

Transition to Applied Science

Use the links below to help you to complete the tasks. These should be completed and brought with you to your first lesson in September.

Good Luck, Miss Burkin

Useful Links:

History of the microscope

<https://www.youtube.com/watch?v=Ue-86MDmjns>

Cell structure

<https://www.youtube.com/watch?v=URUJD5NEXC8>

Specialised cells

<https://www.youtube.com/watch?v=RqbkTT63yeE>

Structure and function of the blood

<https://www.youtube.com/watch?v=noMsCGRkwSE>

Atomic and electronic structure

<https://www.youtube.com/watch?v=H0rFDakTI-0>

Ionic and covalent bonds

<https://www.youtube.com/watch?v=wQ3NJUKKcTU>

Longitudinal and transverse waves

<https://www.youtube.com/watch?v=ZADaRGEUCDw>

Electromagnetic spectrum

<https://www.youtube.com/watch?v=HPcAWNIVI-8>

BIOLOGY

History of the Microscope

Draw and Label a diagram of a microscope

Describe what microscopes are used for

Produce a timeline showing the main developments in the microscope.

Identify the scientists involved in the development of the microscope and describe how the microscope has changed over the years [L] [SEP]

Cell Structure

Using the website <http://www.cellsalive.com/> produce a diagram of an animal and a plant cell including all of the subcellular structures.

CHEMISTRY

Atomic Structure

Draw and label a diagram of an atom

Describe the structure of an atom

Complete the table below

Sub Atomic Particle	Relative Mass	Relative Charge
Proton		
Neutron		

Electron		
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Separation Techniques

Draw a diagram and annotate to describe the separation technique: paper chromatography

Research a second method of chromatography called thin layer chromatography (TLC) and explain how it is different to paper chromatography

Explain what R_f values are and how they can be calculated

The Periodic Table

Produce a poster on the periodic table, include descriptions of:

- The groups [SEP]
- The development of the periodic table [SEP]
- Atomic mass [SEP]
- Transition elements [SEP]
- Rows [SEP]

PHYSICS

Waves

Complete the table on longitudinal and transverse waves.

[1
SEP]

	Longitudinal	Transverse
Labelled Diagram		
Description		
Examples		

Explain the difference between amplitude and wavelength

In musical instruments, how does changing the frequency effect the sound of the wave?

How does changing the amplitude effect the sound of the wave?

Electromagnetic Spectrum

Research the electromagnetic spectrum and produce a leaflet on its properties. Include,

- All of the waves ^[1]_{SEP}
- The frequency and wavelength of each wave ^[1]_{SEP}
- Uses of each type of wave ^[1]_{SEP}
- What all the waves have in common

What is an endoscope? Explain the use of an endoscope in medicine.

Research what Bluetooth is, and how is it used in communication.

What is broadband? How does it work?