



KS2 Science & PSHE. Benefits Of Exercise

My heart – Beats per minute tracking fun!

The importance of exercise and what happens to the heart when we exercise

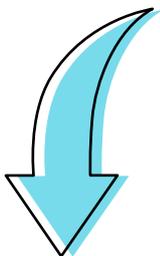
READY CURRICULUM LINKS & SESSION OUTCOMES

Science: recognise the impact of exercise and lifestyle

PSHE: how regular (daily/weekly) exercise benefits mental and physical health

This learning resource supports pupils to:

- Understand the importance of exercise for heart health
- Understand what happens to the heart rate during exercise including cycling



SET WHAT YOU WILL NEED

- Space outdoors and bicycles if possible (Alternatively pupils can run instead, either on the spot or around an area)
- **Heart rate tracking instructions. Teacher prompt**
- **Heart rate tracker** (1 per pupil)
- **Discussion points- Exploring and analysing the data. Teacher prompt**

PEDAL WHAT TO DO

- Use the **Heart rate tracking instructions. Teacher prompt** to enable pupils to count their own heart rate
- Pupils follow the instructions and collect their heart rate data, at rest, with mild activity, when cycle/running and when cooling down. They then complete their individual graph
- Use the **Discussion points - Exploring the graph** to highlight what happens to the heart rate during exercise and the importance of exercising the heart for physical and mental wellbeing.



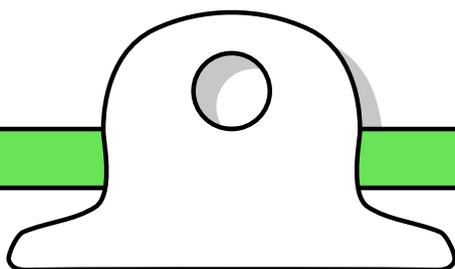
TO MAKE THIS LEARNING ACTIVE

The **Heart rate tracker** activity promotes physically active learning throughout.



DID YOU KNOW?

Cars contribute to air pollution by emitting carbon dioxide, nitrogen oxides and particulate soot. Cycling doesn't produce any of these so can help to keep the air clean to breathe. Aaaaaaaa!



Heart rate tracking instructions. Teacher prompt

If possible use cycling as the activity

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- Teach pupils how to take their pulse, either on their wrist or their neck with 2 fingers not thumbs.
- Individually or in groups pupils have a BPM sheet
- When seated and rested, ask pupils to take their pulse counting from Zero. Time them for 6 seconds only, this will enable more accurate readings. Pupils then make a note of the beats counted in box 1, they multiply it by 10 (add a zero on the end) so it now shows beats per minute BPM
- Next ask pupils to walk around briskly for 2-3 minutes, swinging their arms, or they can march on the spot if there's no room to walk about.
- Repeat taking the pulse again counting from zero, time for 6 seconds, pupils record in the 2nd box, again multiply it by 10 (add a zero onto the end) to show BPM
- Next ask pupils to cycle around for 10 minutes (or ask pupils to run around if no bicycles are available).
- As soon as you say stop, pupils take their pulse again counting from zero, time it for 6 seconds, pupils write in box 3 and multiply by 10 to get BPM
- Finally ask pupils to walk slowly for a minute, pushing their bike alongside if necessary and then take their pulses for a final time in the same way. Pupils record in box 4.
- Using the graph sheet or creating their own, pupils plot their beats per minute onto the graph Box 1 (at rest) Box 2 (when walking briskly) Box 3 (when cycling) Box 4 when cooling down.
- You can also create a large class graph, which will provide a great visual display, with the majority of the graph following the same up and down pattern and overcoming some of the unusual readings they may get!
- Create a large wall graph with BPM on the vertical axis and four points along the horizontal axis as shown. At rest, walking, running, recovering.

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**Teacher
Prompt**



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Discussion points - Exploring and analysing the data

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- Did you know your heart is a muscle and it also needs to work hard?
 - We need to increase our heart rate every day to keep our heart muscle fit and healthy (along with a healthy diet too of course).
 - What else does regular exercise help with?
 - When was your heart rate the highest?
 - What was its BPM? And why do you think it was the highest then?
 - When was you heart rate the lowest? What was its BPM and why do you think it was its lowest then?
 - What can you tell me about the final, BPM in Box 4? Why do you think it was that figure?
 - If you want strong muscles what do you need to do with them to make them stronger?
 - Cycling is a great fun way to get your heart beating faster, next time you cycle put your hand on your chest and feel your heart rate before you set off and again once you finish your ride - what can you feel?



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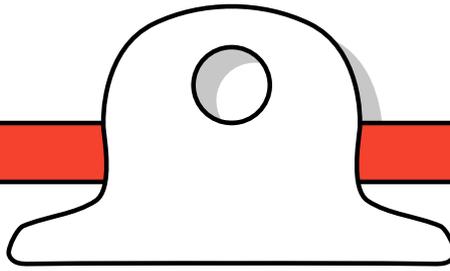
Pupil
Resource



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Name

Heart Rate tracker for

