

## Health

### 5.PCH.4.2

Interpret the relationship between and among the vessels and organs of the circulatory system.

#### **Materials Needed:**

Access to Internet video Heart Works from Kidshealth (6:00)

<https://kidshealth.org/en/kids/csmovie.html#catmovies>

Stethoscopes

Watch with a second hand

PowerPoint – Circulatory System

Appendix 2 – signs cut apart

Masking tape

#### **Focus:**

Tell the students you have a riddle for them. Tell them that when they figure it out, they should show a thumbs up against their body so others will not see.

“What beats but causes no pain?” Wait until most students have given a thumbs up (or at least one!) and ask for someone to share their response. Tell them the answer is the heart!

#### **Statement of Objectives:**

Did you know that the heart of a child your age beats about 5400 times an hour! When you play or exercise it works even harder than that. Just like other muscles it’s important to take care of our hearts so we can be healthy and strong. By the end of the lesson, you will be able to identify how the organs and vessels of the circulatory system work together to keep us that way.

#### **Teacher Input:**

Play the video, How the Heart Works from Kidshealth (6:00)

<https://kidshealth.org/en/kids/csmovie.html#catmovies>

Ask for questions.

Show the PowerPoint slide of terms related to the circulatory system. Share the following definitions on these slides:

Slide #2 –

- Aorta: largest artery in the body, carries blood to rest of body
- Valves: allow blood flow in only one direction through the heart
- Ventricles: two large chambers of the heart that pump blood to the lungs and rest of the body
- Atria: two chambers of the heart that receive blood (deoxygenated blood to be sent to the lungs and oxygenated blood from the pulmonary veins)
- Vena cava: veins that carry deoxygenated blood into the heart

Slide #3 –

- Plasma: liquid part of the blood, carries blood cells and dissolved materials
- Red blood cells: carry oxygen to cells and carbon dioxide away from cells

- White blood cells: fight off pathogens (germs)
- Platelets: assists with clotting

Slide #4 –

- Arteries: carry oxygen-rich and nutrient-rich blood to organs and cells
- Veins: return blood to the heart
- Capillaries: connect arteries and veins, transfer nutrients, oxygen, carbon dioxide, waste

Slide #5 –

- Heart rate: number of times the heart beats per minute
- Pulse: surge of blood with each contraction
- Blood pressure: force of blood against the artery walls

Show slide # 6 and review the importance of health healthy behaviors.

### **Assessment:**

Option 1

If students have access to computers, they can demonstrate labeling the parts of the circulatory system in this program from the Science Learning Hub, NZ

[https://www.sciencelearn.org.nz/labelling\\_interactives/1-label-the-heart](https://www.sciencelearn.org.nz/labelling_interactives/1-label-the-heart)

Option 2

Place the parts of the heart and circulatory system on cards. Have students form a line with their backs toward you. Tape one of the cards on each back. The goal is for students to guess what organ is on their signs as their classmates describe the function and appearance of the organ.

For example, if the sign reads **capillaries**, classmates might say, smallest vessels or allows transfer of nutrients and oxygen. Once their sign is guessed, they are to sit down, but continue to give hints to those whose sign has not been identified (who continue to circulate around the room).

Terms for signs:

Heart	Right ventricle	White blood cells
Valve	Left ventricle	Platelet
Artery	Right atrium	Vena cava
Vein	Left atrium	Pulse
Capillary	Plasma	Blood pressure
Aorta	Red blood cells	Heart rate

### **Closure:**

Today we took a close look at the circulatory system. We know that the heart and the blood vessels keep us alive by carrying nutrients, oxygen, and waste materials around our bodies.

## Signs for Assessment Activity

Heart	Aorta
Capillary	Vein
Artery	Valve
Right ventricle	Left ventricle
Right atrium	Left atrium

Plasma	Red blood cells
White blood cells	Platelets
Vena cava	Pulse

Blood  
pressure

Heart  
Rate