

6.1.3 Advantages and disadvantages of sexual and asexual reproduction

AQA GCSE Biology (Higher) Question and answer notes

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How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

What is the advantage of sexual reproduction?

The advantage of sexual reproduction is that it produces variety in the offspring. If the environment changes, this variation allows natural selection to happen, which allows the population to evolve to become well adapted to the new environment.

What are the advantages of asexual reproduction?

The advantages of asexual reproduction are as follows:

- Only one parent is needed. This means that time and energy do not have to be used finding a mate.
- It is faster than sexual reproduction.
- Many identical offspring can be produced when conditions are favourable.

What are some examples of organisms that reproduce both sexually and asexually?

Examples that reproduce both sexually and asexually include:

- The parasite that causes the disease malaria
- Many fungi
- Many plants

How does the parasite that causes malaria reproduce?

The parasite that causes malaria spends part of its life cycle living in a mosquito and part of its life cycle living in a vertebrate such as a human. When it is in the mosquito it reproduces sexually, and when it is in the vertebrate it reproduces asexually.

How do many fungi reproduce?

Many fungi use both sexual and asexual reproduction. They reproduce asexually by releasing spores that form new fungi that are clones of the original one, but they also use sexual reproduction which gives variation in the population. This variation can help the population of fungi to adapt if the environment changes.

How do many plants reproduce?

Many plants reproduce sexually by forming seeds, but also have methods of asexual reproduction. For example, strawberry plants can reproduce asexually by forming structures called runners that grow along the ground away from the original plant and then form a new plant. And daffodils reproduce asexually through bulb division - when an underground bulb splits in two to form two plants from one.