

Lesson Plan

NEUROHEADWAY

Neuroscience Into Education

Heart and vessels – Part 1: Why do we need a heart?

The aim of the lesson:

- 1) to learn about the main heart function and its anatomy;
- 2) to find out the physical expression of the heart function.

Resources:

- 1) multimedia to show the video
- 2) stethoscope
- 3) clock or timer for time count
- 4) paper, pen and ruler

1 hour lesson plan

Slide	Subject	Description	Time, min.
1–5	Intro to session	Brief review on heart anatomy and function (short video and explanation)	10–15
6	Activity: Trial 1	Take the stethoscope and listen to heart sounds of your friend. Now find the pulse on his wrist and count it. Write down the number. Listen to heart sounds and check the pulse at the same time. How are they related?	15
7	Trial 2	Check the pulse on your wrist. Count it and write the number. Now do some physical activity (e. g. 20 squats) and check and count the pulse again. Do the number differ? Why? For (G+T): count the blood volume pumped by the heart in 1 minute, if the stroke volume is 65 ml before the squats and after the squats? Did they differ? Why?	15
8	Recording the process	Draw the diagram of the pulse change in the pupils of your class. (not obligatory for lower ability students)	10
9	Review and Questions	Students will have time to review each other's diagrams. Provide clarification to student's questions and maybe	5

		offer some sources for extra information if wanted	
10	Extension	Check the pulse of your parents, brother/sister, grand parents. What is the difference in the pulse rate between small children and adults? And what about the animals? If you have a pet, try to count its heart rate. What is the number? Find and read about the relation of heart rate and the size and medium age of the animal. Who's heart beats faster: elephant's or mouse's?	