

Science at Tottington High School



Science Faculty at Tottington High School

Head of Faculty - Mr M Hardman,

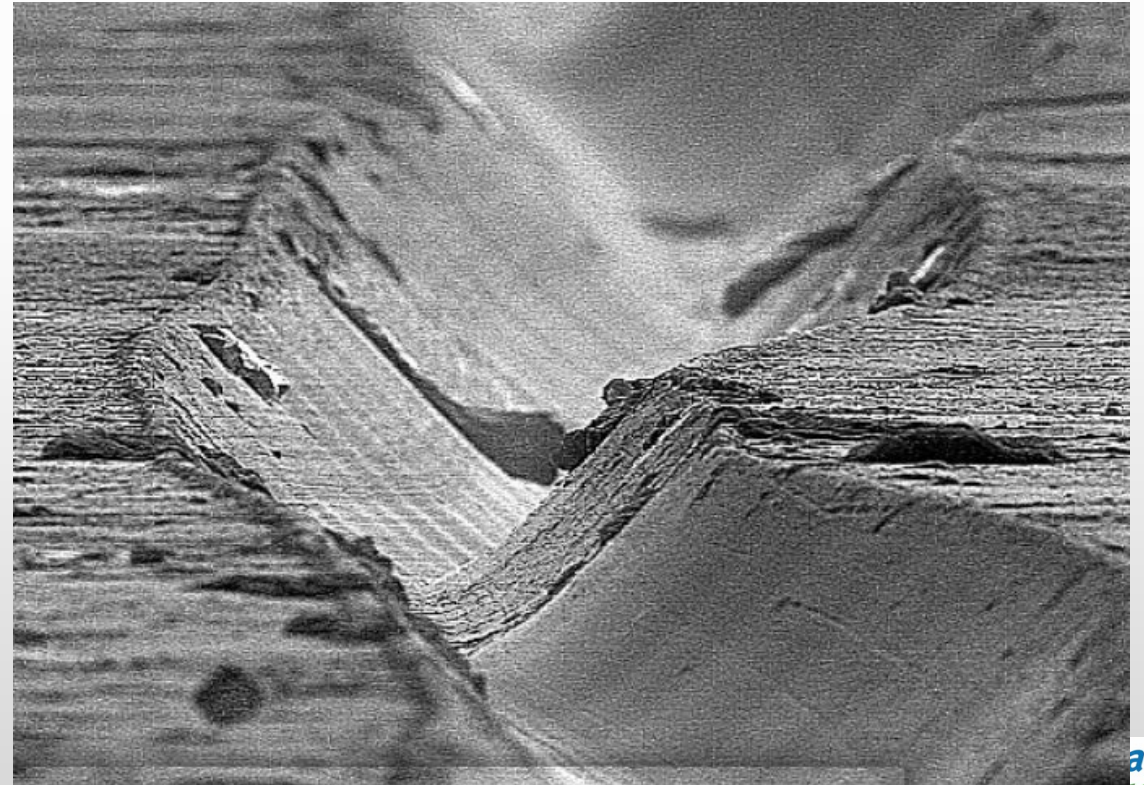
Staff: Miss N Kilby, Miss C Mableson,

Miss S Wagstaff, Mr R Shaw



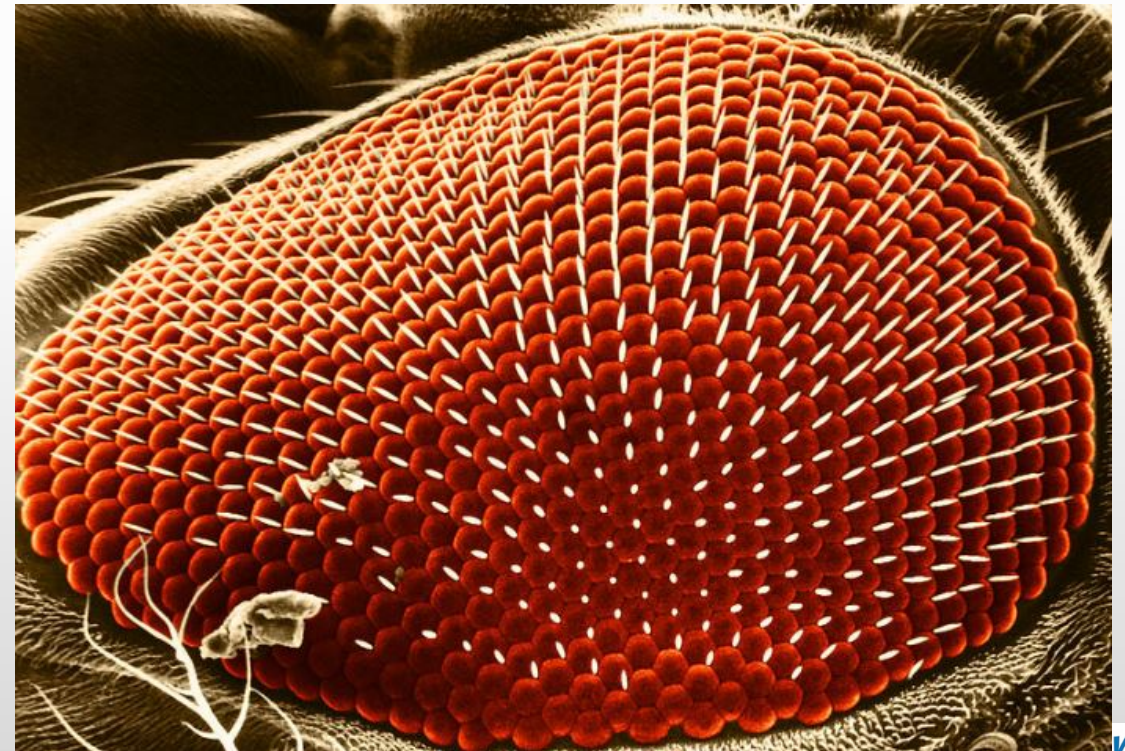
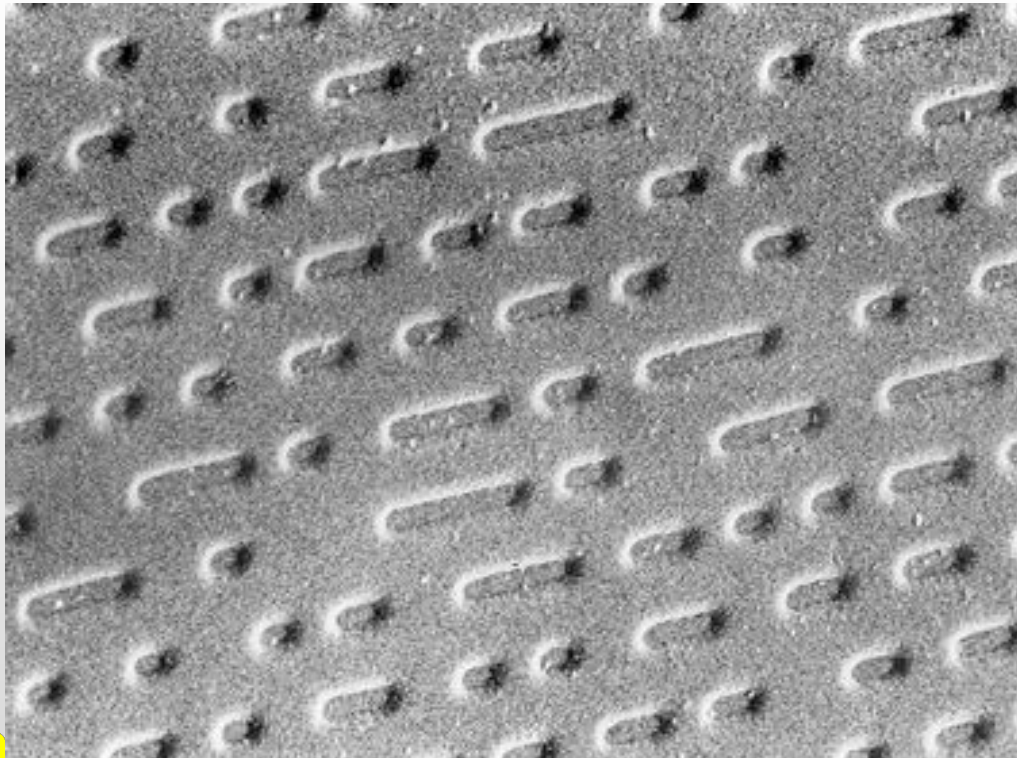
Quick Science Quiz part 1

- Can you identify what these close up images are of



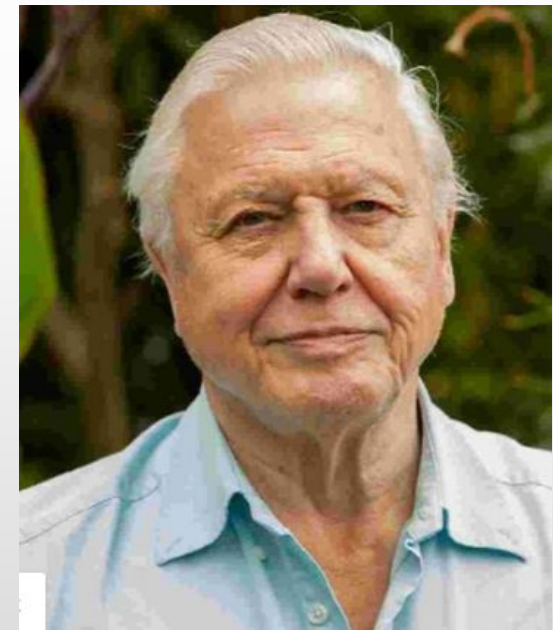
Quick Science Quiz part 2

- Can you identify what these close up images are of



Quick Science Quiz part 3

- Which one of these people famously said 'the Eagle has landed' and can you name them all?



ALL ANSWERS WILL BE GIVEN AT THE END



Science course

- In year 7 and 8 you will study the three science disciplines
- Biology
- Chemistry
- Physics
- These form a foundation for the GCSE course starting in year 9

- In year 7 and 8 you will usually be taught by one teacher.
- In each term you will study a topic related to the three disciplines.
- Each one will have a Key Assessed Task (KAT) at the end of it.



Biology course

- In year 7 you will study
- Organisms: Cells, Bones, Muscles & movement.
- Ecosystems: Food chains & prey/predator relationships, Plant structure and reproduction.
- Genes: Biological variation, Human reproduction.

- In year 8 you will study
- Organisms: Healthy body, Digestion.
- Ecosystems: Respiration , Photosynthesis.
- Genes: Biodiversity & Natural selection, Genetics.



Chemistry course

- In year 7 you will study
- Matter: Solids, liquids & gases, Solutions and separation techniques
- Reactions: Acids & alkalis, Types of elements & chemistry of metals.
- Earth: Rocks, Space.

- In year 8 you will study
- Matter: Atoms, Elements of the periodic table.
- Reactions: Types of chemical reaction, Exo and endo thermic reactions.
- Earth: Environmental chemistry, Global warming, Recycling.



Physics course

- In year 7 you will study
 - Forces: Balanced & unbalanced Forces, Speed
 - Electromagnets: Electricity.
 - Energy: Useful energy, Energy costs
 - Waves: Sound waves, Light waves.
- In year 8 you will study
 - Forces: Types of forces, pressure.
 - Electromagnets: Magnetism, using electromagnets.
 - Energy: Levers, Heating and Cooling
 - Waves: Sound waves, Electromagnetic spectrum



Resources

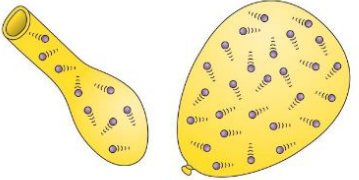
- In year 7 and 8 our curriculum follows AQA Activate scheme.
- Our lessons follow a Scheme of work for each year which is supported by a text book. (accessible on line via kerboodle on line support)
- The Activate scheme also provides,
- Practical ideas to support learning.
- Consolidation and extension worksheets
- A learning journey checklist
- End of unit assessments.

5.1.7 Gas pressure

Learning objectives
After this section you will be able to:

- use words to explain gas pressure simply
- explain unfamiliar observations about gas pressure in terms of particles
- draw before and after diagrams of particles to explain observations about gas pressure.

Why do balloons get bigger as you blow them up? When you blow up a balloon, you are filling it with air particles. The more air particles you add, the bigger the balloon.



Fantastic Fact!
Racing-car tyres reach 100 °C. Before a race, technicians pump tyres to a lower

▲ The more particles you blow into a balloon, the bigger the balloon.

How can you make crystals of salts?

The reactions of acids with metals or bases make salt solutions. Removing water makes salt crystals. The diagrams show how to make copper sulfate crystals.

- 1 stirring rod, copper oxide powder, dilute sulfuric acid
- 2 filter paper, funnel, unreacted copper oxide, copper sulfate solution
- 3 evaporating basin, boiling water, burner, copper sulfate solution
- 4 copper sulfate crystals, evaporating basin

▲ Add copper oxide powder (a base) to dilute sulfuric acid. Keep adding until some copper oxide is left over. All the acid has now reacted.







▲ Filter to remove the copper oxide that has not reacted.

▲ Heat the copper sulfate solution in an evaporating basin until most of the water evaporates.

▲ Leave the evaporating basin in a warm place. The rest of the water evaporates. Copper sulfate crystals remain.

AQA KS3 Activate

Know • Apply • Extend

 LESSONS Ready-to-go lesson presentations, with linked resources and teacher notes	 RESOURCES A collection of resources for use in the classroom or at home	 ASSESSMENT A bank of assessment materials to test knowledge and understanding
 MARKBOOK View work and results, track progress and more	 DIGITAL BOOK Online versions of the Student Books for display and annotation	 USER MANAGEMENT Create and organise teaching groups for this course, and invite more teachers to Kerboodle

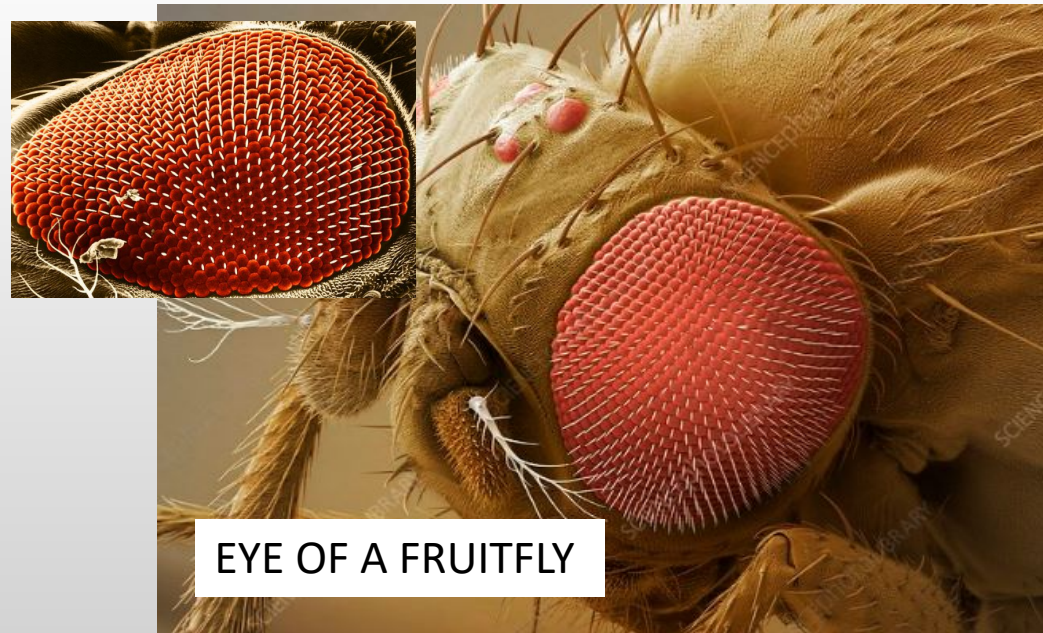
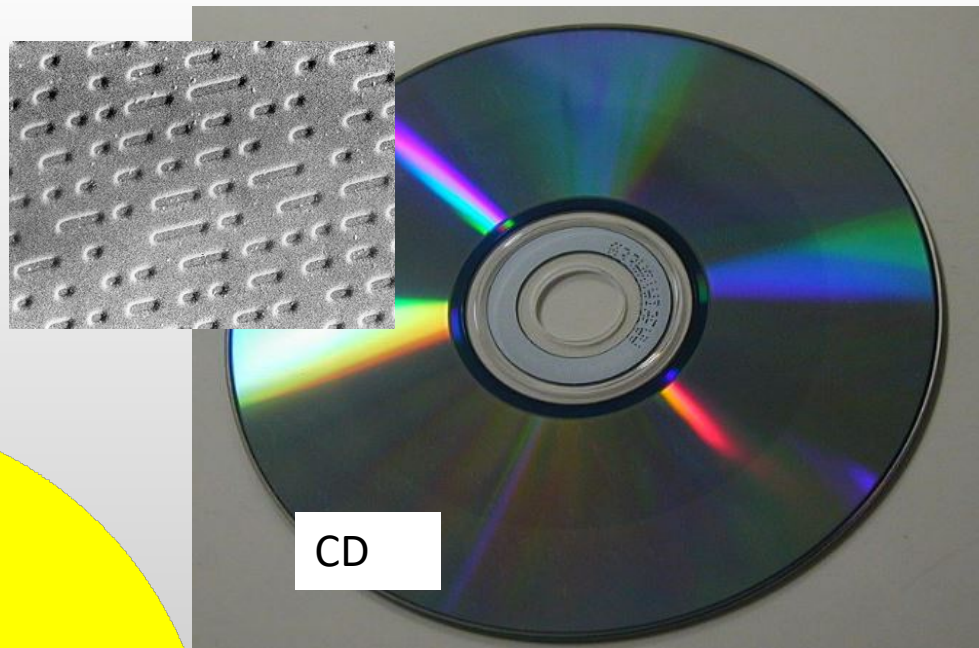
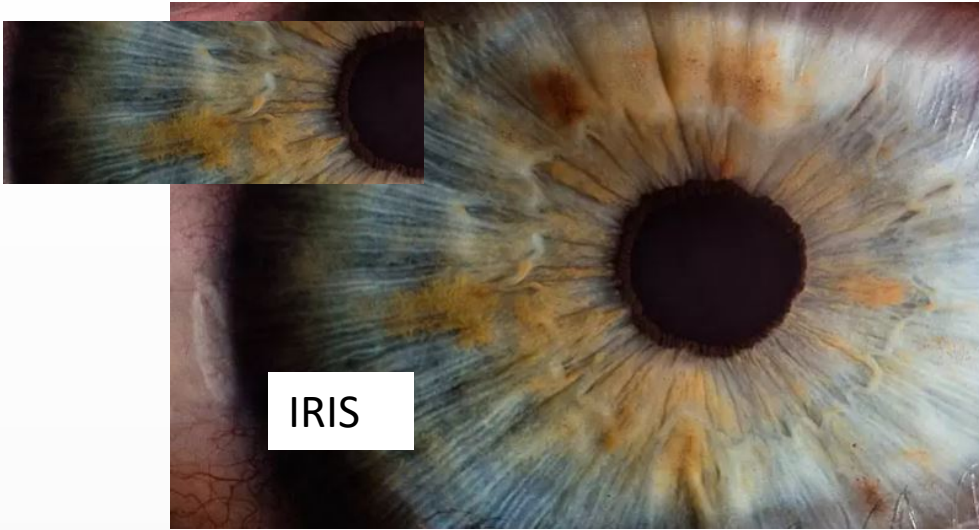


Homework

- Homework is set regularly and pupils write their tasks and deadlines in their year planner
- The homework is also published electronically on a support platform called 'Class Charts'
- This enables carers and parents to log into the site and check what homework has been set and when it is due
- The tasks can range from comprehension worksheets, maths skills including graphs, practical write up and analysis, research and revision



Answers



Quick Science Quiz part 3

- 'the Eagle has landed' was said by Neil Armstrong after he landed on the Moon during the Apollo 11 mission in 1969.

