

Science 5/6 – Human Body / Hero In You



**BC SPORTS
HALL OF FAME**

Curriculum Requirements

Core Competencies: Communication, Thinking, Personal & Social

Big Ideas:

- Grade 5: Multicellular organisms have organ systems that enable them to survive and interact within their environment
- Grade 6: Multicellular organisms rely on internal systems to survive, reproduce, and interact with their environment

Content:

- Grade 5: Students are expected to know the following – basic structures and functions of body systems (digestive, excretory, **respiratory**, **circulatory**)
- Grade 6: Students are expected to know the following – the basic structures and functions of body systems (**musculoskeletal**, reproductive, hormonal, **nervous**)

Learning Standards:

- *Questioning and Predicting*
 - Make observations in familiar or unfamiliar contexts
 - Identify questions to answer or problems to solve through scientific inquiry
 - Make predictions about the findings of their inquiry
- *Planning and Conducting*
 - Explore and pose questions that lead to investigations
 - Decide which variable should be changed and measured for a fair test
 - Choose appropriate data to collect to answer their questions
 - Observe, measure, and record data, using appropriate tools, including digital technologies
 - Use equipment and materials safely, identifying potential risks

- *Processing and analyzing data and information*
 - Identify patterns and connections in data
 - Compare data with predictions and develop explanations for results
- *Evaluating*
 - Evaluate whether their investigations were fair tests
 - Identify possible sources of error
 - Suggest improvements to their investigative methods
- *Communicating*
 - Communicate ideas, explanations, and processes in a variety of ways

Schedule

Program Length: 2 hours

Tour Content – 30 Minutes

Tour will be question based, getting students to hypothesize based on their understanding of their own bodies what the difference would be for people with disabilities / athletes on professional teams / Olympians, and to communicate some of their ideas.

Tour content will focus on respiratory / circulatory system for grade 5s, musculoskeletal / nervous system for grade 6s when possible.

Possible topics of discussion, using artifacts to illustrate each point, include:

- Aerodynamics of clothing, such as speed skating race suit
- Diet / training regime for an Olympic athlete
- Temperature controlled suit in Rick Hansen Gallery
- Evolution of sports equipment to provide best support to athletes, including padding / aerodynamics / grips / preventing repetitive injuries / shock to the body at knees, wrists, etc.
- Diet / exercise / training program for a professional athlete in the Whitecaps, Lions, or Canucks
- Jim Peters marathon collapse in the 1954 British Empire Games Gallery

Participation Zone Activity Content – 30 Minutes

We are going to do an investigation regarding the change in heart rate before and after exercise.

Students will measure and record their pulse, play in the Participation Zone for 20 minutes, and then record a final pulse. This data will be used to calculate a change in pulse for each student and an average change in pulse for the class. This data will be sent back to the school with the teacher.

Guides will use follow up questions to determine what variables might account for differences amongst the students, whether the test was fair, and how the experiment could be done differently to achieve more accurate results.

Break for lunch, snack, washroom, etc.

Hero In You Presentation – 60 minutes

Many of our Honoured Members have a wealth of knowledge that they've amassed through years of intense physical training as to how the human body works. This presentation from one of our Honoured Members will focus on the lifestyle of athletes, and how they trained / overcame physical challenges to achieve success as an athlete.

Please note that we do our best to find an athlete guest speaker, but as their schedules and availability varies, we cannot make any guarantees as to whether we will be able to find a presenter for your group. Please book well in advance to give us the best shot of reaching out to our Honoured Members and finding someone who is available.

Questions that the athlete speaker may use to guide their talk:

- What made this individual interested in pursuing this particular sport?
- What are the physical challenges & risks associated with this sport?
- Did this athlete have any illnesses / injuries / genetic predispositions that altered the way that they were able to use their bodies?
- What modifications did they make to their diet / lifestyle / schedule / mentality when they decided to pursue their sport in a serious way? Was it a slow progression or did one day they just decide to go for it?
- What physical skills did they have to hone to participate in this sport competitively?
- As they trained, how did they keep track of their progress? Did they measure any variables? Did they time themselves? Track how much weight they could lift?
- What strategies did they use to achieve balance between their sport career and the rest of their life?
- What signals did their bodies give them that they needed to train more, or needed to rest?
- How did their training change between the sport season and the off season / leading up to a competition?
- What advice would they give people who are just starting out in a sport?