

# **create a biology 30 lesson on the circulatory system. Be sure to include relevant connection and examples to First Nations. cite the curricular outcomes for alberta, Canada curriculum**

---

## **Objective:**

Students will be able to describe the structure and function of the circulatory system and identify relevant connections and examples to First Nations cultures in Alberta. (Alberta Education Science 30 Curricular Outcomes: SCI30-2, SCI30-3, SCI30-6)

## **Lesson:**

1. Introduction (5 min): Begin the lesson by introducing the topic of the circulatory system, asking the students what they already know about the system and framing the purpose of the lesson. Explain how the circulatory system is a vital system in the human body, responsible for the transport of oxygen, carbon dioxide, electrolytes, and hormones, as well as removing waste from the body.

2. Explanation (15 min): Explain the basics of the system, which is composed of the heart, blood vessels, and the blood itself. Describe the pathway of the blood throughout the body, beginning with the heart. Show an illustration of a heart and label the parts (For example, right and left atrium and ventricles, aorta, and pulmonary artery). Ask the students to describe the role of each part of the heart in the system.

Then, explain that the path of the blood includes arteries, which carry oxygen-rich blood away from the heart, and veins, which carry oxygen-poor blood back to the heart. Highlight the importance of the valves within veins and arteries, and the role they play in facilitating the flow of blood.

You can finish by introducing the lymphatic system (which is sometimes considered part of the circulatory system, though it does not involve red blood cells), and how it works with the cardiovascular system to recycle interstitial fluid and remove metabolic wastes from tissues.

3. First Nations Connection (5 min): Introduce the connections between First Nations cultures and the circulatory system. You can discuss the use of traditional

medicines such as sweetgrass and sage and the ways these can be used to promote circulatory health. Additionally, talk about traditional diets and how particular foods can be beneficial for a healthy circulation.

4. Closure (5 min): Discuss the importance of the circulatory system and health decisions that can be taken to ensure its efficacy and efficiency. Ask the students to summarize the main points from the lesson, and to think about ways in which their decisions may impact their own circulatory health.

5. Assessment (Optional):

Students can complete a short quiz to assess their knowledge of the circulatory system. Alternatively, the students can complete a creative project that explores the connections between First Nations cultures and the circulatory system.