

Learning about circulation... in a heartbeat!

Aim To investigate the effect of exercise on heart rate

Method

Use the Curiscope 'Virtuali-Tee' app to take heart rate measurements and note them down on the table. Measure your heart rate every minute until it returned to near the resting rate, this should be less than 10 minutes.



Materials

- Timer or stop watch
- Curiscope 'Virtuali-Tee' app heart rate monitor

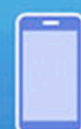
Results

Time (minutes)	Activity	Heart rate (BPM)
0	Resting	
1	Complete 1 minute of exercise (e.g. star jumps)	
2		
3	Recovering	
4		
5		
6		
7		
8		
9		
10		
11		
12		

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about the body



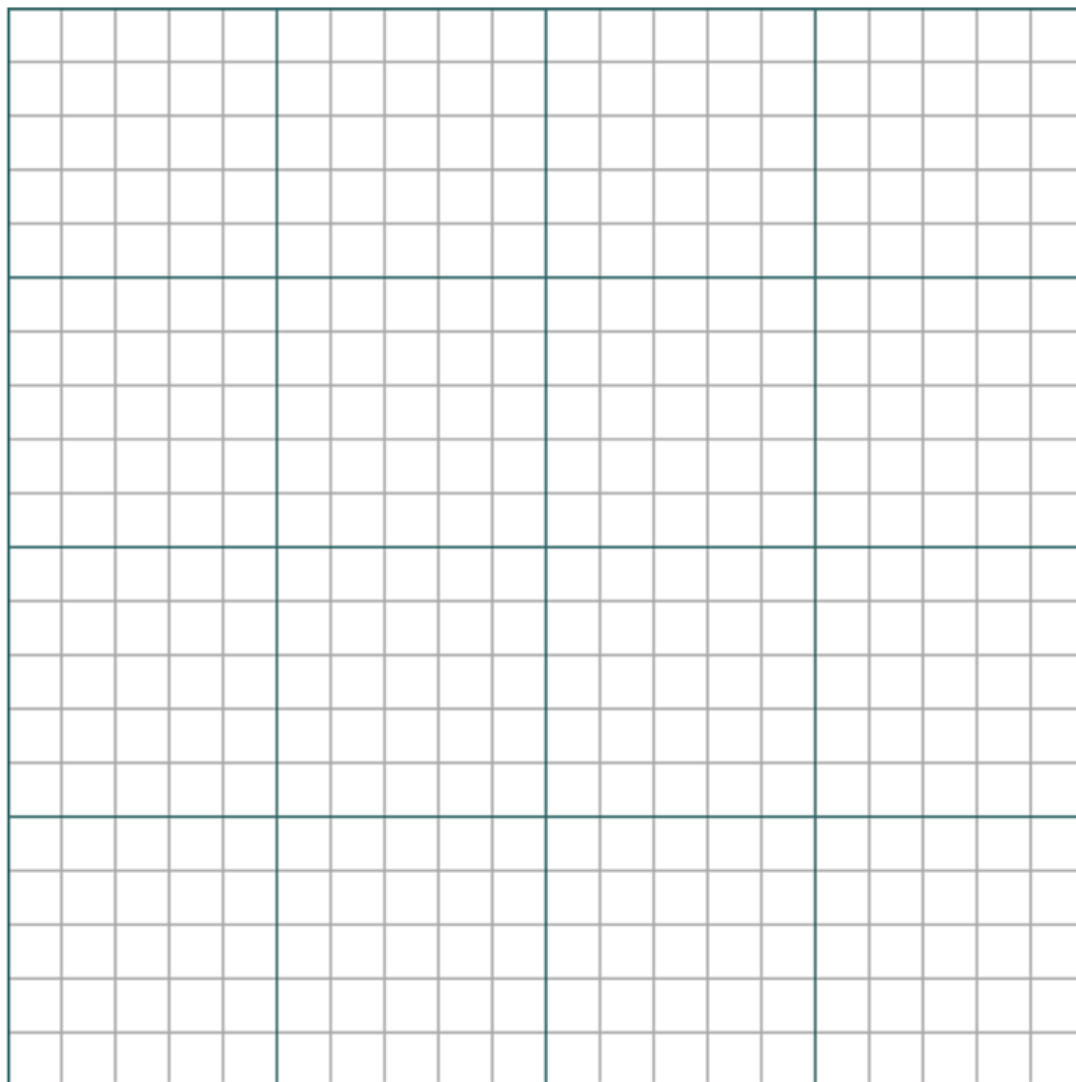
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Discussion

1. Describe the trend (pattern) of your graph.

2. Was your final heart rate measured higher or lower than your resting heart rate? Explain why this might be so.

3. What observations did you make about breathing rate throughout the experiment? Explain what you think might be the reason for this observation.

Conclusion

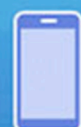
Extension

Can you devise an investigation to show the effects of different activities on heart rate? Does not need to be sports!

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Group organisation – 4 students per group

Student 1: The Human Subject
Does the exercise activity and has heart rate read as instructed.

Student 2: The Timer
Times the activity and informs other group members when to take measurements.

Student 3: Heart Rate Measurer
Takes the heart rate of the Subject when instructed.

Warning: the heart rate monitor can get hot and the Subject must be free to move away from the light.

Student 4: The Recorder
Writes down measurements as taken by the Heart Rate Measurer.

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Group organisation – 3 students per group

Student 1: The Human Subject

Does the exercise activity and measures heart rate when instructed.

Warning: the heart rate monitor can get hot and the Subject must be free to move away from the light.

Student 2: The Timer

Times the activity and informs other group members when to take measurements.

Student 3: The Recorder

Reads the heart rate and writes down measurements as taken by the Heart Rate Measurer.

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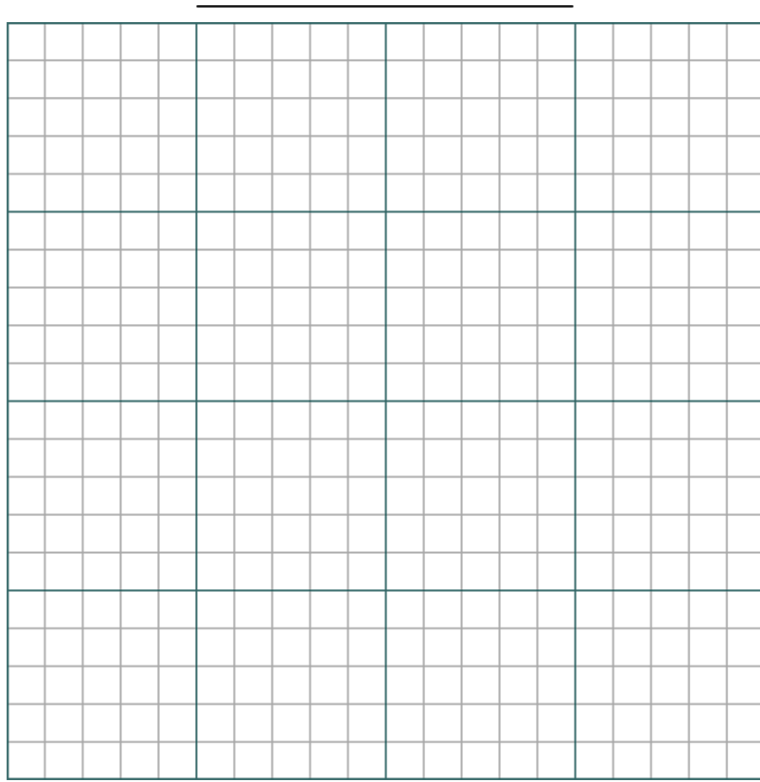
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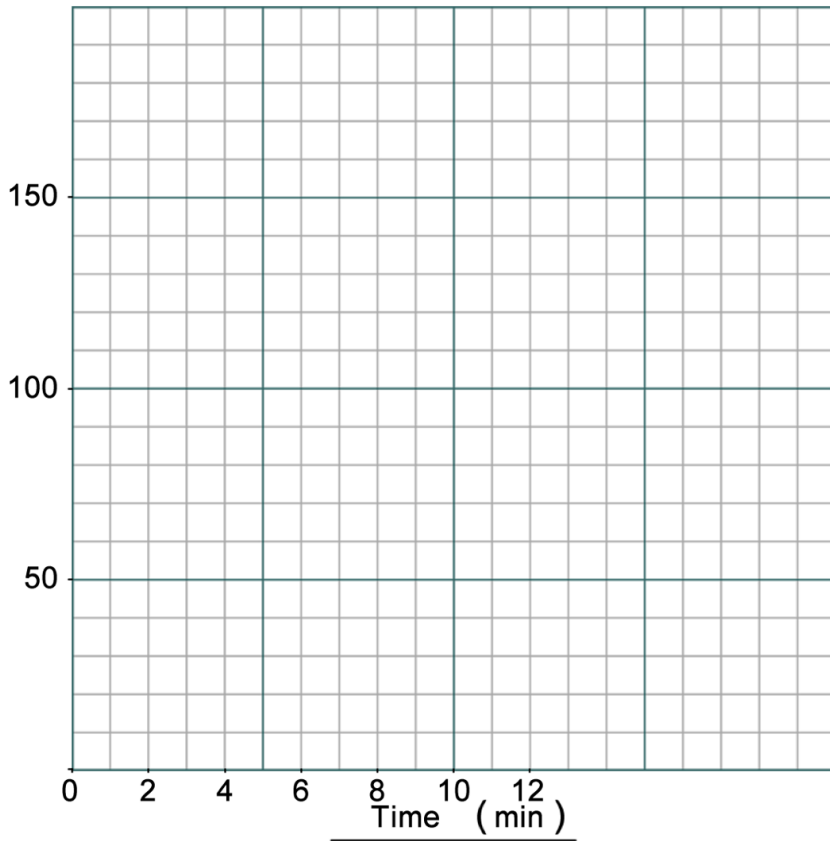
Dependent variable Heart rate (bpm)



Independent variable Time (min)

Title: _____

Heart Rate (bpm)



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