

Genetics Trivia: Questions, Answers, and Facts Printable Trivia Pack

Genetics trivia explores the science of inheritance, from Mendel's pea plant experiments to the structure of DNA and the genetic code. It offers a family-friendly way to revisit major ideas in biology while mixing approachable questions with deeper challenges and a little scientific humor.

HARD GENETICS TRIVIA

1. Which scientist uncovered transposable elements while working in maize genetics?

Answer: Barbara McClintock

2. In what year did Barbara McClintock receive the Nobel Prize in Physiology or Medicine?

Answer: 1983

3. The operon model entered genetics history in what year through the work of François Jacob and Jacques Monod?

Answer: 1961

4. Which bacterial gene-regulation system is induced by signals tied to lactose metabolism?

Answer: lac operon

5. What enzyme famously copies information in the RNA-to-DNA direction rather than the usual DNA-to-RNA flow?

Answer: reverse transcriptase

6. Which enzyme's whole job description is basically 'keep the chromosome tips from shrinking' by extending telomeres?

Answer: telomerase

7. EcoRI recognizes what specific six-base DNA sequence?

Answer: GAATTC

8. Which scientist is credited with inventing PCR in 1983?

Answer: Kary Mullis

9. What standard abbreviation is used for the polymerase chain reaction?

Answer: PCR

10. Name the public nucleotide sequence database maintained by NCBI.?

Answer: GenBank

11. Which resource centers on human genes and genetic phenotypes?

Answer: OMIM

12. Which genome resource is known for providing annotations across many species rather than focusing on just one organism?

Answer: Ensembl

13. If a researcher wants a widely used tool for visually exploring genomic regions, which platform fits that description?

Answer: Genome Browser

14. In what year was the Human Genome Project declared essentially complete?

Answer: 2003

FUNNY GENETICS TRIVIA

1. Who gave the word "gene" its official debut in 1909, basically naming biology's tiniest celebrity?

Answer: Wilhelm Johannsen coined the word "gene" in 1909.

2. DNA keeps its alphabet shorter than most group chats. How many standard bases does it use?

Answer: DNA has four standard bases.

3. True or false: In RNA, thymine gets replaced by uracil.?

Answer: True

4. A codon is like a molecular three-letter word. How many nucleotides are in one codon?

Answer: A codon consists of three nucleotides.

5. If the genetic code were a keypad, how many possible codons would it have to memorize?

Answer: The genetic code has 64 possible codons.

6. Which codon usually acts like the green flag and starts translation?

Answer: AUG commonly serves as the start codon in translation.

7. Which of these is one of the standard stop codons: UAA, AUG, or TGG?

Answer: UAA is one of the three standard stop codons.

8. What is the common abbreviation for transfer RNA, the molecule with major 'I brought the package' energy?

Answer: Transfer RNA is abbreviated tRNA.

9. Messenger RNA prefers to be called what in abbreviation form?

Answer: Messenger RNA is abbreviated mRNA.

10. Ribosomal RNA is not filling out its full name on every form. What abbreviation does it use?

Answer: Ribosomal RNA is abbreviated rRNA.

11. During DNA replication, which enzymes do the actual copying instead of just standing around looking catalytic?

Answer: DNA polymerases carry out DNA replication in cells.

12. Which enzyme plays the zipper-opening role by unwinding the DNA double helix during

replication?

Answer: Helicase unwinds the DNA double helix during replication.

13. After splicing is done being picky, what do you call the gene segment that remains in mature mRNA?

Answer: An exon is the segment that remains in mature mRNA after splicing.

FUN GENETICS TRIVIA

1. Who first spotted the substance he called nuclein in 1869, before the world started calling it DNA?

Answer: Friedrich Miescher

2. In what year did Frederick Griffith report bacterial transformation, giving genetics one of its great plot twists?

Answer: 1928

3. Oswald Avery helped show that DNA carries hereditary information in which year?

Answer: 1944

4. The famous 1952 DNA experiment by Hershey and Chase used what tiny virus-like helpers?

Answer: Bacteriophages

5. Semiconservative DNA replication got a major boost from Meselson and Stahl in what year?

Answer: 1958

6. Thomas Hunt Morgan's inheritance studies famously buzzed around which organism?

Answer: Fruit flies

7. Which scientist helped connect genes to enzymes through experiments in Neurospora?

Answer: George Beadle

8. Who shared the 1980 Nobel Prize in Chemistry for DNA sequencing work?

Answer: Frederick Sanger

9. Which prominent figure was a leader in rapid genome sequencing efforts?

Answer: Craig Venter

10. Who led the U.S. National Human Genome Research Institute during the Human Genome Project?

Answer: Francis Collins

11. Which CRISPR pioneer shared the 2020 Nobel Prize in Chemistry and has the first name Jennifer?

Answer: Jennifer Doudna

12. Which CRISPR scientist shared the 2020 Nobel Prize in Chemistry alongside Jennifer Doudna?

Answer: Emmanuelle Charpentier

13. If you mailed a postcard to Illumina headquarters, which city would you address it to?

Answer: San Diego

GENETICS FAMILY TRIVIA

1. Identical twins usually begin from what single starting point before splitting into two embryos?

Answer: One fertilized egg

2. Fraternal twins usually develop from what?

Answer: Two separate eggs fertilized by two sperm cells

3. In humans, biological sex is typically associated with which chromosome combinations?

Answer: XX or XY

4. Mitochondrial DNA is inherited almost entirely from which parent?

Answer: The mother

5. How many chromosomes does each human parent normally contribute to a child?

Answer: 23 chromosomes

6. Is eye color usually controlled by just one gene alone?

Answer: No, it is influenced by multiple genes.

7. Which gene system is involved in blood type inheritance?

Answer: The ABO gene system

8. A person with Type O blood has which A and B markers on red blood cells?

Answer: Neither A nor B antigen

9. If a trait shows up when just one copy of an allele is present, what kind of allele is it?

Answer: A dominant allele

10. A recessive trait usually appears under what condition?

Answer: When two copies of the recessive allele are present

11. What kind of chart is used to track inherited traits through a family?

Answer: A pedigree chart

12. Down syndrome is most often caused by an extra copy of which chromosome?

Answer: Chromosome 21

EASY GENETICS TRIVIA

1. Who is often called the father of genetics?

Answer: Gregor Mendel

2. What does DNA stand for?

Answer: deoxyribonucleic acid

3. In genetics, what word means a change in a DNA sequence?

Answer: mutation

4. What is the name for an ordered display of an individual's chromosomes?

Answer: karyotype

5. What term refers to the genetic makeup of an organism?

Answer: genotype

6. How many chromosomes do humans typically have in somatic cells?

Answer: 46

7. Humans usually have how many pairs of chromosomes?

Answer: 23 pairs

8. Genes are made of what molecule?

Answer: DNA

9. CRISPR-Cas9 uses what molecule to help target specific DNA sequences?

Answer: guide RNA

10. In what year was the DNA double helix model proposed?

Answer: 1953

11. Which scientist produced key X-ray diffraction images of DNA?

Answer: Rosalind Franklin

12. Which scientist was one of the people who proposed the DNA double helix model?

Answer: Francis Crick

13. Which lab method is used to detect specific proteins?

Answer: Western blotting

Source: <https://triviagong.com/themes/genetics>