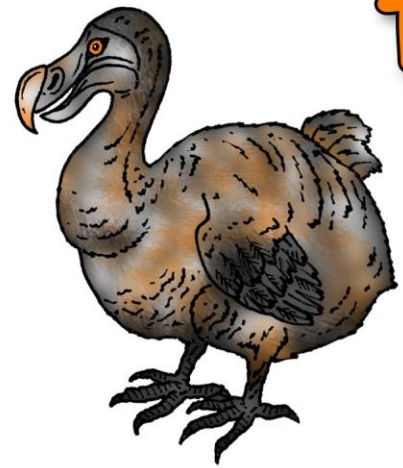
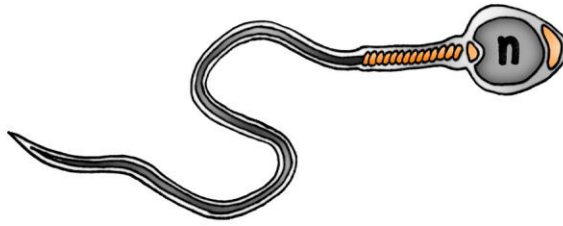
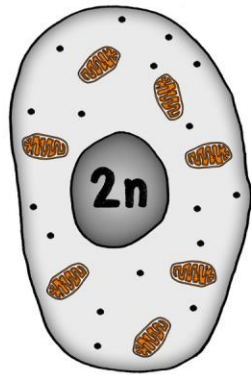
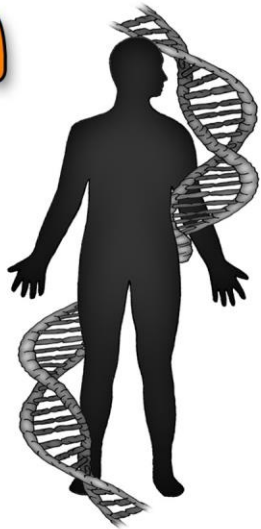
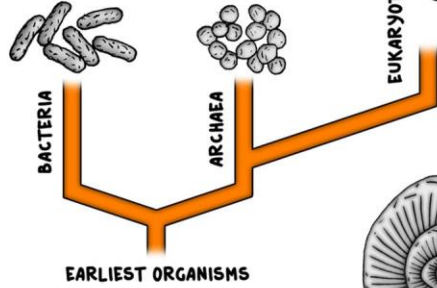


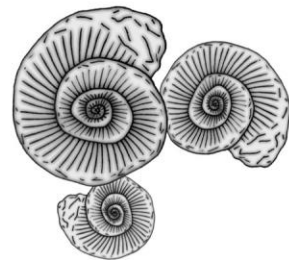
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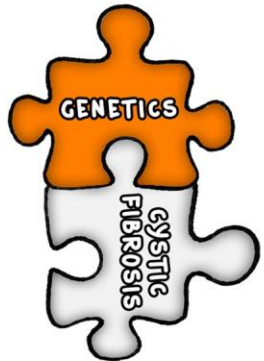
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# AQA GCSE INHERITANCE THINK IT!



C



BB, Bb or bb?



*Tursiops truncatus*



G

### Reproduction:

- Compare the process for making sperm to that for an embryo developing.
- Explain why it is beneficial for fungi to reproduce both sexually and asexually.
- Holly trees are either male or female. Cucumber plants have male flowers and female flowers on the same plant. What are the benefits of these arrangements?

### DNA and the genome:

- What was Rosalind Frank's contribution to our understanding of inheritance?
- Why is knowing about human migration patterns in the past of importance?
- If only 2% of the human genome contains information regarding the formation of proteins what is all the rest for?
- How is the information on DNA transferred to ribosomes?
- Why don't cells on the retina have hairs?

### Genetic Inheritance:

- Cells in mature testes divide continually to produce sperm. Why do no two sperm carry the same genetic information?
- If a colour blind man married a normal sighted woman none of their offspring would be colour blind. But if one of his daughters marries a normal sighted man the chances are that half of their sons will be colour blind. Can you explain this?

### Evolution, Extinction and classification :

- Why was the development of antibiotics so important for the theory of evolution?
- **(Biology Only)** Construct a timeline of the work of Mendel, Lamarck, Darwin and Wallace in the development of the theory of evolution by natural selection.
- How do antibiotic resistant bacteria in a chicken's gut spread to people?
- Compare the method of classification set up by Linnaeus to that proposed by Woese. What is molecular phylogeny?

# AQA Inheritance, variation and evolution

# ThinkIT!

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### Variation:

- Are adaptation and natural selection the same thing?
- Explain the term 'survival of the fittest' in relation to a plant.
- Modern birds have bones which have lots of air spaces inside them. Why is this a survival advantage?
- Why do very few mutations bring about a change in the phenotype despite the fact mutations are occurring continuously?

### Fossils :

- Why is fossil evidence unreliable?
- What evidence other than fossils supports Darwin's theory of evolution?
- Research when the earliest records of living cells begin.
- The Irish Elk was thought to be identical to European reindeer. How could this be proved or disproved? Why might the Irish Elk have such huge antlers?
- If you find fossils - will you find fossil fuels?

### Genetic Engineering:

- If you could choose to modify the genome of the human race with any gene from another organism what would it be and why?
- How could we make 'designer milk'?
- Describe the steps involved in adult cell cloning.
- What is the point of adult cell cloning?
- What is the economic benefit of embryo transplants in farm animals?

### Selective breeding:

- Is selective breeding a better description than artificial selection? Explain.
- Why does wild wheat not yield as much seed as a modern wheat crop?
- If humans used selective breeding to remove certain traits from our farm animals e.g. fatty meat – what is the point of Rare Breeds farms?