

Biological Systems and Processes

Lesson 8 - How does the intensity of exercise affect breathing rate? -

An Investigation

KS3 Biology

Miss Hindle



Quick Recap...

1. What happens to our breathing rate when we exercise?

It

2. Why does this happen to our breathing rate?

Breathing is to get oxygen into the body and get rid of carbon dioxide.

3. How do we calculate the mean?

4. What is the controlled variable?



Risk Assessment...

1. Say any REAL risks that could happen in the practical.
2. Explain how you could reduce the risk of these.

What is the hazard?	How could it be dangerous?	How will you reduce the risk?



Method...

Step in Method	Steps
	Walk on the spot for one minute
	Immediately after sit down and count your breaths for 1 minute, record the result.
	Repeat the whole practical three times
	Sit quietly and calmly for one minute, don't move or talk.
	Count the number of breaths you take in 1 minute for your resting breathing rate. Record the result.
	Repeat steps 1-4 but changing the exercise to jogging on the spot for 1 minute and then star jump for 1 minute.



Results...

Usually shown in a table and then a graph drawn from the data in the table

Type of Activity	Breathing Rate			Mean
Rest				
1 min of walking on the spot				
1 min of jogging on the spot				
1 min of star jumps				



Past Paper Question...

Peter is investigating how exercise affects his pulse rate.

He uses a pulse meter to measure his pulse rate.

He runs as fast as he can for four minutes.

Peter's legs ache towards the end of the exercise.

He then sits down and measures his pulse rate again every two minutes for the next 16 minutes.

Explain the pattern in the graph between 4 minutes and 20 minutes. (6 marks)

The graph shows his results....

