a summative exam that will test their knowledge for what they've covered during the course of the entire term.

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Science Overview

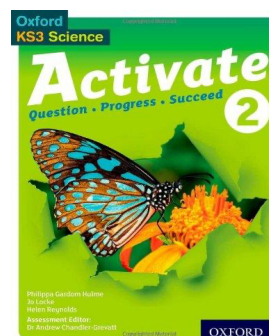
Term: Summer

Year: 8

Teacher: Ms Fatima Mamache

Textbook title: KS3 Science Activate Book 1

What will we be covering this term?





1st Half Term:

Motion and pressure: Students will use diagrams to explain observations of fluids in terms of unequal pressure. They will be able to explain why objects either sink or float depending upon their weight and the upthrust acting on them. Pupils will be able to explain observations where the effects of forces are different because of differences in the area over which they apply. They will be able to calculate speed from a distance–time graph.

The Earth: By the end of this units, Students will be able to explain why a rock has a particular property based on how it was formed. They will be able to identify the causes of weathering and erosion and describe how they occur.

2nd Half Term:

The Earth (Cont.): Students will be able to describe how human activities affect the carbon cycle. They will be able to explain why recycling of some materials is particularly important.

Metals and acids: By the end of this unit, students will be able to compare the reactions of different metals with dilute acids. They will be able to describe an oxidation, displacement, or metal acid reaction with a word equation. They will use particle diagrams to represent oxidation, displacement and metal-acid reactions. They will identify an unknown element from its physical and chemical properties.

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How will my child be assessed this term?

There will be at least 2 assessed pieces this term. In more detail;

1st Assessment- Motion and pressure

2nd Assessment- The Earth & Metals and acids

At the end of the term there will summative exam that will test their knowledge for what they've covered during the course of the entire term.

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