

Experiences and Outcomes:

I am developing my understanding of the human body and can use this knowledge to maintain and improve my wellbeing and health. HWB 2-15a

By investigating some body systems and potential problems which they may develop, I can make informed decisions to help me to maintain my health and wellbeing. SCN 2-12a

Learning Intentions:

To understand how we breathe(the respiratory system)

To investigate/measure breathing rate

To know that the heart pumps blood around the body

To investigate/measure heart rate

To use my knowledge to devise an exercise plan

Success Criteria:

I can:

Sequence the parts of the respiratory system in the correct order

Label parts of the respiratory system and match explanations of how they work.

Measure and compare my breathing rate before, during and after exercise.

Colour code a diagram to show how the heart works

Measure and compare my heart rate before, during and after exercise.

Create an exercise plan to keep my body healthy.

Briefly outline the context and range of quality learning experiences that have been provided making reference to the chosen design principles.

Lesson 1

Pupils exercised rigorously for a brief time. They were then asked to describe how they felt, which included suggestions that they became out of breath. Pupils then watched Tigtag video clip, 'A Human Breath'. Pupils worked in small groups to sequence cards in order to show respiratory process (Evidence A) They then worked in pairs to label a diagram of respiratory system. Pupils reported back on their diagrams and self-corrected their work, ensuring they had labelled diagrams correctly. (Evidence B)

Lesson 2

Children completed entry pass (Evidence C) and watched video clip to re-cap on respiratory system.

They then worked in pairs to measure breathing rates before, during and after exercise.

They reflected on their findings, writing a sentence or two as a conclusion (Evidence D).

Lesson 3

Pupils watched short video clip on the heart and circulatory system. Pupils felt their own pulses and made a model of heart from plasticene (Evidence E). They colour coded and annotated a diagram of how the heart pumps blood around the body. (Evidence F) Pupils then planned an investigation to measure pulse rate. Each pupil chose their own exercises as part of the investigation. Pupils carried out activity to measure pulse rates. (Evidence G)

Lesson 4

Pupils applied their knowledge of heart rates, gained from the investigation, to devise an exercise plan which will be carried out over a few weeks to try to improve fitness (Evidence H). The class suggested success criteria for their plans (e.g. Pupils thought plans should begin with stretches and that their exercises should be strenuous enough to increase heart and breathing rates). Pupils tried out their exercise plan then they self and peer assessed against the success criteria which they had suggested at the start of the lesson. They completed a grid, colour coding with 'traffic lights'. (Evidence I)

Record the range of assessment evidence that was gathered to meet the success criteria (Say, Write, Make, and Do) considering breadth, challenge and application.

- Sequencing of cards to show respiratory process (photos) - (Do/ Say)
- Labelled diagram of respiratory system (Make)
- Entry pass showing knowledge of respiratory system (Write)
- Breathing rate investigation results (Write/ Do)
- Pulse rate investigation results (Write/ Do)
- Heart model photo and diagram (Make)
- Exercise plan (Say/ make/ do)
- Success criteria grid (Write/ say)

Application

As pupils gained knowledge of the respiratory and circulatory systems, they applied this to their own bodies and related this to exercise. Pupils were encouraged throughout all lessons to be aware of the need to exercise to maintain a healthy body.

Challenge

Pupils were provided with challenge when they planned and reflected on their investigations. It was also challenging for them to devise exercise plans and to suggest success criteria for these.

Breadth

Two body systems were covered within these lessons.

Practitioner Moderation Template

Learner Evidence

Did the learner successfully attain the outcomes? YES/NO

The learner is working well, showing good understanding of all concepts taught so far. She has not, however, fully attained this outcome yet as further lessons are required. Further work is necessary so that pupil can 'investigate potential problems' which body systems may develop. For example, the dangers of smoking will be taught at a different stage as it does not seem age appropriate for this P5 class yet.

Briefly outline the oral/written feedback given to the pupil on progress and next steps, referring to the learning intention and success criteria.

Pupil was able to measure breathing and pulse rates and was interested to learn about body systems. She met all success criteria, as noted as stars on evidence. She needed a little encouragement at first to reflect upon and make conclusions from her investigation rather than simply state the numerical results.

Next steps will be to carry out the exercise plan for a few weeks in January to encourage development of fitness. After that, next step will be to learn about the digestive system and link this to awareness of healthy eating. Healthy eating lessons will also touch on heart health.

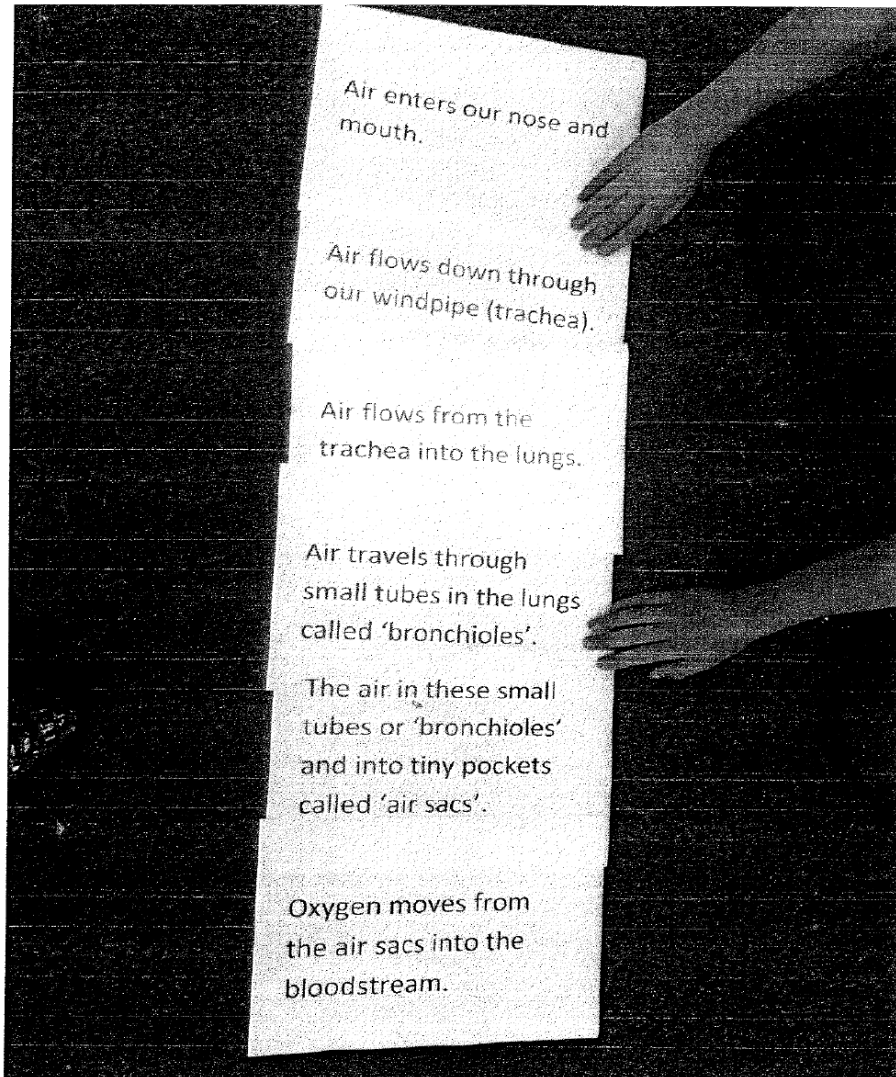
Pupil Voice:

What have you learned? How did you learn? What skills have you developed?

I have learned how my blood travels through my body and how I breathe. We have looked at and labelled lots of diagrams which made it easier. I like doing entry passes because it's easy to put all the information you know into one box instead of writing lots of paragraphs. It was really fun to plan and do exercises.

I am now able to recognise different parts of the body by looking at a picture. This will help me if I am researching something. It will help me to know what is the best thing to do for my heart.

Learner Evidence



Respiratory System Sequencing
Activity

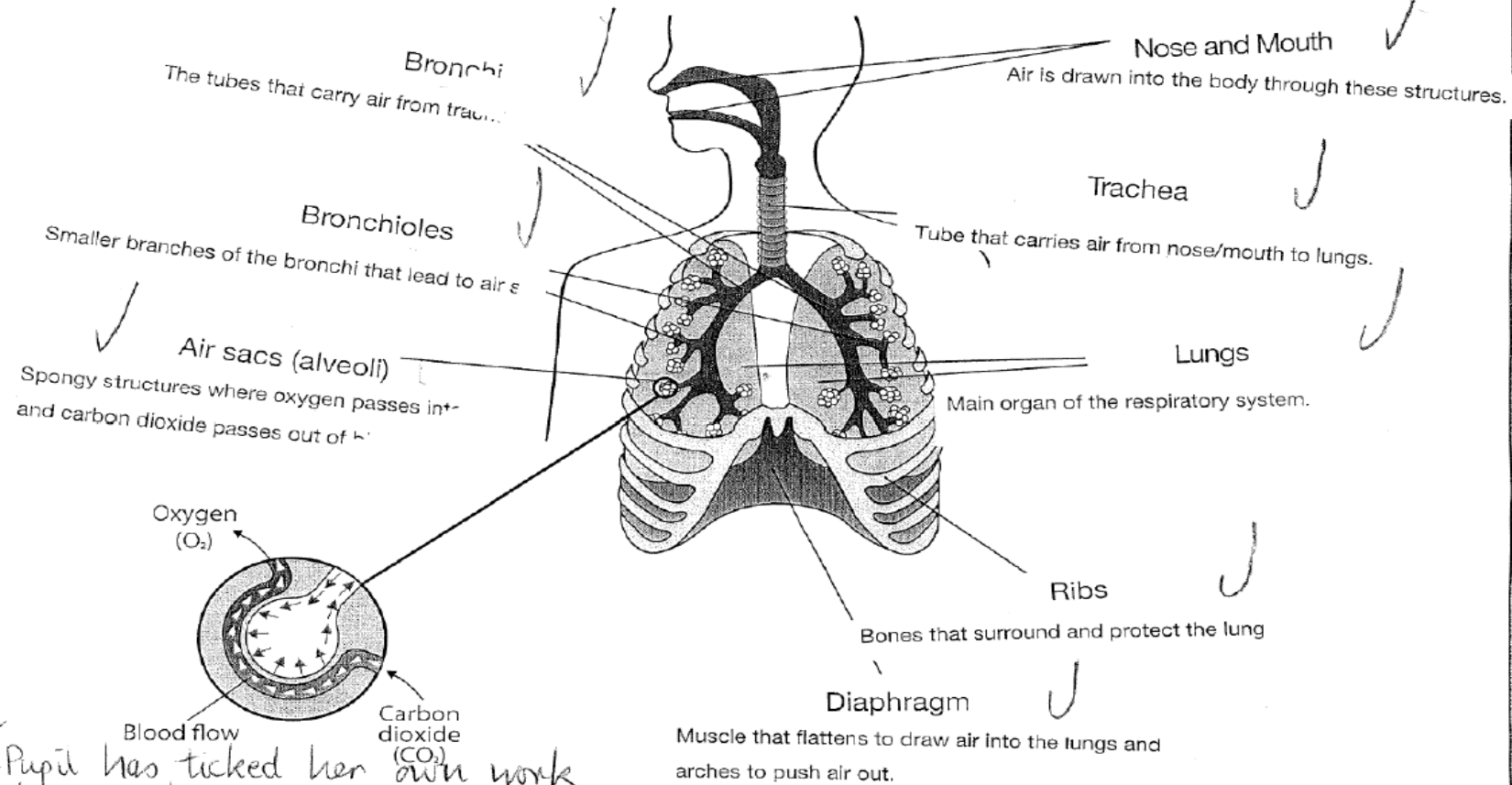
Practitioner Moderation Template

Learner Evidence

Respiratory system

* You labelled the diagram correctly.
* You matched the explanations correctly.

(B) tigttag*



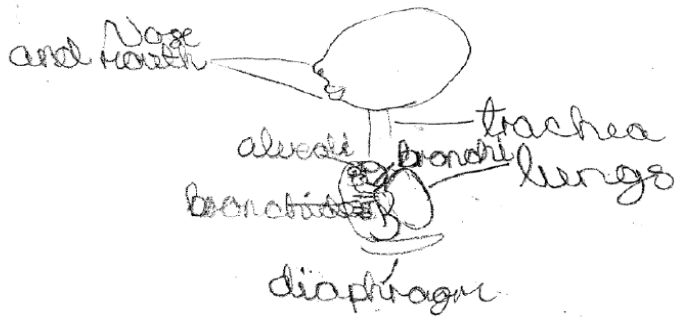
(Pupil has ticked her own work during class report back/self-correction.)

The Respiratory System

ENTRY PASS

The Respiratory System is the process of air going through the body (breathing system.) We inhale air with our mouths and noses, down our trachea, into our lungs, into our bronchi, then our bronchioles and into the alveoli. Then we exhale out of our nose and mouth. (From the alveoli, oxygen goes into the bloodstream.)

The lungs are the main organ in the system.



★ You have shown good knowledge of the respiratory system.

* What do we exhale? You have said 'air'. Perhaps you could be more precise.

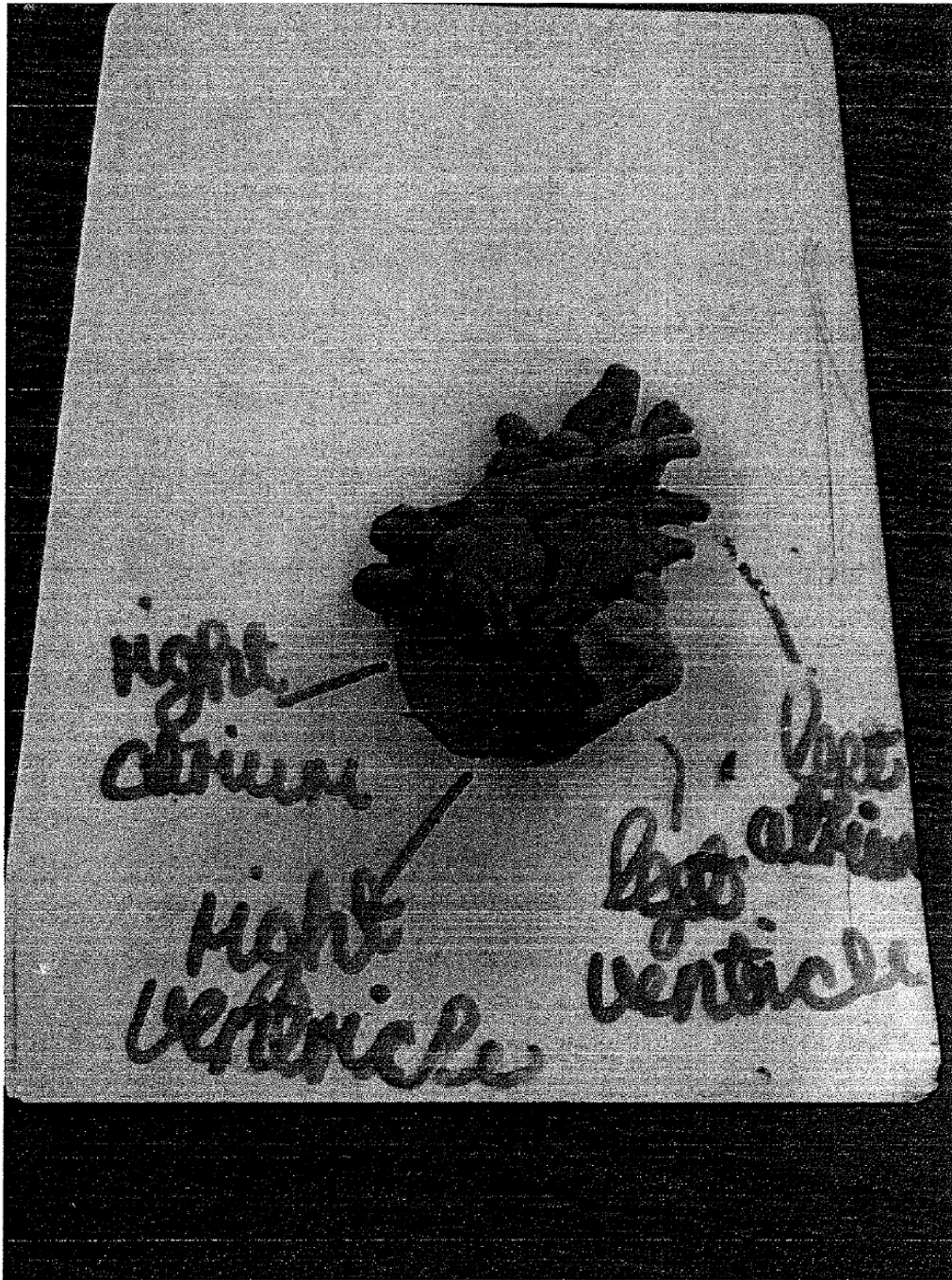
I. To Investigate Breathing Rates During Exercise

Number of breaths per minute	Before exercise	Straight after exercise	4 minutes after exercise
Myself	50	69	40
My Partner	42	89	39

My Conclusions

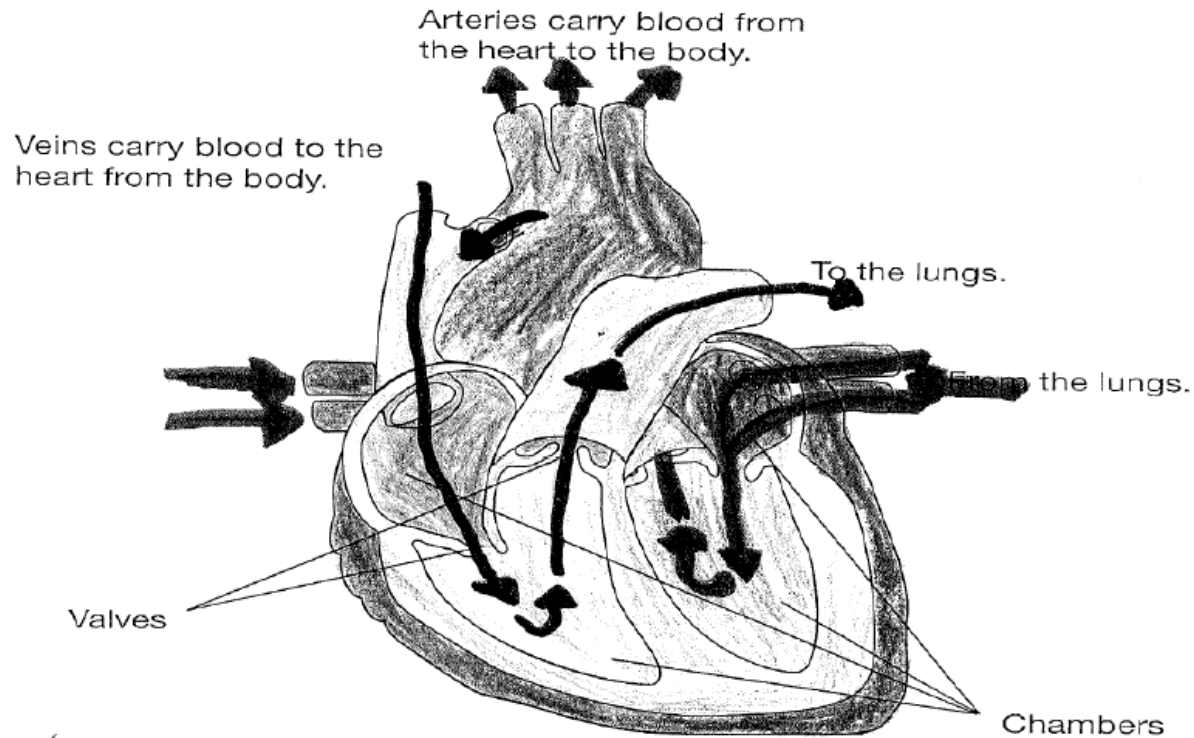
When you exercise, you need more oxygen for energy, so your breathing rate increases. This healthy but when you recover it is also a good thing.

★ Your conclusion shows that you have understood the process.



Plasticene Model of the Heart

Heart



* You have colour coded your diagram to show circulation of blood.

Investigating my Heart

Aim (What do you hope to find out?):

To investigate heart beats during exercise.

Method (What will you do?):

- Check pulse;
- before exercise
- straight after exercise (scissor jumps for 3 mins)
- 10 mins after exercise

Variables:

- Types of exercise
1. scissor jumps
 2. jumping jacks
 3. Running on the spot

Prediction (What do you think will happen?):

My heart rate WILL increase after exercise

Conclusion (What did you find):

Your heart rate increases when you exercise. RUNNING ON THE SPOT was the best exercise. Scissor jumps was the worst.

* You planned your investigation carefully to measure pulse rate before and after exercise.

Pubo Kate Results

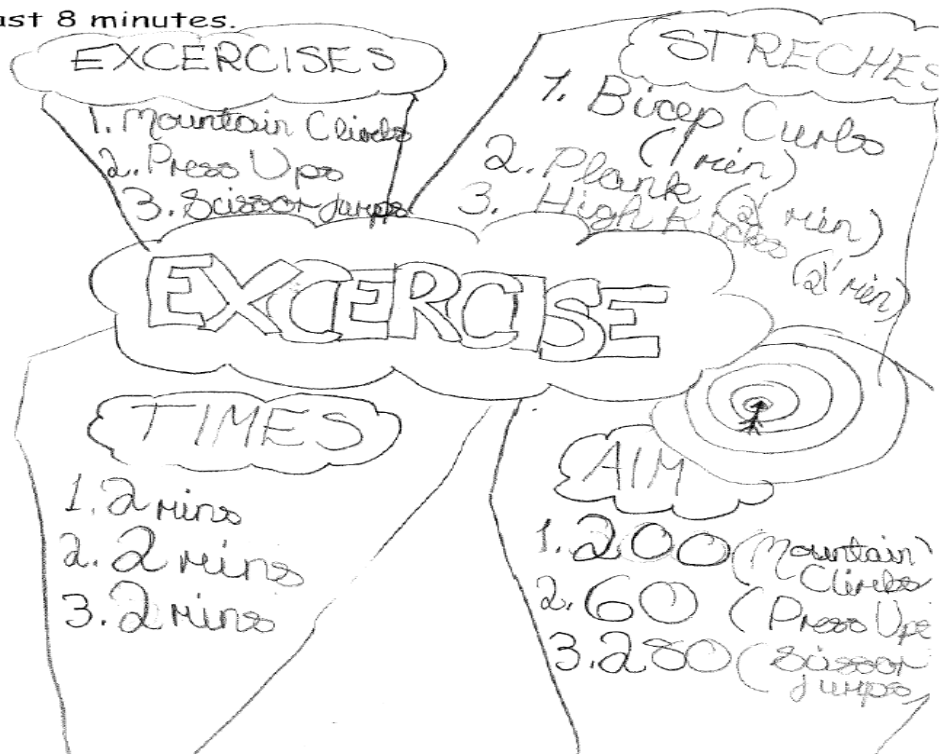
Results

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Activity	Beats per 15 seconds	BPM (Beats per minute)
Formula Beats per 15 secs x 4 = beats per minute		
Scissor jumps	36	144
Jumping jacks	40	160
Running on the spot	44	176
Rest Beat	22	88

My Exercise Plan

Create your own plan to help increase your heart/ breathing rate and boost your fitness. Your plan will be carried out at least 3 times a week indoors. It should last 8 minutes.



Learning Intention: To Create an Exercise Plan
Context:

Success Criteria:	Self	Peer	Teacher
Have I included stretches?			✓
Have I included exercises with lots of movement to my heart rate going up?			✓
Have I included exercises which will make me out of breath?			✓
Does my exercise plan say how much of each exercise I should do?			✓
Are my exercises constant (no breaks)?			✓

It went really well! I followed the success criteria.

*

* You certainly looked out of breath during the exercise session! You met all criteria.

* Colour coding 'traffic lights' were green!