



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

**LIFE SCIENCES PRACTICAL TASK 2
19 AUGUST 2026**

LEARNER'S NAMES: _____

TIME: 1 hour

This question paper consists of 06 pages

INSTRUCTIONS TO LEARNERS

Read the following instructions carefully before answering the questions.

1. This is a formal SBA task and needs to be done under supervised conditions in the classroom.
2. Each learner completes this task on his/her own (under test conditions).
3. Present your answers per the instructions of each question.
4. Draw all diagrams in pencil.
5. The diagrams in this task may NOT be drawn to scale.
6. Answer ALL the questions.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Present your answers according to the instructions of each question.
9. Write neatly and legibly.

SECTION A**GROUP WORK ASSESSMENT****Rubric for assessing learners:**

Assessment criteria	Marks			
	0	1	2	3
Model constructed according to instructions	Did not follow any of the instructions; model not constructed or incorrect	Followed some of the instructions correctly; model incomplete/ inaccurate	Followed most of the instructions; model completed with some errors	Followed all the instructions correctly; model completed accurately
Observing and explaining what happened to the balloon when the plastic sheet moved	No observation or explanation given is incorrect	Correct observation given with no explanation/ incorrect explanation	Correct observation given with incomplete explanation	Correct observation and explanation given
Matching parts of the model with parts of the thorax	Not done/ incorrect	1 to 3 parts matched	All 4 to 5 parts correctly matched	
Describing shortcomings of the model	Not done/ very poor description	Reasonable description	Excellent description	
Comments				
				-----/ 10

(10)

SECTION B			
INDIVIDUAL TASK (In class under strict supervision)			
	1.2.	Answer the following questions.	
	1.2.1.	What does the movement of the plastic sheet represent? _____	(1)
	1.2.2.	What happens to the balloon when the plastic sheet moved	
	(a)	Down _____	(1)
	(b)	Up _____	(1)
	1.2.3.	Why did the balloon change shape? _____	(2)
		What parts of the thorax in a human are represented by each of the following in your model?	
	(a)	Straw _____	(1)
	(b)	Balloon _____	(1)
	(c)	Bottle _____	(1)
	(d)	Air-filled space _____	(1)
	(e)	Plastic sheet _____	(1)
	(f)	Piece of string. _____	(1)

1.2.5.	Describe the ways in which your model is a poor representation of the structure of the thorax and the mechanism of breathing.	(6)															

		(17)															
	TOTAL QUESTION 1:	[27]															
QUESTION 2																	
2.1.	Answer the question based on the information in the table below.																
	Table showing composition of gases in inhaled and exhaled air. <table border="1"> <thead> <tr> <th>Gases</th> <th>Inhaled air</th> <th>Exhaled air</th> </tr> </thead> <tbody> <tr> <td>Nitrogen %</td> <td>78</td> <td>78</td> </tr> <tr> <td>Oxygen %</td> <td>21</td> <td>16</td> </tr> <tr> <td>Carbon dioxide %</td> <td>0.04</td> <td>4</td> </tr> <tr> <td>Water vapour</td> <td>Variable</td> <td>Higher than in inhaled air</td> </tr> </tbody> </table>	Gases	Inhaled air	Exhaled air	Nitrogen %	78	78	Oxygen %	21	16	Carbon dioxide %	0.04	4	Water vapour	Variable	Higher than in inhaled air	
Gases	Inhaled air	Exhaled air															
Nitrogen %	78	78															
Oxygen %	21	16															
Carbon dioxide %	0.04	4															
Water vapour	Variable	Higher than in inhaled air															
2.1.1	What is the difference in percentage of oxygen between inhaled and exhaled air?	(1)															

2.1.2	Explain why there is less oxygen in exhaled air than in inhaled air.	(2)															

2.1.3	What is the difference in the percentage of carbon dioxide between inhaled and exhaled air.	(1)															

		2.1.4	Explain why there is more carbon dioxide in exhaled air than inhaled air.	(2)
		2.1.5	Explain why the percentage of nitrogen is the same in inhaled than in exhaled air.	(2)
		2.1.6	Draw a pie chart to show the gas content of inhaled air.	(5)
				(13)
		TOTAL QUESTION 2:		[13]
		GRAND TOTAL:		[40]