Year 7 Science Learning Journey

BOWER PARK ACADEMY

Year 6

Unit One
Introduction to Science
Half term 1

We are learning what it means to be a Scientist and the basics to Physics, Biology and Chemistry

We will be assessed using our baseline assessment

Unit Two
Adaptations, Variation and Classification
Half term 2
B

We are studying animal adaptations in different environments

We will be assessed on our recall of knowledge Adaptations, Variation and Classification

Learning Challenge
Should we enable some species to go extinct? What are humans doing to prevent extinction?

Unit Three
Solids, Liquids and Gasses
Half term 3
C

We are studying the three states of matter

We will be assessed on our recall of knowledge on solids, liquids and gases

Unit Four
Acids and Alkalis
Half term 4
C

We are studying acidic substances

We will be assessed on our recall of knowledge on acids and alkalis

Learning Challenge
Are the following household items solids, liquids or gases? Justify your answer

-Toothpaste
-Custard

Unit Five
Cells and Reproduction
Half term 5
B

We are learning about different types of cells and how new life is formed

We will be assessed on our recall of knowledge on cells and reproduction

We are working on the Crisp Practical experiment, studying Conduction, Convection, and working on the Haybox

We will be assessed on our practical skills and recall to specific knowledge about experiments

Learning Challenge
Should we rely more on nuclear energy compared to other sources of energy?

Unit Six
Energy
Half term 6
P

Year 8

Key Vocabulary
Classification
Adaptation
Variation
Fertilisation
Reproduction
Contraception
Mitochondria
Ribosomes
Conservation of Energy
Indicators
Neutral

Key
B Biology
P Physics
C Chemistry

Curriculum Question 1
This half term we are studying…because….

Curriculum Question 2
This Unit of Learning builds on last half term's skills/ knowledge by…

Curriculum Question 3
What key skills have you used in this Unit of Learning?

Year 8 Science Learning Journey

BOWER PARK ACADEMY

Year 7

Unit One
Ecological Relationships and Microbes
Half term 1
B

We are studying the relationships between plants and animals and the impact on the environment

We will be assessed on our recall of knowledge on Ecological Relationships and Microbes

We are learning about out digestive, respiratory and skeletal systems

We will be assessed on our recall of knowledge on Feeding and Moving

Unit Two
Elements, Compounds and Mixtures
Half term 2
B

Learning Challenge
Name two deficit diseases and describe how they can be prevented or treated

Unit Three
Forces and Space
Half term 3
P

We are studying how forces effect objects and about outer space

We will be assessed on our recall of knowledge on forces and space

We are studying the rock cycle and our changing atmosphere

We will be assessed on our recall of knowledge on Earth and its atmosphere

Unit Four
Earth and its Atmosphere
Half term 4
C

Learning Challenge
To what extent has human activities affected global warming?

Feeding and Moving
Unit Five
Half term 5
C

We are studying about the materials our world is made from!

We will be assessed on our recall of knowledge on Elements, Compounds and Mixtures

Unit Six
Electricity
Half term 6
P

Year 9

Learning Challenge
Can Pluto be classified as a planet?

We are studying Conduction, learning how to make circuits. We are studying magnetism and electromagnets

We will be assessed on our recall of knowledge on electricity

Key Vocabulary
Respiration
Mantle
Igneous
Greenhouse gases
Elements
Magnetism
Conduction
Electrons
Static electricity
Enzymes
Micro-organisms
Deficiency Diseases

Key
B Biology
P Physics
C Chemistry

Curriculum Question 1
This half term we are studying…because….

Curriculum Question 2
This Unit of Learning builds on last half term's skills/ knowledge by…

Curriculum Question 3
What key skills have you used in this Unit of Learning?

Year 9 Science Learning Journey

BOWER PARK ACADEMY

Year 8

Unit One
Waves
Metals and materials
Half term 1
P

We are studying light and sound and EM waves

We will be assessed on our recall of knowledge on waves

Unit Two
, Metals and materials
Speed and Pressure
Half term 2
P

We are studying different materials and reactions

We will be assessed on our recall of knowledge on Metals and materials, Speed and Pressure

Learning Challenge
Drivers can be held accountable for their speed using distance and time. What equation is this

Unit Three
Health, Disease and the Development of Medicines
Atoms and periodic table
Half term 3
C
P

We are studying disease and the immune system atomic

We will be assessed on our recall of knowledge on Health, Disease and the Development of Medicines as well as atomics

Unit Four
Atoms and periodic table
Conservation of Energy
Half term 4
B

We are studying is conserved and Key concept in biology

We will be assessed on conservation of energy

Learning Challenge
What cardiovascular diseases can be prevented from lifestyle choices?

Unit Five
Key Concepts in Biology
Half term 5
P
C

We are studying cells, microscopes, enzymes and particle movement.

We will be assessed on our recall of knowledge on the key concepts of Biology

We are studying how we can separate substances from mixtures.

We will be assessed on our recall of knowledge on the key concepts cells and control and calculations involving masses.

Learning Challenge
Discuss how the stem cell research is enhancing the medical world

Unit Six
Half term 6
States of Matter
Separating Substances
B

Year 10

GCSE

Key Vocabulary
Refraction
Compression
Transverse
Longitudinal
Tuberculosis
Pathogens
Lymphocytes
Phagocytosis
Antibodies
Mendeleev
Isotope
Antibiotics
Stem cells
Mitosis
Neurones

Key
B Biology
P Physics
C Chemistry

Curriculum Question 1
This half term we are studying…because….

Curriculum Question 2
This Unit of Learning builds on last half term's skills/ knowledge by…

Curriculum Question 3
What key skills have you used in this Unit of Learning?

Year 10 Science Learning Journey

BOWER PARK ACADEMY

Year 9

Unit One
Cells and Control
Calculations involving masses
Waves
Half term 1
C
B

We are studying types of bonding and motion.

We will be assessed on our recall of knowledge motion, ionic and covalent bonding.

Unit Two
Waves
Types of bonding
Forces and Motion
Half term 2
B
C

We are studying genetics and acids and alkali.

We will be assessed on our recall of knowledge on DNA extraction and acids and alkali.

Learning Challenge
Do embryos constitute human life?

Unit Three
Forces and Motion
Genetics
Acids and Alkali
Half term 3
C
P

We are studying forces and motion, natural selection and genetic modification.

We will be assessed on our recall of knowledge the process of natural selection and Newton's Law of Motion.

Unit Four
Natural selection and GM
Electrolysis, obtaining metals and Equilibria.
Radioactivity
Half ter
B

We are studying the process of electrolysis and radioactivity.

We will be assessed on our recall of knowledge electrolysis processes, obtaining metals and types of radiation.

Learning Challenge
What issues may arise from x-rays?

Unit Five
Plant structures and their functions.
Groups on the periodic table.
Half term 5
P

We are studying plant structures and groups on the periodic table.

We will be assessed on our written mock exam papers

Unit Six
Particle model
Forces and matter
Half term 6
C

Year 11

Learning Challenge
How is 'dry ice' formed?

We are studying particle model and forces and matter.

We will be assessed on our written mock exam papers

Key Vocabulary
Ionic
Covalent
Chromosome
Diploid
Salt
Electrolysis
Vector
Scalar
Ores
Oxidation
Reduction
Halogen
Photosynthesis

Key
B Biology
P Physics
C Chemistry

Curriculum Question 1
This half term we are studying…because….

Curriculum Question 2
This Unit of Learning builds on last half term's skills/ knowledge by…

Curriculum Question 3
What key skills have you used in this Unit of Learning?

Year 11 Science Learning Journey

BOWER PARK ACADEMY

Year 10

Unit One
Groups in the periodic table
Particle model and forces ad matter
Exchange and Transport
Half term 1
B
C

We are studying heart dissections and respiration rates

We will be assessed on our recall of knowledge on Exchange and Electrolysis

We are studying Electricity and magnetism as well as rate of reactions

Students will have Paper 1 content in mocks

Unit two
Exchange and Transport
Electricity
Rates of reaction and energy
Half term 2
P
C

Unit Three
Animal coordination, control and homeostasis
Fuels and the atmosphere
Half term 3
B
C

Students will be assessed on both topics.

Students will be assessed on Ecosystems and the material cycle

Unit four
Ecosystems and material cycle
Energy – forces doing work
Half term 4
B
P

Learning Challenge
How are human contributing to the alteration of the carbon cycle

Unit Five
Magnetism and Motor effect
Public Examinations
Half term 5

We are revising key knowledge from prior learning

We will be assessed our final written examination paper

Learning Challenge
Create a revision guide to support your recall of key terms

Unit Six
Public Examinations
Half term 6

16+

We are revising key knowledge from prior learning

We will be assessed our final written examination paper

Key Vocabulary
Electrolysis
Ore
Ions
Electrostatic forces
Collisions
Endocrine
Endothermic
Exothermic
Decomposers

Key
B Biology
P Physics
C Chemistry

Curriculum Question 1
This half term we are studying…because….

Curriculum Question 2
This Unit of Learning builds on last half term's skills/ knowledge by…

Curriculum Question 3
What key skills have you used in this Unit of Learning?