The science of sugar in the body			
Learning Foci	**Understand/Know/Do** What can students do with what they know and understand? What learning will endure beyond school?	**Suggestions for pedagogies/strategies** What learning experiences will support the development of understanding, knowing and doing?	**Supporting resources**
The science of sugar in the body	Classify types of carbohydrates, including sugars, starches, and fibres and understand the need for carbohydrates as a source of energy for the body. Recognize and correctly order steps in the process of digestion and metabolism of carbohydrates in the body. Compare and contrast the nutritional value of different types and sources of carbohydrates in terms of their structure, digestion, and impact on blood sugar levels to highlight nutritionally pointless /empty calories in sugary drinks. Illustrate how sugar is metabolized and used by the body. Explain how Type 2 diabetes develops.	Complete a graphic organiser to help students classify and compare/contrast types of carbohydrates, including sugars, starches, and fibres. Explore the process of digestion and metabolism of carbohydrates in the body using simulations/modelling. For example: (preferably require the students to invent/come up with the model) e.g., mimic the mechanical breakdown of food in the stomach – use a plastic bag with crackers/bread and water/vinegar. Transfer to a stocking or similar to represent peristalsis and nutrient absorption in the small intestine. Investigate the breakdown of starches into sugars using amylase to replicate the action of digestive enzymes and the iodine test for the presence or absence of starch/glucose with Benedict's. Model or illustrate the effect of sugar on tooth enamel over time, i.e., some bacteria in our mouths feed on sugars producing acids that can harm teeth. Gamified quizzes to assess knowledge and understanding. Watch and discuss/unpack interactive videos or animations that depict glucose metabolism and homeostasis: glucose transport/absorption, the role of insulin/glycogen storage and release, and the role of glucagon.	Graphic organiser template Materials for modelling FIZZ Teacher PowerPoint FIZZ Polar bear video SLH Obesity resources Concept cartoon FIZZ Quizzes LENScience Type 2 Diabetes resources

FIGHTING SUGAR IN SOFTDRINKS