

Biology - Key stage 4

Ecology

Decay

Dr Clapp



Independent practice

Describe the process of decay.

Keywords: detritivores, decay, feeding, decomposers, nutrients, growth, respire, waste products



Independent practice - answers

Detrivores such as worms and woodlice start the process of decay by feeding on the dead matter.

Decomposers such as bacteria and fungi will also feed on the dead matter.

Both the detrivores and decomposers will use some of the nutrients from the dead matter for growth but will also respire and release waste products into the surroundings.

The waste products can be used by plants for growth and then the cycle will begin again.



Independent practice

1. State the three conditions required for decay
2. Explain why if it gets too hot the rate of decay will slow down.
3. Explain why if oxygen levels get low the rate of decay will slow down



Independent practice - answers

1. State the three conditions required for decay
Warm temperatures, damp and good oxygen supply

1. Explain why if it gets too hot the rate of decay will slow down.

If it gets too hot the enzymes will begin to denature and then the substrates won't be able to bind to the active sites so the reactions will stop and decay will slow down



Independent practice - answers

3. Explain why if oxygen levels get low the rate of decay will slow down

If oxygen levels get low then the organisms involved in the decay process won't be able to respire and will die so the rate of decay will slow down



Exam question - independent practice

ExamBuilder: OCR, B732/02, June 2016

1. After heavy rain, a rubbish dump can become water-logged.

The production of landfill gas will increase over the following few weeks.

b. Suggest why. (2)



Exam question - independent practice

ExamBuilder: OCR, B732/02, June 2016

When bristlecone pine trees die the wood does **not** rot.
The wood is full of thick sap called resin.
This means the wood does **not** easily absorb oxygen or water.

Use this information to help explain why the wood does **not** rot. (2)



Exam question - answers

ExamBuilder: OCR, B732/02, June 2016

1. After heavy rain, a rubbish dump can become water-logged.

The production of landfill gas will increase over the following few weeks.

- b. Suggest why. (2)

Lots of water would mean less oxygen could get in (1)
This would lead to anaerobic conditions for respiration (1)



Exam question - answers

ExamBuilder: OCR, B732/02, June 2016

Microorganisms need oxygen for respiration (1)
No oxygen means the organisms cannot survive and carry out decay processes (1)

Use this information to help explain why the wood does **not** rot. (2)

