WJEC England Biology GCSE

7.2 - Inheritance

Flashcards

What are gametes?

What are gametes?

Gametes are sex cells (sperm or eggs)

What is a chromosome?

What is a chromosome?

Tightly packaged DNA around histone proteins

What is a gene?

What is a gene?

A section of DNA that codes for a protein

What is an allele?

What is an allele?

Different versions of the same gene

What is a dominant allele?

What is a dominant allele?

A version of a gene where only one copy is needed for it to be expressed

What is a recessive allele?

What is a recessive allele?

A version of a gene where two copies are needed for it to be expressed

What is meant when an organism is homozygous?

What is meant when an organism is homozygous?

When an organism has two copies of the same allele (two recessive or two dominant)

What is meant when an organism is heterozygous?

What is meant when an organism is heterozygous?

When an organism has two different versions of the same gene (one dominant and one recessive)

What is the genotype?

What is the genotype?

The genes present for a trait

What is the phenotype?

What is the phenotype?

The visible characteristic

What is monohybrid inheritance?

What is monohybrid inheritance?

The inheritance of one allele

How are dominant alleles represented in a punnett square?

How are dominant alleles represented in a punnett square?

They are represented using uppercase letters

How are recessive alleles represented in a punnett square?

How are recessive alleles represented in a punnett square?

They use the lowercase version of the same letter as the dominant allele

Draw a Punnett square for a cross between a homozygous recessive blue eyed female (bb) with a heterozygous brown eyed male (Bb)

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	B	b
b	Bb	bb
b	Bb	bb

50% brown eyes	Bb
50% blue eyes	bb

Draw a Punnett square for a cross between a homozygous dominant red flower (RR) with a homozygous recessive white flower (rr)

Draw a Punnett square for a cross between a homozygous dominant red flower (RR) with a homozygous recessive white flower (rr)

	R	R
r	Rr	Rr
r	Rr	Rr

100% Red flowers	Rr

Draw a Punnett square for a cross between two heterozygous cystic fibrosis carriers (Ff)

Draw a Punnett square for a cross between two heterozygous cystic fibrosis carriers (Ff)

	F	f
F	FF	Ff
f	Ff	ff

25% healthy	FF
50% carriers	Ff
25% have CF	ff

Draw a Punnett square to show how sex is determined

Draw a Punnett square to show how sex is determined

	X	X
X	XX	XX
Y	XY	XY

50% Male	XY
50% Female	XX

Give 3 important findings of Gregor Mendel

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- Organisms inherit hereditary units from their parents
- Offspring receive units from both parents and so share traits with both parents
- Traits can be passed on but not visible

What discovery lead to people accepting Mendel's ideas?

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The discovery of the gene