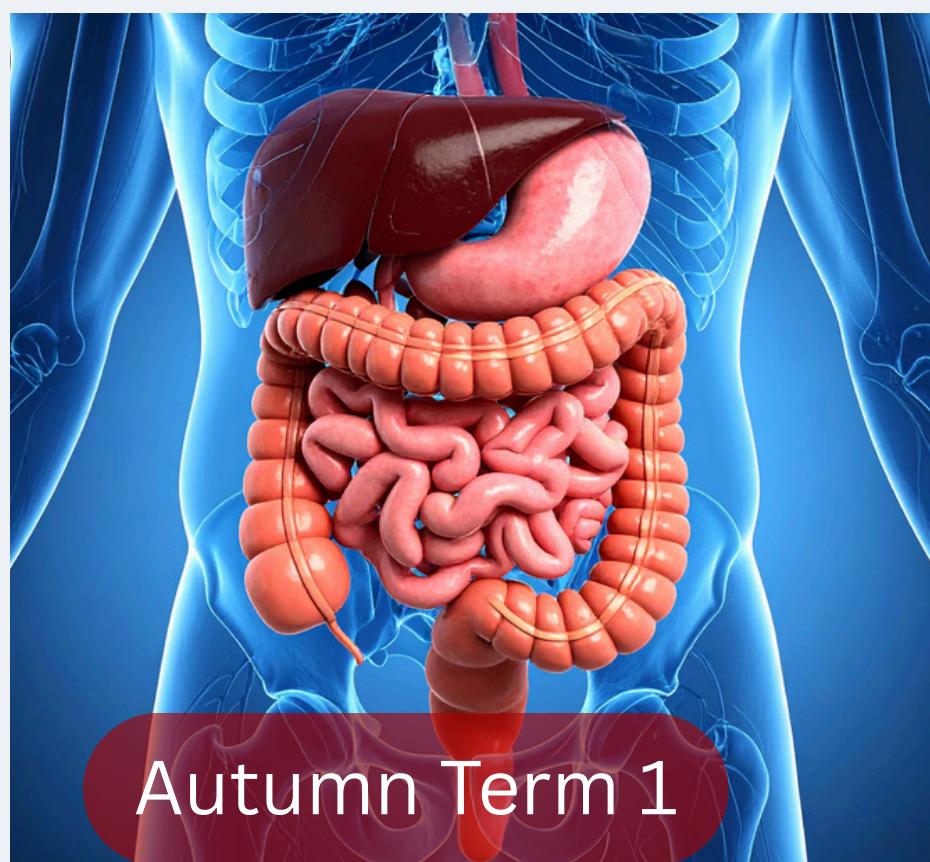


## YEAR 10 LEARNING JOURNEY INFORMATION

# SCIENCE

### Organisation Quantitative Chemistry



Autumn Term 1

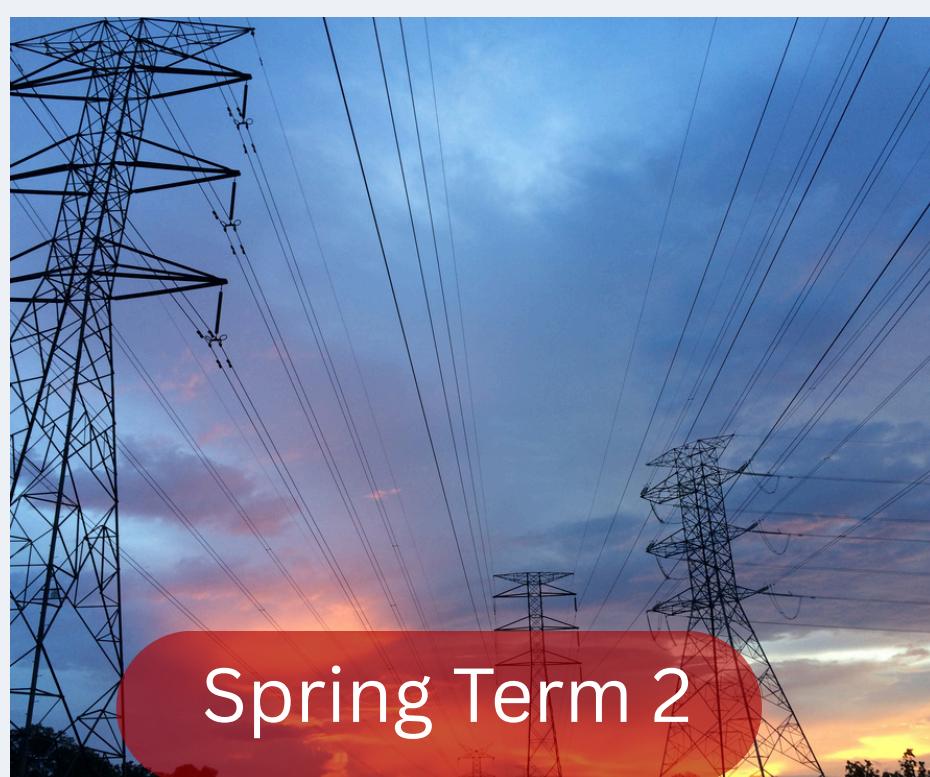
#### Knowledge

I will learn about the hierarchy of organisation in living things. I will learn in detail how the digestive system and circulatory system work together to supply nutrients and oxygen to the body cells. I will learn how chemists make accurate measurements of substances and how this is used in industry to carry out chemical reactions economically.

#### Skill

I will learn how to test food samples for different food groups, how to investigate the effect of pH on enzyme function and how to measure mass change during a reaction.

### Electricity



Spring Term 2

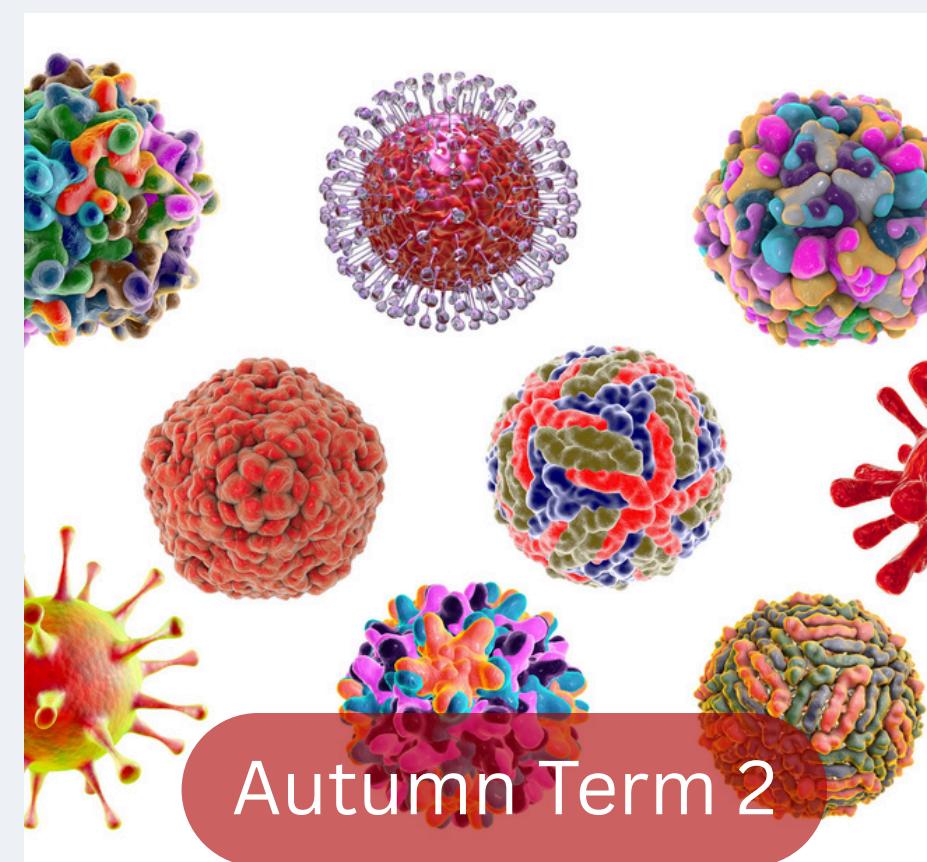
#### Knowledge

I will learn about how current, potential difference are linked and how energy is transferred in electrical circuits. I will learn about different electrical components, how power is supplied through the national grid and the domestic uses of electricity.

#### Skill

I will learn how to measure the resistance of a wire of increasing length and different electrical components.

### Energy Infection and Response



Autumn Term 2

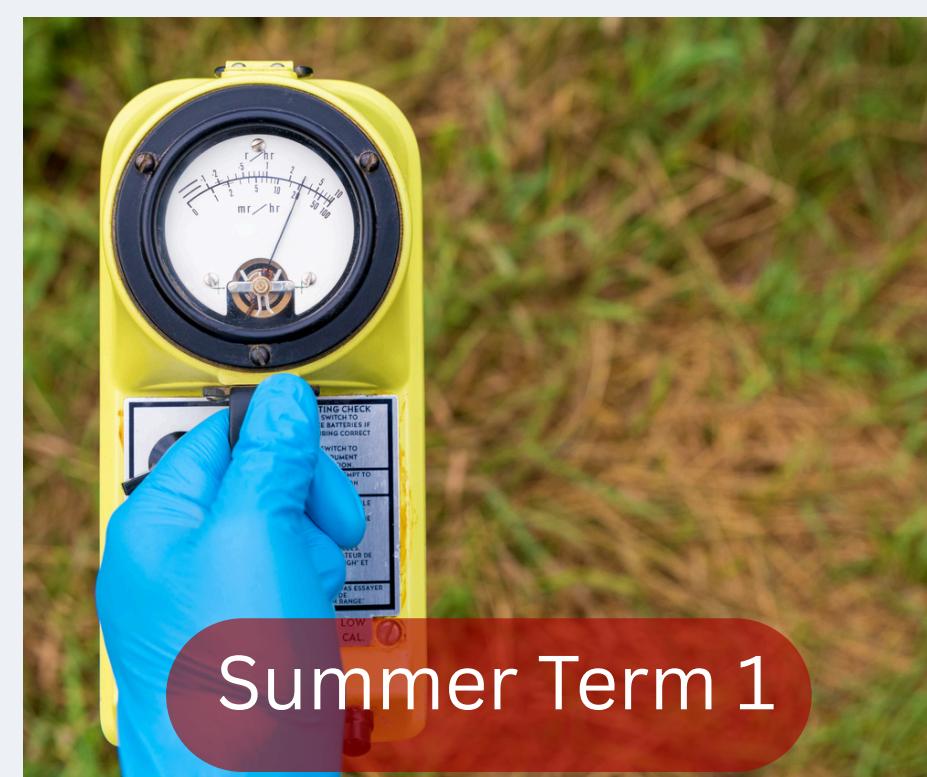
#### Knowledge

I will learn about the different energy stores, pathways and what happens to wasted energy. I will learn how to calculate the size of different energy stores/changes using equations and how to measure efficiency and power. I will learn about the different types of pathogens, the diseases they cause, how to reduce the spread of disease and how the body prevents and responds to infection.

#### Skill

I will investigate specific heat capacity in a metal block and how to investigate which antibiotic is most effective at killing bacteria.

### Waves Rates of Reaction



Summer Term 1

#### Knowledge

I will learn about the different energy stores and pathways and what happens to wasted energy and how to use equations involved with these. I will learn about the different types of pathogens, the diseases they cause, how to reduce the spread of disease and how the body prevents and responds to infection.

#### Skill

I will learn how to use ray boxes to investigate reflection and refraction and how measure infrared radiation using a Leslie cube.

### Chemical Changes



Spring Term 1

#### Knowledge

I will learn how acids and alkalis react in neutralise reactions. I will learn about the reactivity series and how this determines how different metals are extracted. I will learn about reduction, oxidation and electrolysis.

#### Skill

I will learn how to make a pure salt and how to separate solutions using electrolysis.

### Ecology



Summer Term 2

#### Knowledge

I will learn how the living and non-living factors interact in an ecosystem and how resources are cycled in the water and carbon cycles. I will learn about biodiversity; the impact humans are having on it and how we can protect it.

#### Skill

I will learn how to use a quadrat to estimate population sizes and monitor changes in distribution along a transect.