Subject	Year 8 Threshold Knowledge – Autumn/Spring/Summer term	How to support students' learning
Science - Biology	**Autumn Term** 1. Understand that plants can reproduce sexually and asexually. 2. Describe the structure and function of the main parts of a flower. 3. Describe the processes of pollination and fertilisation in flowering plants to produce fruit and seeds. 4. Describe how flowering plants ensure their seeds are dispersed. 5. Explain why seed dispersal is important to the parent plant and it's offspring. 6. Understand the structures and roles of the human reproductive organs. 7. Describe and explain how fertilisation happens in humans. 8. Describe and explain what fertility is and give examples of solutions to fertility issues. 9. Describe the menstrual cycle, the hormones involved and what happens during the cycle. 10. Describe how the foetus develops and how the mother accommodates this. 11. Describe the structure of DNA and how it was discovered. 12. Explain the role of DNA in inheritance. 13. Describe what is meant by dominant and recessive alleles. 14. Determine the inherited characteristics of an organism based on the alleles it has. 15. State some of the symptoms of a genetic disease. **Spring Term** 16. Recall examples of variation within humans. 17. Identify and describe when variation is continuous or discontinuous. 18. Collect and represent data on variation within a population.	• Use BBC bitesize Biology: https://www.bbc.co.uk/bitesize/subjects/z4882hv. • 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 BBC David Attenborough documentaries. • Use the link below to help find lessons you need to refresh and want to revise; https://continuityoak.org.uk/lessons

	19. Describe the difference between vertebrates and invertebrates and the differences between the 5 classes of vertebrate. 20. Explain why variation is important for the survival of a species. 21. Describe and explain how different organisms are adapted to their environment. 22. Define evolution and explain how fossils are evidence for evolution. 23. Explain how natural selection leads to evolution of an organism. 24. Define biodiversity and describe how preserving biodiversity is useful for humans. 25. Describe what extinction is and explain why it might happen to a species. **Summer Term** 26. Describe how to combine food chains to form a food web. 27. Explain that organisms in a food web (decomposers, producers and consumers) depend on each other for nutrients. 28. Describe how a species' population changes as its predator or prey population changes. 29. Describe and explain how the population of a species is affected by the number of its predators and prey, disease, pollution and competition between individuals for limited resources such as water and nutrients. 30. Explain the effects of environmental changes and toxic materials on a species' population.	