NHSG Key stage 3: Unit Overview for P1.3 Pressure

Scheme of Learning	P1.3 Pressure
Learning outcomes	**Subject Content** Knowledge and understating of: • How the motion of the molecules in a gas is related both to its temperature and its pressure. • How to explain qualitatively the relationship between the temperature of a gas and its pressure at constant volume. • The simple model of the earth's atmosphere and atmospheric pressure • The factors that affect floating and sinking • Why pressure in a liquid varies with depth and density and how this leads to an upwards force on a partially submerged object.
Key questions	
Knowledge **What key concepts are covered?** **What key skills are developed?** **What key terminology is learned (i.e. glossary)?**	**Key Concepts & Skills Development** • How temperature affects pressure at constant volume. • Recall that gases can be compressed or expanded by pressure changes • Explain how increasing the volume of a gas at constant temperature can decrease the pressure. • Describe the simple model of the earth's atmosphere and atmospheric pressure • Explain why atmospheric pressure varies with height about the surface of the planet. • Calculate the differences in pressure at different depths in a liquid. **Key Terminology** • Temperature • Pressure • Volume • Net force • Right angles • Work done • Simple model • Vacuum • Atmospheric pressure • Buoyancy

	• Upthrust • Floating • Gravitational field strength
Ongoing Assessment	• Do it now booklets in the beginning which checks the previous knowledge of students from last lesson, a couple of lessons before and lessons from the past. • MWB activities throughout the lesson • No hands up questioning • Done in all lessons • Homework from work packs and resource booklets **Misconceptions:** • Light or small objects float and heavy objects sink
Key Assessment	• End of topic test on P1 • Multiple choice questions, long answer questions which involves extended answer, multistep mathematical questions and practical based questions. • The test is around 40 minutes. • This is an in-class assessment which will be marked by teachers and feedback provided in the form of next steps which students will respond to. • Data is analysed and a colour is given based on the spread of grades outlined in the T&L policy.
Clear sequencing of content	Pressure is revisited in P2 Forces and P8 Global challenges.
Diversity and Inclusion	Susan Solomon is known as a leader in atmospheric science. She is most widely known for her theory of the cause of the hole in the Antarctic ozone. Susan also obtained some of the first chemical measurements which showed that chlorofluorocarbons (CFCs) were the cause of the hole. Susan's research formed part of the basis of the UN Montreal Protocol. This is an international agreement to regulate atmospheric pollution and protect the ozone layer. Susan is currently researching climate change, ozone depletion and the links between them.
Support	• Do it now booklets • Resource booklets • Exam booklets • Lunch time clubs
Challenge	Explain Pepper's Ghost