

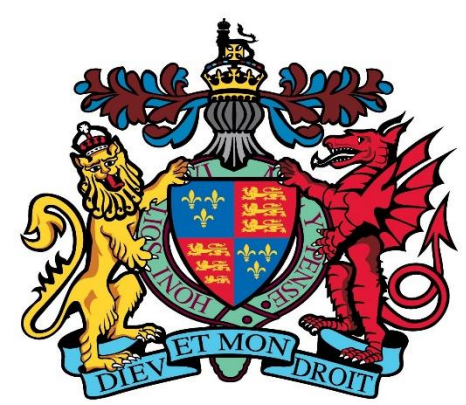
Year 7 Science Curriculum



Our aim is to give each student an appreciation, knowledge, and understanding of scientific facts, history, methods, and applications and to develop their practical and investigative skills.

Whether they proceed to advanced studies or finishes their formal scientific training at GCSE they should have a broad, informed foundation for the future.

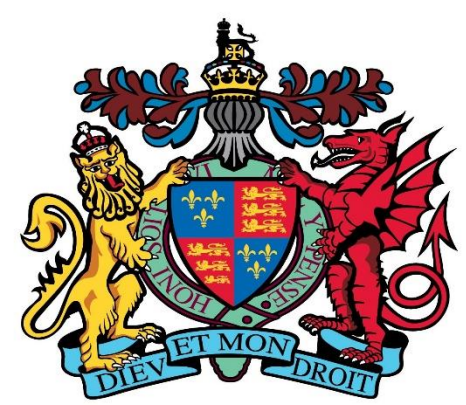
All students are taught balanced science (biology, chemistry, physics and How Science Works) in year 7.



Main Science Topics (Biology)

- Cells
- Reproduction
- Variation
- Relationships between organisms.
- Skeletons, muscles and movement

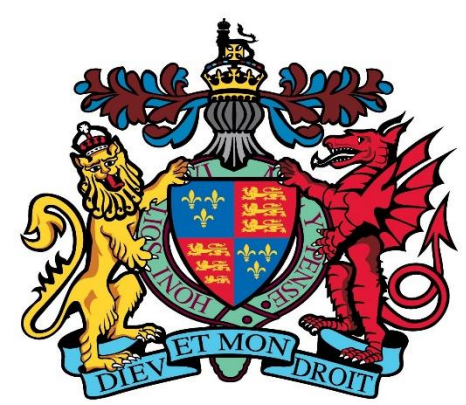




Main Science Topics (Chemistry)

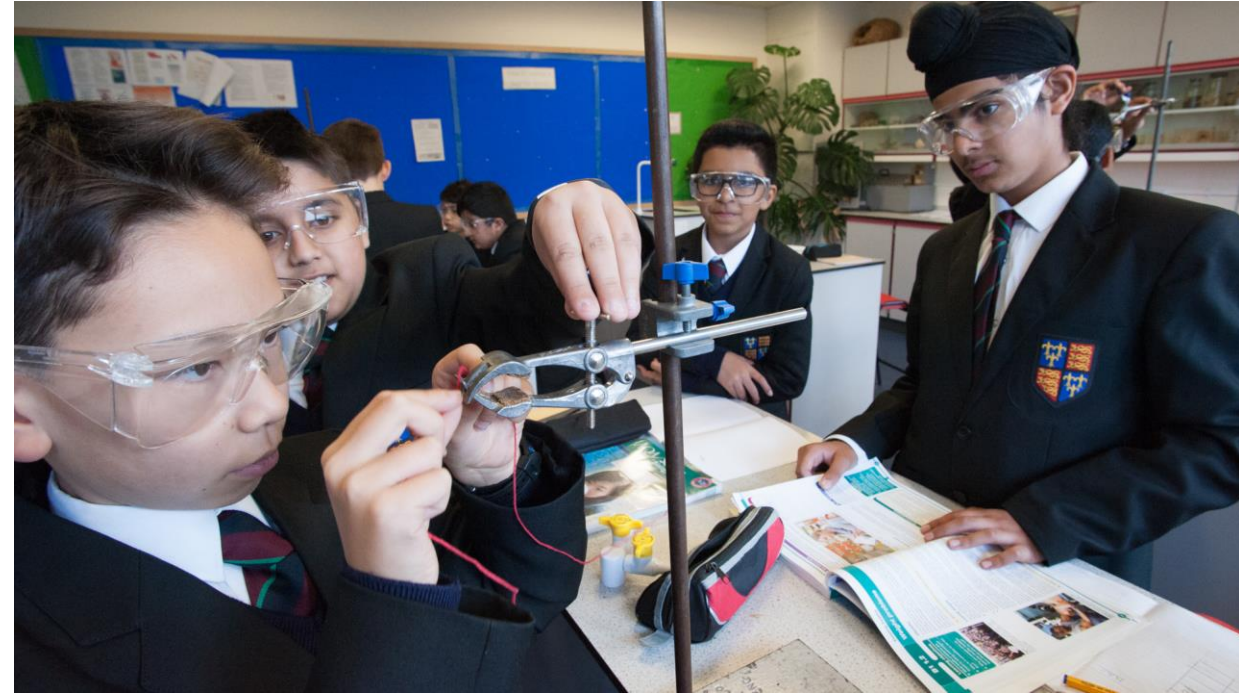
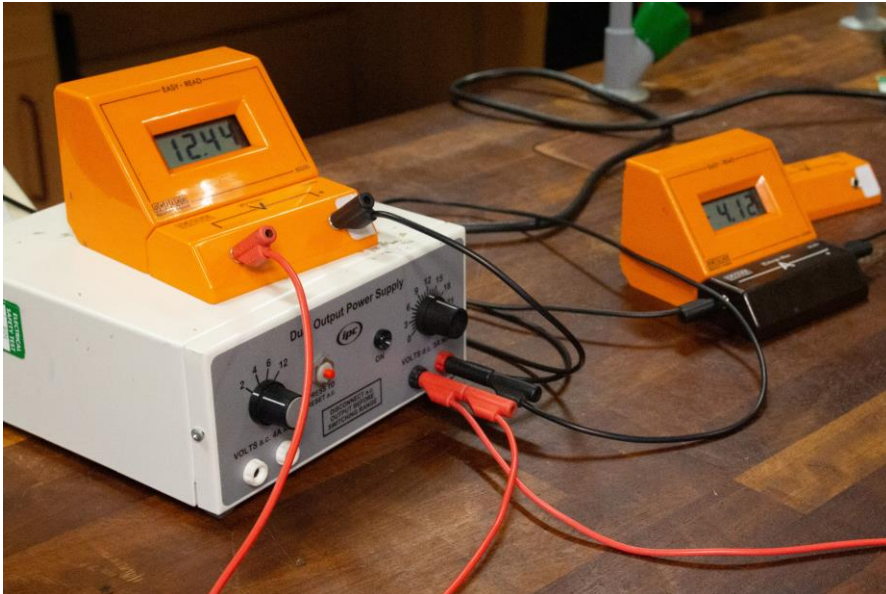
- Particle nature of matter
- Acids and bases
- Mixtures, compounds and elements

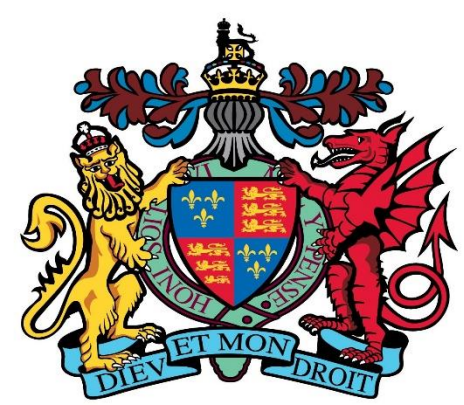




Main Science Topics (Physics)

- Forces
- Electricity
- Energy
- Space



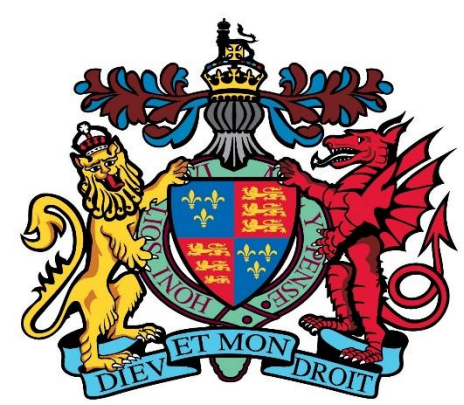


Assessment throughout the year



Students will complete a number of tests throughout the year reflecting on the topics they have learnt about in each term.





How parents can support their son's learning

Encourage student's natural curiosity to question the world around them.

Discuss science stories in the news and take the time to watch science documentaries together.

Identify real-world applications of the science they have been learning, forces acting on the car, the changes in the garden or park throughout the year and identifying household chemicals.

There are two potential practical ideas included in this presentation that could take place at home under adult supervision.



Lava Lamp

Did you know that oil and water are not the same density? That is why oil and water do not mix!

Density is a measure of how tightly packed together the particles that make up a substance are.

However, water and oil will add up to something that's even more fun!!

What you will need:

- **A glass or jar** (something you can observe through)
- **Water**
- **Oil** (vegetable oil or baby oil)
- **Food colouring** (liquid)
- **Alka-Seltzer** (effervescent tablets you can buy from any supermarket)



What you will do:

1. Fill the glass/jar with 1-2 inches of water.
2. Add your favourite food colouring.
3. Fill the rest of the glass with oil but stop about 1 inch from the top of the glass so it won't bubble over.
4. Drop a tablet into the mixture and watch the magic happen!

Making clouds

A cloud is a large collection of very tiny ice-crystal water droplets

The drops are so small and light that they can float in the air! This is how clouds can move through the sky with wind.

This experiment will help you visualise how clouds hold invisible water vapour that turns into rain when the warm air **condenses** water vapour into rain

What you will need:

- A glass, jar or vase
- Shaving cream
- Blue food colouring
- A syringe or dropper



What you will do:

1. Fill the glass with the $\frac{3}{4}$ full of water
2. Fill the top of the water with white foamy shaving cream
3. In a separate bowl, mix food colouring and water.
4. Using a dropper/syringe, start adding the coloured water to the shaving cream
5. Watch the cloud hold the water until it becomes too heavy and the coloured water starts to rain!