



Pearson

Activity 3 AO1 questions 3b

Question 3b

Sample A

The screenshot shows the ePEN2 Qc Viewer interface. The browser address bar displays <https://uk.pearsonopen.com/epen-score/qcViewer.html>. The page title is "ePEN2 Qc Viewer". The main content area shows a question: "Line 1 MP1 lost as heat". Below the question, there is a text input area with a pre-defined annotation: "(b) Explain why the energy in the mud worms is not all transferred to the organisms that eat them. (4)". The response is handwritten: "Some energy is lost in heat as the organisms may heat up their surrounding. Some energy is lost in kinetic energy as the energy used to eat the organisms is being lost also". The response state is 19, WF: 0, RESPONSE: 140132, DOC_ID: P_0461000060390. The classification is ePACK. The score is 1. The interface includes a toolbar with various icons for editing and a sidebar with navigation options like Skip, Add to, Approve, Activity, and Exit So.

Sample B

The screenshot shows the ePEN2 Qc Viewer interface. The browser address bar displays <https://uk.pearsonopen.com/epen-score/qcViewer.html>. The page title is "ePEN2 Qc Viewer". The main content area shows a question: "Line 2 Mp1 respiration
Line 3 Mp3 excretion
Line 3 Mp2 egestion
Score 3". Below the question, there is a text input area with a pre-defined annotation: "(b) Explain why the energy in the mud worms is not all transferred to the organisms that eat them. (4)". The response is handwritten: "There are several reasons, firstly, ~~when~~ some of the energy is used for respiration, some is lost ~~through~~ through excretion and mostly egestion, meaning the energy is not being used, finally, some is used in the body for life processes such as growth. Moreover, some of the energy is used ~~the~~ lost in egestion and excretion because the body cannot convert it and growth and movement require energy to happen". The response state is 19, WF: 0, RESPONSE: 124399, DOC_ID: P_0461000055581. The classification is ePACK. The score is 3. The interface includes a toolbar with various icons for editing and a sidebar with navigation options like Skip, Add to, Approve, Activity, and Exit So.



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Sample C

ePEN2 Qc Viewer

https://uk.pearsonopen.com/epen-score/qcViewer.html

Apps YouTube Maps News Gmail New Tab ePEN2 Sympatric speciation Certificated Share... VassarStats: Statistic...

Line 1 Mp4 not all eaten
Line 2 Mp2 egestion
Line 4 Mp1 movement
Score 3

Update Annotation

(b) Explain why the energy in the mud worms is not all transferred to the organisms that eat them.

As they may not eat all of the mudworm. They also may egest some of it in their faeces. Also they may use some of the energy to respire to move around or lose it keeping themselves warm. Finally they may also use the energy for metabolic processes such as digestion.

RESPONSE_STATE: 19
WF: 0
RESPONSE: 124403
DOC_ID: P_0461000055574

Q03b 0 1 2 3 4 3

831108TL

Skip
Add to
Approv
Activity
Exit So

Classification
ePACK

Type here to search

08:43
05/08/2019

Sample D

ePEN2 Qc Viewer

https://uk.pearsonopen.com/epen-score/qcViewer.html

Apps YouTube Maps News Gmail New Tab ePEN2 Sympatric speciation Certificated Share... VassarStats: Statistic...

Line 1 Mp1 respiration
Line 2 Mp2 egested
Line 2 Mp3 excretion
Line 3 Mp4 not all eaten
Scores 4

Update Annotation

(b) Explain why the energy in the mud worms is not all transferred to the organisms that eat them.

they loose ~~the~~ energy through respiration, they egest and excrete a lot of what they eat. the organisms eating them may not eat all of them thus for not getting as much energy from them and they will not be able to obtain all the energy they can whilst digesting the mud worm. Because of this only about 10% of the energy will be transferred to the next trophic level.

RESPONSE_STATE: 19
WF: 0
RESPONSE: 124405
DOC_ID: P_0461000055580

Q03b 0 1 2 3 4 4

831108TL

Skip
Add to
Approv
Activity
Exit So

Classification
ePACK

Type here to search

08:44
05/08/2019



Pearson

Activity 4

Question 9b

Sample A

ePEN2 Qc Viewer

https://uk.pearsonopen.com/epen-score/qcViewer.html

Apps YouTube Maps News Gmail New Tab ePEN2 Sympatric speciation Certificated Share... VassarStats: Statistic...

Line 6 MP7 less oxygen
Line 8/9 MP4 plants grow
Score 2
Line 12 MP4 eutrophication mark already credited.

Update Annotation

RESPONSE_STATE: 19
WF: 0
RESPONSE: 129909
DOC_ID: P_046100055593

Q09b 0 1 2 3 4 5 6 2

9588471

Skip
Add to Set
Approved
Activity Log
Exit Scoring

Classification

ePICK

When sewage pollution releases toxic waste into rivers the wildlife fish and inhabitants of the water get sick because of all bacteria sewage pollution also damages the under water plants as there will be less oxygen in the river. However some sewage pollution can be used as a fertilizer for the plants and help it grow. Also the bacteria in the sewage pollution will eat on the plant and animals. Also the nutrients in the sewage enter the river and Eutrophication happens.

Type here to search

09:15 05/08/2019

Sample B

ePEN2 Qc Viewer

https://uk.pearsonopen.com/epen-score/qcViewer.html

Apps YouTube Maps News Gmail New Tab ePEN2 Sympatric speciation Certificated Share... VassarStats: Statistic...

Annotation Notes
Line 2- MP 4 eutrophication
Line 4 MP2 urine
Line 5- MP1 eutrophication bacteria that lead to disease
Line 7 MP5 eat organisms
Line 10 MP6 can't photosynthesize
Line 12- MP7 no oxygen
Line 14 MP 8 respiration
Score 8/9

Update Annotation

RESPONSE_STATE: 19
WF: 0
RESPONSE: 129417
DOC_ID: P_046100060366

Q09b 0 1 2 3 4 5 6 6

Skip
Add to Set
Approved
Activity Log
Exit Scoring

Classification

ePICK

(b) Water pollution can occur if sewage enters a river.
Explain the biological consequences of sewage pollution on a river ecosystem.

A river being contaminated by sewage can lead to eutrophication and problems throughout a river ecosystem. Sewage contains human waste such as faeces and urine. These contain bacteria and can lead to disease affecting organisms in a river's ecosystem. The sewage could kill organisms by them eating it or getting ill (animals) or by the sewage blocking sunlight from the river meaning that the plants can't photosynthesize and die as they can't survive without food (glucose). This would also mean that fish could die as all of the oxygen has been used by the plants so there's not left for the animals to use in respiration. However the sewage may also contain nutrients which could be used by algae (for example) to grow again leading to it to block out the sun resulting in the death of organisms and an unbalanced food chain.

(Total for Question 9 = 9 marks)

Type here to search

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Pearson

Sample C

ePEN2 Qc Viewer

https://uk.pearsonopen.com/epen-score/qcViewer.html

Apps YouTube Maps News Gmail New Tab ePEN2 Sympatric speciation Certificated Share... VassarStats: Statistic...

Annotation

Notes

Line 1: MP 4: autophosphatation
Line 2: MP 2: nitrate
Line 5: MP5 reducing light
Line 10: MP6 growth of plants
Line 12: MP7 reduce oxygen
Line 13: MP8 respiration
Score 5

Update Annotation

Q15b

0 1 2 3 4 5 6

6

11/10/19

Stop

Add to Set

Approved

Activity Log

Exit Scoring

Classification

Q15b

RESPONSE_STATE: 10
MP 3
RESPONSE: 120621
DOC_ID_P_48100000844

Classification

Q15b

RESPONSE_STATE: 10
MP 3
RESPONSE: 120621
DOC_ID_P_48100000844

(b) Water pollution can occur if sewage enters a river.
Explain the biological consequences of sewage pollution on a river ecosystem. (6)

- Sewage pollution on a river causes eutrophication.
- The sewage causes excess phosphorus and nitrates into the water, increasing the number of bacteria.
- This increases algae growth.
- Algae blocks the sun, which reduces the light penetration for other larger plants, meaning they can't photosynthesise so they die.
- The death of these plants increases the build up of debris, as well as removing food sources for fish.
- The debris build up causes an increase in the number of ~~anaerobic~~ anaerobic bacteria.
- These bacteria reduce the oxygen availability for other organisms, meaning the organisms can't respire, therefore killing them.
- Eventually, the water becomes anoxic, and no other organisms can live there, so species diversity decreases.

(Total for Question 9 = 9 marks)

Type here to search

09:16 05/08/2019