

OBHS Core Questions:

Subject: Science

Year and Term: Year 11 Autumn Term

Topic: B6 Inheritance and Evolution



Learn these questions to build a strong foundation of knowledge for this half-term. Ask family or friends to test you regularly, or practise on your own using the 'Look, Say, Cover, Write' method.

Question	Answer
1. What is meiosis?	Cell division which forms gametes
2. What is mitosis?	Cell division for growth and repair
3. Does meiosis produce genetically identical cells or genetically identical cells?	Genetically different cells
4. Does mitosis produce genetically identical cells or genetically identical cells?	Genetically identical cells
5. What is a gamete?	A sex cell (sperm or egg cells)
6. Name male and female gametes in animals.	Sperm and egg
7. Name male and female gametes in plants.	Pollen and egg
8. How many parents in asexual reproduction?	One
9. How many parents in sexual reproduction?	Two
10. How many cells are made after one round of mitosis?	Two
11. How many cells are made after one round of meiosis?	Four
12. Which type of cell division makes cells with 46 chromosomes?	Mitosis
13. Which type of cell division makes cells with 23 chromosomes?	Meiosis
14. What is DNA?	Genetic material
15. What shape is DNA?	Double helix

16. What is a gene?	A short section of DNA (coding a protein)
17. What is the genome?	All genetic material in an organism
18. What is a chromosome?	A long, coiled strand of DNA
19. What is an allele?	A version of a gene.
20. What is dominant gene?	A gene that is always expressed in the organism
21. What is a recessive gene?	A gene which is only expressed if two alleles are present
22. What does homozygous mean?	Two copies of the same alleles
23. What does heterozygous mean?	Two different alleles
24. What is a phenotype?	Physical traits
25. What is a genotype?	The genetic information in an organism
26. What is variation?	Differences in characteristics.
27. What are the 2 causes of variation?	Genetic (inherited) and environmental
28. Who came up with the theory of evolution by natural selection?	Charles Darwin
29. What is natural selection?	Survival of the fittest
30. What can evolution lead to?	New species
31. What is selective breeding?	Choosing parents to make children with particular, beneficial traits
32. What are benefits of selective breeding?	Crops which are resistant to drought and disease, animals with more meat, animals that make more milk.

33. What are risks of selective breeding?	Less genetic variation, more chance of inheriting diseases
34. What is genetic engineering?	Altering DNA for specific traits to be expressed
35. Which hormone is made by genetically modified (GM) bacteria, for patient with type 1 diabetes?	Insulin
36. What are the benefits of creating GM crops?	Greater resistance to disease and drought, higher yield of crops.
37. What are GM crop concerns?	Unethical, could be harmful to human health, could be harmful to the environment
38. What is a fossil?	Preserved remains or traces of dead organisms
39. How are fossils formed?	Bones of the organism are replaced by minerals Become preserved in amber Preserved traces of the organisms, such as footprints
40. Why is the fossil record incomplete?	Soft bodied organisms have no bones and will not usually have a fossil record Or the fossils may have been destroyed
41. What is extinction?	No individuals of a species remain
42. What causes extinction?	New diseases, new predators, change in the environment, competition, catastrophic event
43. What are antibiotic resistant bacteria able to do?	Survive antibiotics
44. How can we reduce antibiotic resistance?	Proper use of antibiotics, completing the full course of antibiotics, only taking antibiotics when absolutely necessary.
45. What is classification?	Grouping similar organisms together

46. What are the 3 domains?	Archaea, Bacteria, Eukaryota
47. What are the groups in Carl Linnaeus's classification system, in order.	Kingdom, phylum, class, order, family, genus, species
48. What is the genus of <i>Erithacus rubecula</i> ?	Erithacus