

ACTIVITY EXAMPLE



Cambridge
Equine Hospital
A Division of Cambridge Veterinary Services (1988) Ltd



Cambridge
High School

KEY WORDS

Genetics and evolution | animal health | human impact | biology | syndromes | sire | descendants | homozygous | recessive genes | genetic testing | potential | punnet squares | reproduction

ALSO USEFUL FOR

Agriculture | Social Studies | Maths

PROGRAMME OUTLINE

3 POINTS OF CONTACT

- Veterinarian comes into classroom (x2)
- Workplace visit (x1)

EXAMPLE

1. Veterinarian comes into classroom, introduces themselves, background to veterinary services, their careers and how science is used in the industry. Discussion focus around genetics. **Student Activity:** Lethal White Foal Punnet Squares.
2. Workplace visit includes tour of the hospital, investigation of horse skeleton, observing an equine surgery and learning about what happens at the hospital.



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ACTIVITY EXAMPLE

GENETICS: BIG EFFECTS



FUNCTIONAL



DEFORMITY

HUMANS' IMPACT ON HORSE TYPES



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ACTIVITY EXAMPLE



PRIMITIVE HORSE



MODERN RACEHORSE

GENETICS: A MATTER OF LIFE OR DEATH?



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LETHAL WHITE FOAL SYNDROME

- Homozygous – 2 copies of recessive gene.
- Parents both carriers – brown and white.
- Foal born white – intestine non-functional.
- Dies of colic.



	A	a
A	AA	Aa
a	Aa	aa Lethal white



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ACTIVITY EXAMPLE

COLLAPSING QUARTER HORSES - HYPP



- “Impressive” – influential show sire.
- When potassium level in blood is too high – collapse & need sugar.
- All affected horses are descended from Impressive

TESTING FOR SPEED



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RACEHORSE GENETIC TESTING

- Stayer, sprinter or mixed type genetics.
- Potential to become an elite horse.
- Suitability to race as a two year old or needs more time.

COULD GENETICS KILL YOU?



It was on a short-cut through the hospital kitchens that Albert was first approached by a member of the Antibiotic Resistance.



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