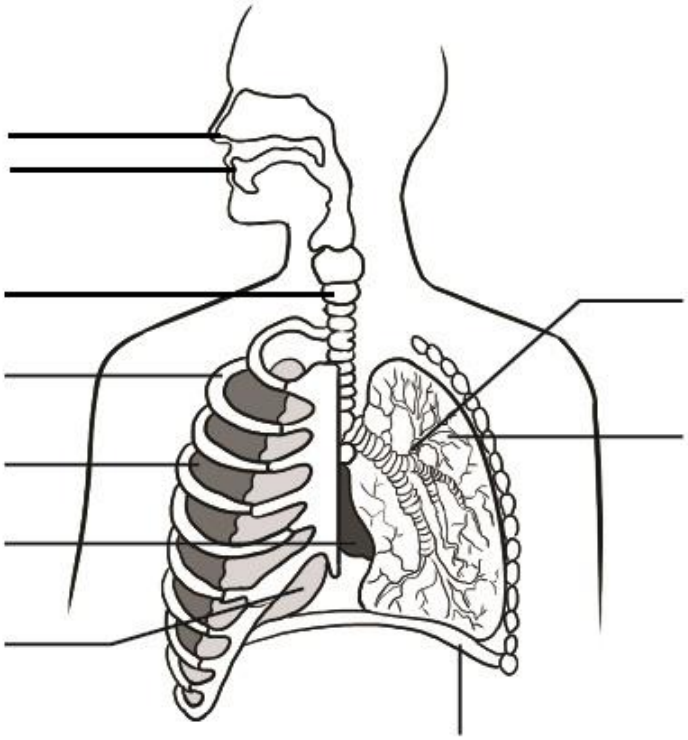
8 Part 2 Checkpoint Revision (Route A)

Task 1

1 The diagram below shows the main structures in your respiratory system. Use the following words to label the structures.

diaphragm **mouth** **nose** **heart** **lung** **ribcage**
muscle **bronchus** **alveolus** **trachea**



2 Complete the table below to describe the function of some of their parts and how they are adapted for their function.

Structure	Function	Adaptations
Ribcage		
Alveolus		
Diaphragm		

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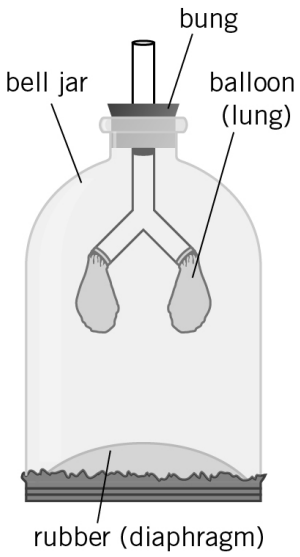
Task 2

1 The table below summarises what happens when you inhale (breathe in) and exhale (breathe out)

In each row circle the correct statement to describe what happens.

	Inhaling	**Exhaling**
Muscles between ribs	Contract / Relax	Contract / Relax
Ribcage moves	Up and out / Down and in	Up and out / Down and in
Diaphragm	Relaxes / Contracts	Relaxes / Contracts
Diaphragm moves	Down / Up	Down / Up
Volume inside chest	Decreases / Increases	Decreases / Increases
Pressure inside chest	Decreases / Increases	Decreases / Increases
Air	Forced out / Rushes in	Forced out / Rushes in

2 The bell jar model is often used to help explain what is occurring during breathing.



State and explain what would happen if you pulled down on the sheet of rubber.

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8 Part 2 Checkpoint Revision (Route A)

Task 3

1 Choose appropriate words to complete the paragraphs below.

The amount of oxygen required by your body cells determines how ..... you need to breathe. You need ..... oxygen when you exercise. The harder you exercise, the ..... your breathing rate and the ..... the volume of breathing. This allows you to take in the oxygen you need to respire more, which transfers more ..... to your muscle cells.

Lung volume can be increased with regular ..... . A large lung volume means that more ..... can enter your body. Smoking, diseases such as ....., and old age can reduce lung volume.

2 State two respiratory problems caused by smoking and describe how they are caused.

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3 Your lung volume is a measure of how much air you can exhale. The airways of people who have asthma are generally narrower as they are very sensitive to allergies that cause them to swell. Suggest why someone with asthma has a lower lung volume than a person without asthma.

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8 Part 2 Checkpoint Revision (Route A)

Task 4

1 Match the parts of the digestive system to their role in the body

Mouth	Food passes down this tube.
Gullet	Faeces are stored here until they leave the body.
Stomach	Water passes back into the body and faeces are formed.
Small intestine	Small molecules of nutrients pass through the wall into the bloodstream.
Large intestine	Muscular ring through which faeces pass out of the body.
Rectum	Food is chewed and mixed with saliva. Teeth help to break the food into smaller chunks.
Anus	Food is mixed with digestive juices and acids.

2 State and explain three ways the small intestine is adapted to its function.

1. .....

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2. .....

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3. .....

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8 Part 2 Checkpoint Revision (Route A)

Task 5

During digestion large food molecules are broken down into smaller food molecules.

1 Describe what happens to your food in your mouth.

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2 Enzymes play an important role in digestion as they break down molecules into even smaller molecules that can then be absorbed by the body.

Explain why they are called biological catalysts.

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3 Specific enzymes perform specific jobs. Complete the table below to show the function of carbohydrases, lipases, and proteases.

Enzyme	Molecule broken down	Molecules produced
Protease		
Carbohydrase		
Lipase		

4 The useful products of digestion are then absorbed. Describe what happens to the undigested food.

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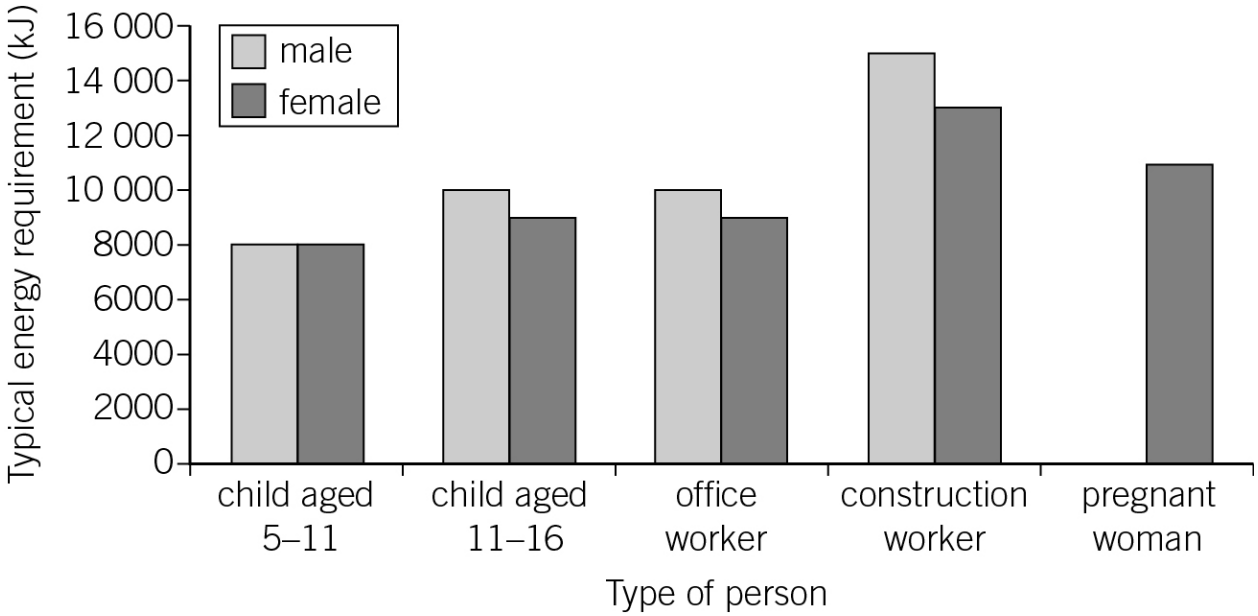
8 Part 2 Checkpoint Revision (Route A)

Task 6

This graph shows the amount of energy required per day, by different people.



1 State the amount of energy needed per day by:

a 10 year old child: .....

a 15 year old female: ..... .

2 Explain why a construction worker needs more energy than an office worker.

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3 An office worker regularly consumes more than 15 000 kJ of energy per day. Suggest the effects this could have on their health.

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8 Part 2 Checkpoint Revision (Route A)

4 To remain healthy you should regularly eat foods containing vitamins and minerals.

It is recommended that an adult consumes 40 mg of vitamin C per day. A glass of orange juice contains 80 mg of vitamin C. How much orange juice would an adult need to consume to take in their recommended amount of vitamin C?

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5 One of vitamin C's roles in the body is to help repair damaged tissue. Suggest what might happen to a cut if you don't have enough vitamin C in your body.

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