GEELONG SPORTS MUSEUM
at KARDINIA PARK

INNOVATION TRAIL

CLASS RESOURCES FOR LESSON PLANS, FURTHER LEARNING AND CURRICULUM LINKS

OVERVIEW

This resource is designed to support students to make the most of their museum visit through suggested pre and post-visit lesson plans and a learning trail completed at the museum. Lesson plans are suitable for years 3-8, with suggested adaptations included in the descriptions. The curriculum links outlined can be met through a combination of these activities.

PRE-VISIT LESSON PLAN

SUGGESTED TIME
60 minutes

TUNING IN

Watch the video on the Pod Active Knee Protection Brace.
https://youtu.be/kJ-hVGHKd-s?si=dOfzsCocvUFdeZpa

Students will learn about the following in this video:

0:00 Introduction to Pod Active knee braces
0:42 The need for knee protection in action sports
1:07 Types of knee injuries
1:43 Design and features of the Pod Active Human Motion knee brace
4:04 Dynamic ligament protection
4:41 Pod Active's competitive advantage and how to compare knee braces

This brace is on display at the Geelong Sports Museum, so students can see and interact with a real brace. Ask students the following questions to facilitate a discussion:

- What is the problem this product addresses/solves?
- Why do you think these kinds of injuries are so common?
- How is it different from a traditional knee brace?
- Why do you think this product is successful?

STUDENT LED ACTIVITY

Working in pairs or small groups students choose a sport that interests them and research how the equipment (including playing surfaces) has changed over time and what influence this has had on their chosen game. Students may want to explore the concept of 'technological doping' which is when the use of technology provides an unfair advantage to an athlete. An example of this is the Speedo LZR Racer Swimsuit, which provides an interesting case study on this concept.

REFLECTION

HEADLINES THINKING ROUTINE
Ask students to think about the big ideas of the concept they have been researching. Students write a headline for this topic that summarises and captures a key aspect that they feel is important.

POST-VISIT LESSON PLAN

SUGGESTED TIME
60 minutes

PLEASE NOTE
This lesson can extend over more than one session if you would like to include the marketing component.

TUNING IN

Begin a class discussion reflecting on your visit to the Geelong Sports Museum. Ask students to share what they learned from the Innovation Wall. What were some of the innovations and how did they address a problem or barrier that people face in sport. For example the Zena Sport Impact Protection Garment helps reduce the risk of injury in contact sports for female athletes without restricting movement.

STUDENT LED ACTIVITY

Students complete the resource 'Design your own Sports Innovation'. Encourage students to think of a problem, challenge or barrier that people may face when participating in or accessing sport. Some examples to get students thinking include concussion, repeated injuries such as sprained ankles or access to sport for people with disabilities. Students can use one of these examples, or think of their own, to base their innovation design on.
Below are some enrichment prompts you may wish to use with your students if they are suitable for your class.

- Consider what materials you would use to make your innovation. Explain why you would choose these materials? Think of the type of material, would it need to be flexible, rigid, soft or strong? For example if it is to be worn on the body it would need to be comfortable.
- Consider the cost of your materials and where your product might be manufactured.
- Consider the environmental impact of your innovation. How could you make your innovation more sustainable? Is it possible to use recycled materials, can your product be recycled or even reused?
- To extend learning further students could consider how they would market their product. They could make a poster or advertisement.

REFLECTION

What was a challenge you faced during this task, how did you overcome it?

CURRICULUM LINKS

LEVELS 3 & 4

DESIGN AND TECHNOLOGIES

- Recognise the role of people in design and technologies occupations and explore factors, including sustainability, that impact on the design of solutions to meet community needs (VCDSTS023)
- Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes (VCDSTC027)

LEVELS 5 & 6

DESIGN AND TECHNOLOGIES

- Investigate how people in design and technologies occupations address competing considerations, including sustainability, in the design of solutions for current and future use (VCDSTS033)

LEVELS 7 & 8

DESIGN AND TECHNOLOGIES

- Examine and prioritise competing factors including social, ethical, economic and sustainability considerations in the development of technologies and designed solutions to meet community needs for preferred futures (VCDSTS043)
- Investigate the ways in which designed solutions evolve locally, nationally, regionally and globally through the creativity, innovation and enterprise of individuals and groups (VCDSTS044)