



Townley Grammar School 2022/2023

Primary Outreach – FREE STEM Workshops

Science

The Heart and Circulatory system – Year 6

A one-hour year 6 session on the heart and circulatory system. The session can take a group of between 30-45 students and requires a hall sized space to create a model of the circulatory system, as students participate in delivering oxygen to the tissues and carbon dioxide to the lungs through the heart, a double circulatory system. This session also involves a demonstration of a heart dissection, with limited student's participation involvement and is delivered by Year 12/13 STEM students who will offer a Q&A session to end.

Food Chains and Food webs. Interdependence, natural selection leading to evolution Year 4, 5 or 6

A One-hour session for Year 4,5 or 6 on food chains and natural selection. This session can take a group of between 30-60 students and requires access to a large outdoor space, such as a playground or field. Students will participate in an outdoor activity looking at the processes involved natural selection which ensures the best adapted to the environment survives by collecting wool worms and examining survival rates of offspring. We also study a selection of different fossils, and learn more about the process of fossilisation. This session is also delivered in part by Year 12/13 STEM students and will offer a Q&A session at the end.

Discover Anatomy of the Human Body – Year 3 or 4

Using a real human skeleton, we assemble 'card human' skeletons from card bones and compare our card skeleton to the human one on display. Correctly identify the bones, card sort with the real skeleton to enable comparison. This activity requires the use of the school hall.

Magnets & Magnetism – Year 3

Using iron fillings and magnets, we explore the properties of magnets and allow students to explore the force of magnetism by creating cars which can be moved by magnets.

This activity will require a hall or large classroom space.

Plants & Reproductive parts – Year 5

Making model flowers and learning the reproductive parts. This activity can be delivered in the classroom.



Science sessions are delivered by Mrs Funk, Lead Practitioner for Science at Townley Grammar School and long-time Outreach/CPD provider, supported by a team of willing and eager sixth form students.

Computing - KS2

Sphero Robot

Students learn what an algorithm is, write an algorithm for a robot to move around the maze and code it with the help of our sixth form scholars.

Binary Beads

Students will learn what a binary number system is and make a bracelet using binary numbers,

Digital Footprint

Students learn what a 'Digital Footprint' is and make a poster.

Mathematics

Forces and Magnetism - Years 4, 5 & 6

In this activity, we make and race Lego cars containing magnets, learning about the polarity of magnets and the invisible force of magnetism. We also learn about mass, speed and momentum and how they relate to each other to allow us to design the fastest vehicle.