Subject	Year 7 Threshold Knowledge – Autumn/Spring/Summer term	How to support students' learning
Physics	**Autumn Term** 1. Recall the 8 stores of energy. 2. Recall the 4 energy pathways. 3. Know that energy cannot be created or destroyed but can be transferred, stored or dissipated. 4. Explain how energy is conserved when objects fall. 5. Describe how elastic potential energy effects how far an object will travel. 6. Know that the thermal energy of an object depends upon its mass, temperature and the material it is made of. 7. Know that when there is a temperature difference, thermal energy transfers from the hotter to the cooler object. 8. Describe how thermal energy is transferred through different pathways, by particles, in conduction and convection, and by radiation. 9. Describe how an object's temperature changes over time when heated or cooled. 10. Describe how a method of thermal insulation works in terms of conduction. 11. Draw diagrams to show convection currents. 12. Describe the effects forces have on objects. 13. Explain the difference between a contact and a non-contact force. 14. Describe the factors that affect friction. 15. Describe what air resistance is. 16. Define elastic deformation and use Hooke's law in calculations. 17. Safely carry out the Hooke's law practical.to investigate the effect of force on a spring.	**Use BBC bitesize Physics:** • https://www.bbc.co.uk/bitesize/subjects/zh2xsbk • Get pupils to set themselves quizzes on Educake (The Science Department's homework platform) to help them revise topics they are trying to understand. • Talk about science at home and what students have learnt today. As well as discuss new scientific advances in the news. • Watch 'Into the universe with Stephen Hawking' documentary. • Use the link below to help find lessons you need to refresh and want to revise; https://continuityoak.org.uk/lessons

	18. Draw a graph of results and describe the important features of the Hooke's law graph. **Spring Term** 19. Define work done. 20. Understand how force and distance affect work done. 21. Recall and use the equation: Work done (J) = force (N) x distance moved (m). 22. Understand how machines like levers and pulleys make work easier. **Summer Term** 23. Describe how particles vibrate in a transverse and longitudinal wave. 24. Give examples of transverse and longitudinal waves. 25. Label diagrams of transverse and longitudinal waves. 26. Define the terms wavelength, amplitude and frequency. 27. Understand what a water wave is and how to calculate the speed of one. 28. Describe some uses of transverse and longitudinal waves.	