

## YEAR 11 LEARNING JOURNEY INFORMATION

# SCIENCE

### Homeostasis Organic Chemistry



Autumn Term 1

#### Knowledge

I will learn about the process of homeostasis which maintains the internal conditions of the body using the nervous and endocrine systems. I will learn about how and why crude oil is separated, how demand is met for fuels and how they react in combustion reactions.

#### Skill

I will learn how to measure reaction time using the ruler drop test and how to test for alkenes using bromine water.

### Forces



Autumn Term 2

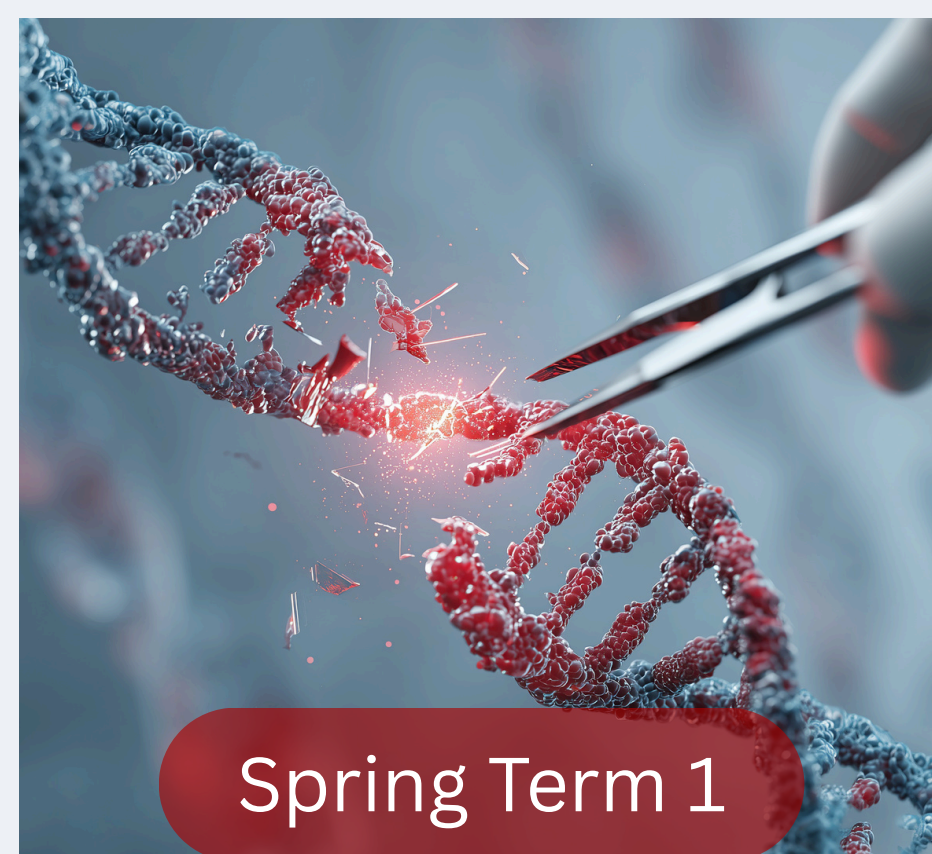
#### Knowledge

I will learn about the different contact and non-contact forces and how they act in pairs on objects to affect their motion and/or shape. I will learn about Newton's laws of motion and how these link to day to day life, for example stopping distance and safety systems in cars.

#### Skill

I will learn how to investigate Hooke's Law in elastic objects and how to measure the acceleration of an object with increasing force.

### Inheritance Using Resources



Spring Term 1

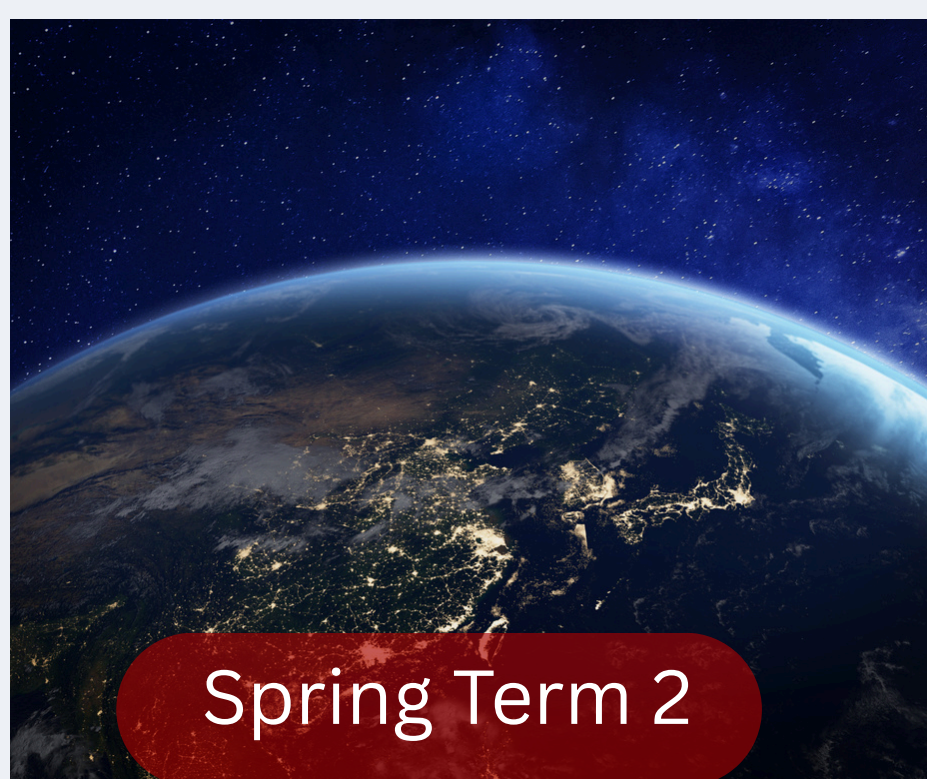
#### Knowledge

I will learn about DNA and its uses in embryo screening, genetic engineering and selective breeding as well as how natural selection leads to evolution. I will learn about how finite and renewable resources from the earth are used, the importance of reusing and recycling to ensure sustainability, how potable water is made and waste water treated.

#### Skill

I will learn how to use punnet squares to predict the offspring of a genetic cross and how to test water samples.

### Chemistry of the Atmosphere Electromagnetism Chemical Analysis



Spring Term 2

#### Knowledge

I will learn about how the earth's atmosphere has evolved over time, the processes that have led to these changes and the global warming crisis. I will learn about how electricity interacts with magnetic fields in the motor and generator effects. I will learn how scientists test for different chemicals and analyse mixtures using chromatography.

#### Skill

I will learn how to test for common gases, ions and use chromatography to analyse a mixture.

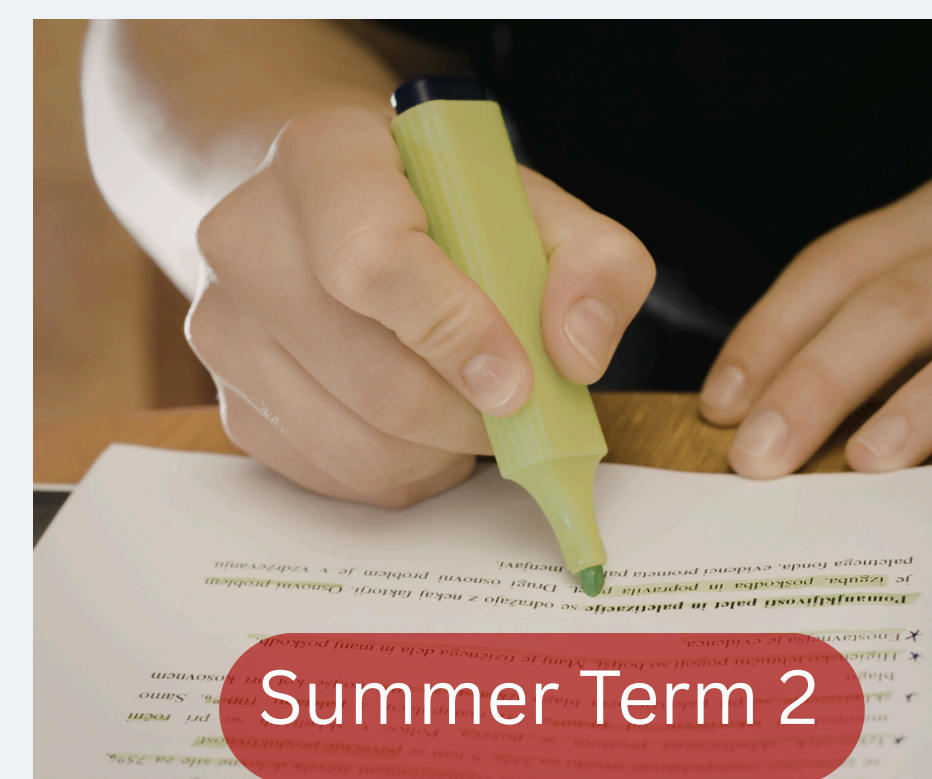
### Exam Focussed Revision



Summer Term 1

#### Knowledge

I will practice exam style questions learning how to apply knowledge succinctly and logically. I will practice using command words like describe, explain and analyse. I will practice numeracy skills like drawing a graph, identifying anomalies and calculating a mean. I will practice scientific skills like identifying sources of error and inaccuracy



Summer Term 2

**Last exams.  
Summer break!**