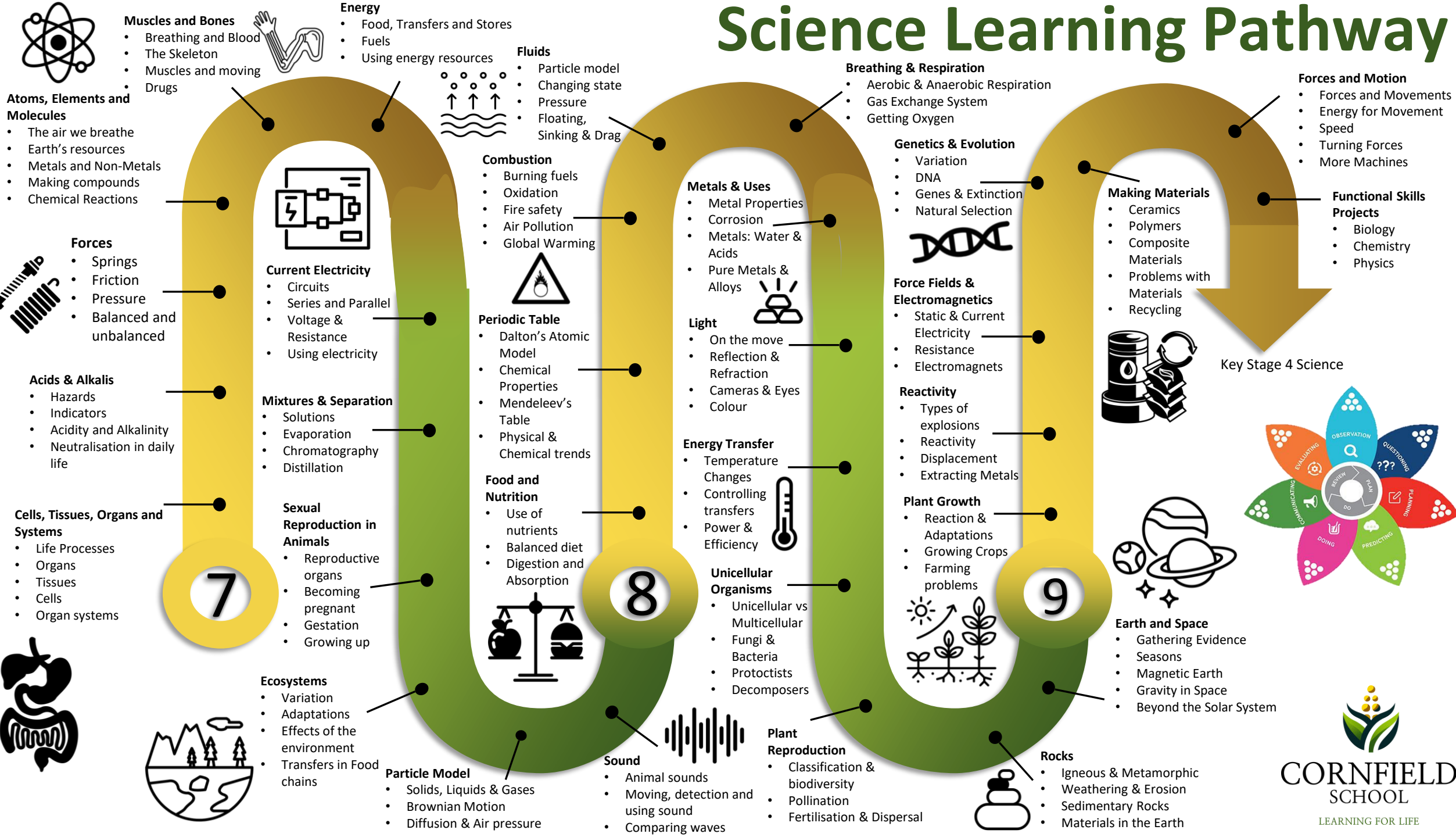


# Science Learning Pathway



**Atoms, Elements and Molecules**

- The air we breathe
- Earth's resources
- Metals and Non-Metals
- Making compounds
- Chemical Reactions

**Forces**

- Springs
- Friction
- Pressure
- Balanced and unbalanced

**Acids & Alkalis**

- Hazards
- Indicators
- Acidity and Alkalinity
- Neutralisation in daily life

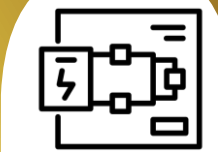
**Cells, Tissues, Organs and Systems**

- Life Processes
- Organs
- Tissues
- Cells
- Organ systems



**Muscles and Bones**

- Breathing and Blood
- The Skeleton
- Muscles and moving
- Drugs



**Current Electricity**

- Circuits
- Series and Parallel
- Voltage & Resistance
- Using electricity

**Mixtures & Separation**

- Solutions
- Evaporation
- Chromatography
- Distillation

**Sexual Reproduction in Animals**

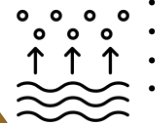
- Reproductive organs
- Becoming pregnant
- Gestation
- Growing up

**Ecosystems**

- Variation
- Adaptations
- Effects of the environment
- Transfers in Food chains

**Energy**

- Food, Transfers and Stores
- Fuels
- Using energy resources



**Combustion**

- Burning fuels
- Oxidation
- Fire safety
- Air Pollution
- Global Warming



**Periodic Table**

- Dalton's Atomic Model
- Chemical Properties
- Mendeleev's Table
- Physical & Chemical trends

**Food and Nutrition**

- Use of nutrients
- Balanced diet
- Digestion and Absorption



**Particle Model**

- Solids, Liquids & Gases
- Brownian Motion
- Diffusion & Air pressure

**Fluids**

- Particle model
- Changing state
- Pressure
- Floating, Sinking & Drag

**Metals & Uses**

- Metal Properties
- Corrosion
- Metals: Water & Acids
- Pure Metals & Alloys



**Light**

- On the move
- Reflection & Refraction
- Cameras & Eyes
- Colour

**Energy Transfer**

- Temperature Changes
- Controlling transfers
- Power & Efficiency



**Unicellular Organisms**

- Unicellular vs Multicellular
- Fungi & Bacteria
- Protocists
- Decomposers



**Sound**

- Animal sounds
- Moving, detection and using sound
- Comparing waves

**Breathing & Respiration**

- Aerobic & Anaerobic Respiration
- Gas Exchange System
- Getting Oxygen

**Genetics & Evolution**

- Variation
- DNA
- Genes & Extinction
- Natural Selection



**Force Fields & Electromagnetics**

- Static & Current Electricity
- Resistance
- Electromagnets

**Reactivity**

- Types of explosions
- Reactivity
- Displacement
- Extracting Metals

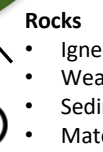
**Plant Growth**

- Reaction & Adaptations
- Growing Crops
- Farming problems



**Plant Reproduction**

- Classification & biodiversity
- Pollination
- Fertilisation & Dispersal



**Rocks**

- Igneous & Metamorphic
- Weathering & Erosion
- Sedimentary Rocks
- Materials in the Earth



**Earth and Space**

- Gathering Evidence
- Seasons
- Magnetic Earth
- Gravity in Space
- Beyond the Solar System

**Forces and Motion**

- Forces and Movements
- Energy for Movement
- Speed
- Turning Forces
- More Machines

**Functional Skills Projects**

- Biology
- Chemistry
- Physics



Key Stage 4 Science

