**NATURE Summer Camp 2017**

**Conduction: get pumped!**



**Description**:

This class introduces the learner to the biological processes of the cardiovascular system, structures and functions of the heart, blood flow and conduction; structures and functions of blood.

**Objectives**:

Students will:

* Develop understanding of the heart and blood
* Recall important functions of blood cells and how they work within the immune system
* Use technology to create a heart simulation
* Demonstrate knowledge of topic by investigating a series of questions through jeopardy
* Apply information to hands-on lab exercise by dissecting the heart

**North Dakota state standards covered**:

11-12.2.1. Understandings About Scientific Inquiry: Explain how new knowledge and methods emerge from different types of investigations and public communication among scientists

11-12.4.1. Structure and Function: Explain the importance of heart and blood

11-12.2.7. Abilities Necessary To Do Scientific Inquiry: Design and conduct an independent investigation

9-10.2.3. Abilities Necessary To Do Scientific Inquiry: Identify questions and concepts that guide scientific investigations

MS-LS1-1. Conduct an investigation to provide evidence to explain how the heart transports gases.

MS-LS1-2. Develop and use a model to describe the function of a heart and how this contributes to a healthy living system.

MS-LS1-3. Use argument supported by evidence for how blood is a system of interacting subsystems composed of different cells.

**Schedule:**

09:00-09:30 Introduction and cultural connection

09:30-09:50 PowerPoint: Circulation

09:50-10:50 PowerPoint: heart structures, function, blood flow, and video

10:50-11:30 Activity 1: *Heart Dissection*

11:30-12:15 Activity 2: *Construct a Heart Simulation*

12:15-12:45 Lunch

12:45-01:15 PowerPoint: conduction, heart sounds, and two short videos

01:15-01:45 Activity 2: *How to create a stethoscope and listen to heart sounds*

01:45-02:15 PowerPoint: blood and video

02:15-03:00 Activity 3: *Jeopardy and wrap-up*