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LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

PRACTICAL INVESTIGATION

NATURAL SCIENCES | GRADE 8 | TERM 1

DURATION: 1 Hour 30 Minutes

Group Details			
Class:		Date:	**20 February 2026**

Group Leader	
Learner 2	
Learner 3	
Learner 4	
Learner 5	

Office Use Only			
	Maximum Marks	**Mark Obtained**	**Moderated Mark**
1. Prediction	02		
2. Observations	04		
3. Interpretation	12		
4. Conclusion	02		
TOTAL	**20**		
Educator's Signature		Date:	
DH Signature		Date:	

INSTRUCTIONS

1. Work in groups of **5.**
2. Read the instructions carefully before carrying out the investigation.
3. Answer ALL questions.
4. Write your answers in the **spaces** provided.
5. Write neatly and legibly.

This INVESTIGATION consists of **04 pages** including cover page

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Aim: To test for the presence of starch in a green leaf.

You will need/Apparatus:

Apparatus/ Materials	Chemicals
✓ Beaker ✓ Tripot stand with gauze ✓ Burner ✓ Test tube ✓ Forceps ✓ White tile ✓ Pipette	✓ 50 ml water ✓ Iodine solution ✓ Ethanol

Method:

1. Carefully, remove a green leaf from a heathy plant.
2. Place the beaker filled with water on the tripod over the burner.
3. Light the burner heat until boiling point.
4. Use forceps to put the leaf into the boiling water. The boiling water will kill the leaf.
5. Take the leaf and put it into the test tube containing ethanol.
6. The ethanol will change the colour of the leaf.
7. Rinse the leaf in the beaker of hot water.
8. Place the leaf on the white tile and spread it.
9. Use pipette to drop iodine solution over the surface of the leaf and observe the colour change of the iodine solution.

1. Prediction/ Hypothesis

1.1 What do you think would be the results?

_____

_____

_____ (2)

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2. Observations/ Results

Describe what you observed when:

2.1 The leaf was boiled in water.

_____ (1)

2.2 The boiled green leaf was boiled in ethanol.

_____ (1)

2.3 The leaf was rinsed in the water after being boiled.

_____ (1)

2.4 The iodine solution was added to the surface of the leaf.

_____ (1)

3. Interpretation of the results:

3.1 Why does the leaf have to be boiled?

_____ (2)

3.2 Why do you have to turn off the burner before you place the test tube containing ethanol in the beaker of hot water?

_____

_____ (2)

3.3 What colour was the leaf when it was removed from the test tube containing Ethanol?

_____ (1)

3.4 What did the leaf feel like when it was removed from the test tube containing Ethanol?

_____ (1)

3.5 What happened to the leaf when it was washed in the hot water?

_____ (2)

3.6 What did you observe when the Iodine solution was dropped on the leaf?

_____ (2)

3.7 The colour changes of Iodine solution when placed on the leaf means:

_____ (2)

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4. Conclusion

4.1 Draw a conclusion from the observations and results of the investigation.

_____

_____

_____ (2)

TOTAL: 20



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EDUCATION

SENIOR PHASE

GRADE 8





NATURAL SCIENCES
TERM 1 PRACTICAL INVESTIGATION
20 FEBRUARY 2026

Marks: 20 **Duration: 1 H 30 Minutes**

This marking guideline consists of 3 pages.

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1.1 Iodine solution will change to blue/black √ when used to test starch in a leaf. √

2.1 The leaf became soft√

2.2 The leaf lost its green colour and became brittle√

2.3 The leaf became soft again. √

2.4 The Iodine solution changed from brown to blue/back. √

3.1 Boiling softens and kills the cells of the leaf√ so that the Iodine solution can reach the starch inside the cells. √

3.2 Ethanol is highly flammable √ and would catch fire if it was close to an open flame. √

3.3 The leaf was a pale cream/white colour. √

3.4 The leaf felt brittle. √

3.5 The leaf became soft √ and becomes easy to absorb iodine. √

3.6 The green leaf part turned into blue/back colour√, the vein part did not change the colour√

3.7 Starch is present in the leaf√, which shows that leaves produce and store starch. √

4.1 Plants store the starch produced√ during photosynthesis in the leaves. √

TOTAL = 20 MARKS

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RUBRIC FOR GRADE 8 PRACTICAL TASK TERM 1

CRITERIA	EXCELLENT (4 Marks)	GOOD (2 -3marks)	NEED IMPROVEMENT (1 marks)	MARKS
Hypothesis	Clearly stated	Partially stated	No hypothesis	
Observation	Records observations accurately	Records observations with errors	No observations recorded	
Results	Results clearly indicated	Results partially indicated	No results indicated	
Safety and handling	Demonstrate good safety and handling practices	Demonstrated some safety and handling practices	Demonstrated poor safety and handling practices	
Conclusion	Drawn a clear conclusion based on the results	Conclusion partially drawn	No conclusion	

TOTAL: /20 MARKS