

THE CIRCULATORY SYSTEM

LESSON PLAN

A fast-paced, hands-on and engaging session for primary and homeschooling students.

This 90-minute session is broken into **two halves (45 minutes each)** and covers a vast field of information pertaining to the circulatory system.

It is appropriate for Kindy to Upper Primary, or homeschoolers of varied age groups.

Included:

- List of all learning objectives covered in the session
- List of materials you require to deliver it
- Some ideas for take-away questions and research points for the children
- Australian (WACE) Curriculum points touched upon

If you enjoy it, please remember to rate it on TPT 😊
Thank you!

CONDITIONS OF USE:

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THE CIRCULATORY SYSTEM

Learning Objectives:

To gain an understanding of:

- ✓ What the heart is and why we need one
- ✓ Where it is in the body
- ✓ Composition of blood
- ✓ Why we need it
- ✓ Why we need Oxygen
- ✓ That Oxygen is O₂ and how the molecule looks
- ✓ How O₂ is carried in the blood by red blood cells
- ✓ Why blood is red
- ✓ What a heart looks like – its structure
- ✓ What a beating heart feels like and looks like
- ✓ What a heartbeat sounds like
- ✓ How to feel a pulse on a person
- ✓ How our pulse changes when exercising/resting
- ✓ Stimuli which might raise/lower heart rate
- ✓ How blood is circulated through heart and body
- ✓ How to keep your heart healthy

WA Curriculum codes touched upon:

- ACSSU175
- ACPMP083
- ACSSU177
- ACSSU186
- ACSSU150
- ACSSU149

Materials:

- ❖ Lesson Plan
- ❖ Audio file of the heartbeat
- ❖ Percussion instruments
- ❖ Picture in a book of where the heart is in the body
- ❖ Pictures of blood cells
- ❖ Red salt dough to make red blood cells
- ❖ Pom poms and glue to make an Oxygen molecule
- ❖ Picture of a heart in detail
- ❖ Balloons to fill with water
- ❖ Stethoscope to listen to the heart
- ❖ Video showing blood flow through heart and body
- ❖ Picture showing blood flow through heart and body
- ❖ Explanation of what is happening each time it beats
- ❖ Picture of a heartbeat on ECG
- ❖ Art supplies
- ❖ Diagram of the body with heart, to draw circulation
- ❖ Wool/texters/glue for diagram of circulation
- ❖ Glossary of words to do with the circulation/heart

Take-aways and home research:

- Why are white blood cells yellow?
- Why is the heart depicted the way it is as a symbol of love?

LESSON PLAN: The Circulatory System (Primary ages)

90 mins total, with a break in middle

Part one – 45 mins					
LESSON SECTION	ACTIVITY	LEAD QUESTION	LEARNING POINTS	RESOURCES	TIME
GETTING SETTLED	• Listen to audio of heartbeat	What are we listening to?	This is what a real heartbeat sounds like	Audio file of a heartbeat and a speaker	(5 MINS)
	• Move with percussion / dance	Can you feel it as a rhythm and move to it?	It is rhythmic, constant, steady, and quite soothing	Percussion instruments	
	THE BLOOD	• Discuss with group	What is the heart, where is it and why do we need one?	To pump blood around the body to keep cells and us alive	Picture of the heart and blood
What is blood?			A liquid that pumps O ₂ and nutrients around our bodies to keep us alive		
What is blood made of?			Plasma and blood cells – different shapes and functions: <ul style="list-style-type: none">• White (immune system, fight off germs)• Platelets (clotting)• Red (carry O₂ around the body)	Pictures of blood cells and their different shapes	
• Make red blood cells with red salt dough		Why is blood red?	Red blood cells have Haemoglobin, a protein which contains iron atoms. The O ₂ attaches to these and so it surfs along on the red blood cells to its destination. O ₂ + Iron = red (rust) We have a kind of rust in our blood 😊	Red-coloured salt dough	(20 MINS)
• Make O ₂ out of pom poms		What does an O ₂ molecule look like?	Where Oxygen is on the periodic table and that by two of the atoms bonding together, a molecule of Oxygen is produced.	2 craft pom-poms per child & a glue gun (supervised)	(10 MINS)
End of part one – take a break					

Part two – 45 mins

LESSON SECTION	ACTIVITY	LEAD QUESTION	LEARNING POINTS	RESOURCES	TIME
PUMPING BLOOD	<ul style="list-style-type: none"> Look – where it is in the body 	What does a heart look like?	Where the heart is located in relation to the other organs	Picture of where the heart is in the body	5 MINS
	<ul style="list-style-type: none"> Feel how heavy a heart is and how it feels when pumping 	What does it feel like?	It pumps top, then bottom, in a rhythm	Small balloons filled with water (DO THIS ACTIVITY OUTSIDE)	10 MINS
	<ul style="list-style-type: none"> Take suggestions around the group, one at a time 	How might it pump if...?	(everyone gives their own scenario, in turn) <ul style="list-style-type: none"> Frightening things make it pump faster (fight or flight) Excitement also make it go faster Calming things and rest make it slower 		
	<ul style="list-style-type: none"> Listen to heartbeats 	How do we know our heart is beating?	Hearing a heart beating in real life is exciting and especially hearing your own!	Stethoscope	5 MINS
	<ul style="list-style-type: none"> Check your friend's pulse 	How do you check a pulse?	Count beats per minute – the pulse shows how hard the heart is working and whether it is pumping too slow or fast.		10 MINS
	<ul style="list-style-type: none"> Change your own pulse (jog) 	What happens when you exercise?	Jog on the spot for 30 seconds and check again.		
	<ul style="list-style-type: none"> Take suggestions around the group, one at a time 	How do we keep the heart healthy?	<ul style="list-style-type: none"> Regular exercise Eating a balanced diet Getting enough rest 		
GETTING CREATIVE	<ul style="list-style-type: none"> Watch a brief video about the heart and how it works 	How does the whole circulatory system work?	How the blood journeys to the lungs with de-oxygenated blood, disposes of CO ₂ , picks up Oxygen heads to the heart. The heart then pumps oxygenated blood around the body,	Video appropriate for ages	5 MINS
	<ul style="list-style-type: none"> Create art either free or structured 	What can you represent?	Use an image of a heartbeat as inspiration for a picture, or add designs to the picture itself to create an artwork In the outline of a body picture add red and blue to show how oxygenated blood moves through the body and then deoxygenated blood back to the heart again	ECG Image as inspiration or something to draw around Diagram of a body outline, with red and blue wool or texters	10 MINS

End of session