FARINGDON COMMUNITY COLLEGE

Year 7 Science – Outline Programme of Study

	Term 1	For the rest of the year all Year 7s will study the following topic, each group will study the topics in a different order.					Term 6
Big ideas/ topics	Scientific Principles	Living Things in their Environment	Reactive Chemistry	Particles	Forces	The Solar System	Cells
Key Knowledge	An introduction to the concepts of science at Faringdon community college including experimental procedures and health and safety.	The variation and classification of living things. Including limited to the five kingdoms and the five classes of vertebrates. How organisms interact within a habitat including predator/prey relationships, feeding relationships (food chains and webs) and how we can protect the environment these organisms live in.	In a chemical reaction, new materials are formed and are normally irreversible. Physical changes are often reversible, for example, changes of state. The reactions of acids with metals, carbonates, alkalis and the associated general word equations. Combustion and the fire triangle.	The particle model of matter. The use of the particle model of matter to describe and explain the properties of solids, liquids and gases and explain diffusion and solubility. The law of conservation of mass applied to solutions. The difference between pure substances and mixtures. Using chromatography and distillation to separate mixtures.	Measuring forces, bending and stretching, Floating and sinking, Friction, density, speed and stopping distance, graph drawing and air resistance	Seasons and day lengths, features of our moon, phases of the moon, Eclipses, the relationship between gravity, mass and weight, light-years, the scale of the universe	Structure and function of the component parts of plant and animal cells- limited to cell wall, cell membrane, cytoplasm, nucleus, vacuole and chloroplast. Introduction to the use of microscopes. Cell differentiation and specialism – including sperm, muscle, nerve, egg, root hair and palisade cell. Cell division - mitosis

Further information and reading list
• BBCbitesize • Educake • Focuselearning • CGP revision guide • Richard Dawkins book the magic of reality • Tim Peak book • https://www.docbrown.info/ • What if? Randal Munroe
Ways to support and extend student learning in this subject
• Kurzgesagt youtube • Veritasium youtube • Ask your child what they are studying in science • Cook a meal • Go to a science museum • https://scienceoxford.com/ • Gardening