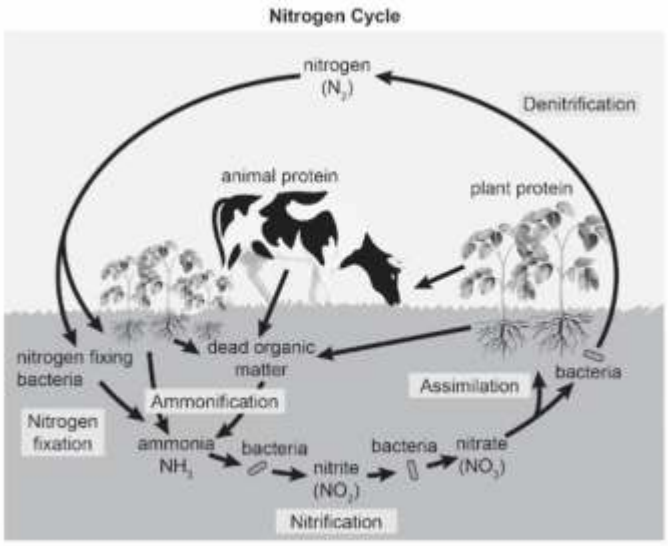
Curriculum Aligned Competency Based Test Items
Science
Class 9 – Chapter 14
Natural Resources

The diagram shows the nitrogen cycle.



SAS21S091401

1 In which form is nitrogen assimilated by plants?

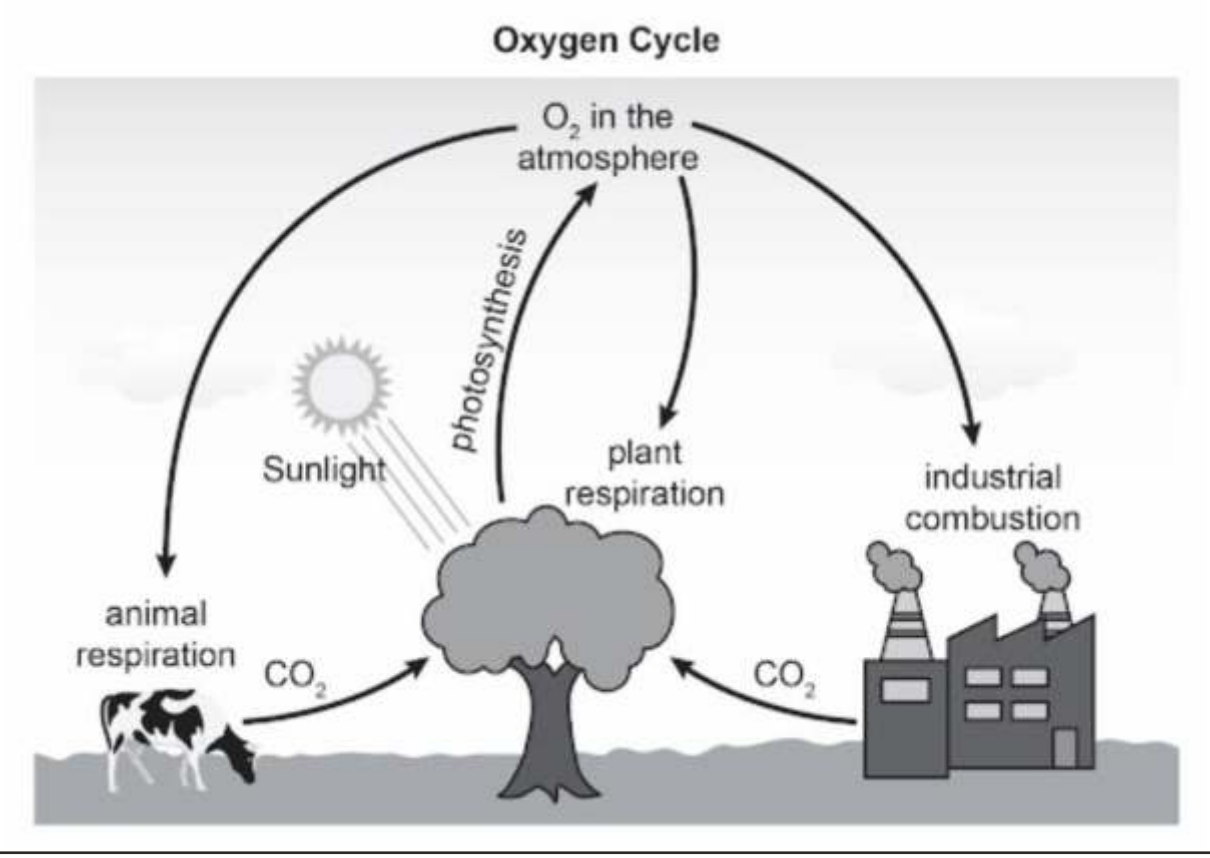
A. Ammonia
B. Nitrite
C. Nitrate
D. Nitrogen

SAS21S091402

2 In which of these processes is dead organic matter broken down?

A. Nitrogen fixation
B. Ammonification
C. Nitrification
D. Denitrification

The diagram shows the basic stages in the oxygen cycle.



SAS21S091403

3 Which of these can be concluded from the diagram?
Circle 'Yes' or 'No' for the correct response.

Can this be concluded from the diagram?	Yes or No
Deforestation will seriously affect the oxygen cycle.	Yes/No
Animals release oxygen into the atmosphere.	Yes/No
Oxygen level in the atmosphere is higher at night.	Yes/No

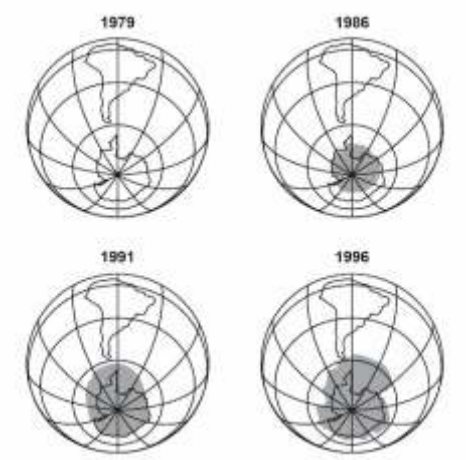
SAS21S091404

4 Will the oxygen cycle discontinue if all industries of a town are shut down?
Explain your answer.

_____

_____

The pictures show the ozone layer above Antarctica in different years.
The **dark shade** represents a hole in the ozone layer.



SAS21S091405

5 What can be concluded about the **hole in the ozone layer** from the pictures?

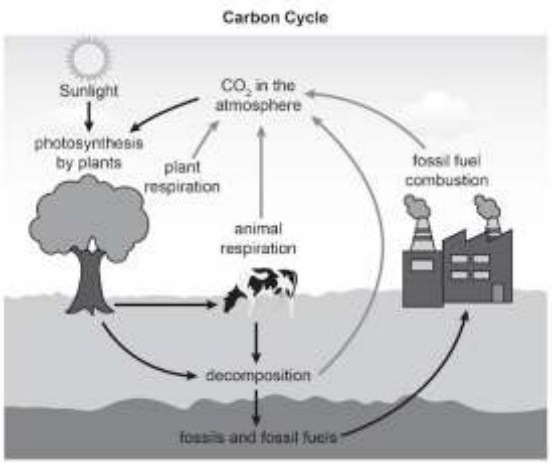
A. It was the largest in 1991.
B. It has decreased after 1986.
C. It started developing in 1979.
D. It has increased from 1986 to 1996.

SAS21S091406

6 Which of these will occur with the reduction of ozone layer in the upper atmosphere?

A. Surface temperature of the Earth will increase.
B. Amount of annual rainfall will decrease globally.
C. Percentage of oxygen in the atmosphere will decrease.
D. Harmful radiations from the Sun will reach the Earth's surface.

The diagram shows the stages in the carbon cycle.



SAS21S091407

7 Which of these is true about the carbon cycle?
Circle 'Yes' or 'No' for the correct response.

Is this true about the carbon cycle?	Yes or No
Plants absorb carbon dioxide from the atmosphere.	Yes/No
Carbon dioxide enters the living world through respiration.	Yes/No
Carbon dioxide level in the atmosphere remains the same during day and night.	Yes/No

SAS21S091408

8 How are fossil fuels formed?

_____

_____

SAS21S091409

9 Which of these is a greenhouse gas?

A. Oxygen
B. Nitrogen
C. Hydrogen
D. Carbon dioxide

SAS21S091410

10 How does planting of trees on riverbanks prevent soil erosion?

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_____

Answers

Item Number	Question 1
Question Code	SAS21S101401
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Nitrogen cycle)
Competency	Interpreting Data and Evidence Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	C. Nitrate
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21S091402
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Nitrogen cycle)
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. Ammonification
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21S091403
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Oxygen cycle)
Competency	Interpreting Data and Evidence Scientifically
Item Type	Complex Multiple Choice Question
Full Credit (Full Score)	Yes No No
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21S091404
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Oxygen cycle)
Competency	Explaining Phenomena Scientifically
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that the oxygen cycle will continue as the transfer of oxygen will happen through plants and animals. For example • No. The oxygen cycle will continue as oxygen will get transferred through plants and animals.
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21S091405
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Ozone Layer
Competency	Interpreting Data and Evidence Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. It has increased from 1986 to 1996.
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21S091406
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Ozone Layer
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Harmful radiations from the Sun will reach the Earth's surface.
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21S091407
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Carbon Cycle)
Competency	Interpreting Data and Evidence Scientifically
Item Type	Complex Multiple Choice Question
Full Credit (Full Score)	Yes No Yes
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21S091408
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Biogeochemical Cycles (Carbon Cycle)
Competency	Explaining Phenomena Scientifically
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that fossil fuels form by the decomposition of dead plants and animals.
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21S091409
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | The Greenhouse Effect
Competency	Explaining Phenomena Scientifically
Item Type	Multiple Choice Question
Full Credit (Full Score)	D. Carbon dioxide
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21S091410
Grade & Chapter Name	Grade 9 | Natural Resources
Concept | Sub-concept	Earth Science | Mineral Riches in The Soil
Competency	Explaining Phenomena Scientifically
Item Type	Constructed Response
Full Credit (Full Score)	Mentions that plant roots hold the soil tightly.
No Credit (No Score)	Any other response or missing response