

TEACHER NOTES

Science: Biology

Living things and their habitats: Characteristics



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Contextual Summary

This is an engaging resource that challenges students to investigate and discover facts and information about the donkeys' characteristics.

This resource is designed for students in upper key stage 2 who are accessing the 'Evolution and Inheritance' part of the Science National Curriculum.

This resource is designed ideally for students of various abilities to work as part of a pair or team, moving around the Sanctuary to find the required information by reading, listening or asking questions.

There are elements of English crossover due to the reading/literacy/listening skills needed to access the information in the environment.

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Task Implementation

This is an on-site resource that is designed to be completed whilst students are visiting the Sanctuary. There is also one task that can be completed in school with access to the internet post-visit.

It would be useful if students had previous discussions about the definition of 'species' and different equine characteristics.

Ability Levels

There are two variants of this resource, one for higher and lower ability students in upper key stage 2.

Teachers can support students in their undertaking of the challenge as necessary for ability, and students could work together in mixed ability groupings to support each other.

Key skills practised in this unit:

- ▶ Students will use visual observation to make notes on different animals based on their observations.
- ▶ Students will also use relevant scientific language to discuss their ideas and communicate their findings.

Relationship to Curriculum

The above skills are required to be taught and practised as part of the 'Evolution and Inheritance' part of the Science National Curriculum 2014 for upper key stage 2.

SUBJECT

Science: Biology

UNIT

Characteristics

OPPORTUNITIES FOR USE

- ✗ Pre-Visit
- ✓ On-Site Activity
- ✓ Post-Visit



CURRICULUM / SYLLABUS

- ✓ National Curriculum 2014
- ✓ Curriculum for Excellence

Applies to Resources numbered:

104061
104062

Learning Opportunities

During the Visit

Completion of the Science / Biology resource linked with this document: *Donkeys Have Character!*

Resource ID:

104061 (KS2U low-mid ability)

104062 (KS2U mid-high ability)

- ▶ Students work individually, in pairs, or small groups.
- ▶ They are using scientific terms to describe their observations.
- ▶ They are able to gather and record data.

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Enrichment Opportunities

Opportunities exist for students to gain valuable practice in working together, using literacy skills, asking questions to find answers to scientific questions, and gaining knowledge in a subject new to them.

Learning Outcomes

- ✓ Students can identify that donkey and horses have different characteristics
- ✓ Some will be able to explain how genetic differences affect the behaviour of the species.

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- ▶ Search by age, subject, exam board
- ▶ Virtual venue tours and maps
- ▶ Bespoke online itinerary builder
- ▶ Risk assessments
- ▶ Travel and accommodation



THE DONKEY/HORSE/MULE COMPARISON












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| Genetics | |
|----------|--|
| Donkeys | 62 chromosomes |
| Horses | 64 chromosomes (przewalski horse - 66) |
| Mules | 63 chromosomes |

-  Donkeys are slower and less powerful than horses but they are extremely intelligent.
-  Horses and ponies are native to lush grassland regions. Donkeys, however are adapted to marginal desert lands and therefore their food needs are much less than that of a horse.
-  Donkeys do not have waterproof coats like horses.
-  Horses are flight animals - in times of panic they will run away. Donkeys on the other hand will simply freeze when in danger.
-  Donkeys don't have a flowing tail like a horse but have a tufted tail, more like that of a cow.
-  Donkeys are usually a lot smaller than a horse, ranging from under 91cms for miniature donkeys.
-  A mule is the offspring of a male donkey (jack) and a female horse (mare). Horses and donkeys are different species, with a different numbers of chromosomes.
-  Mules have short thick heads, long ears, thin limbs, small narrow hooves and a short mane similar characteristics to a donkey. In height and body, shape of neck and rump, uniformity of coat, and teeth, it appears horse-like.
-  A mule makes a sound that is similar to a donkey's but also has the whinnying characteristics of a horse (often starts with a whinny, ends in a hee-haw).