

STEM @ the Zoo

Science, tech, engineer and maths in the real world

Year 10-11

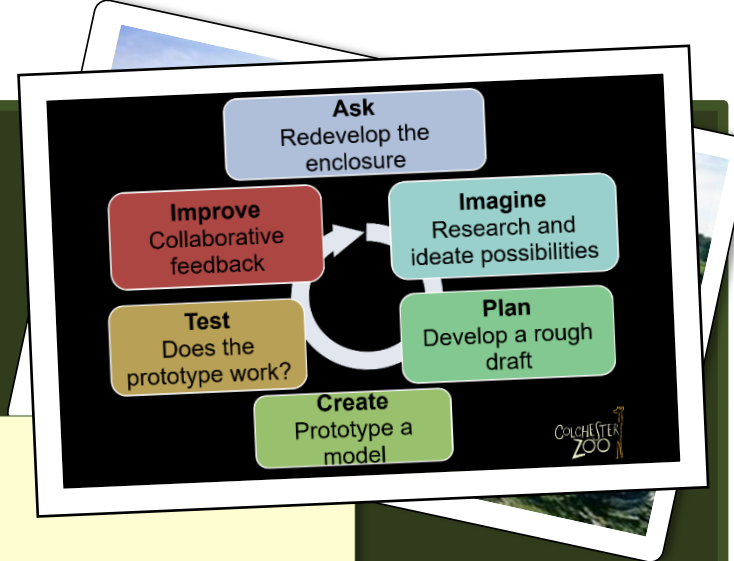
Learning Outcomes:

At the end of the session:

- ✓ **All students** will be aware of real-world applications of STEM and how it relates to zoos.
- ✓ **Most students** will be able to name specific technology used to help endangered species.
- ✓ **Some students** will understand how the STEM design process can be used to develop solutions to a variety of problems, including enclosure design.

Session Outline:

The session with the secret science of zookeeping. Job paths into zookeeping are discussed before looking at the job role in more detail. This includes the science of nutrition and health care as well as monitoring environmental parameters. Next, we will investigate how zoos use the STEM design process when developing new enclosures through an interactive activity where students assess an early 'prototype' of an enclosure and consider how to improve it. The session finishes with how zoos are using STEM to help save endangered species. This includes genetics and DNA analysis as well as supporting and prototyping Conservation Technology used in the wild such as GPS trackers, bioacoustics, AI, and crowdsourcing.



Topic Links

Careers

Biology

AQA: 4.6; 4.7

OCR: Topic B6

Edexcel: Topic 9

Design & Technology

AQA: 3.1; 3.3

OCR: Strand 1, 2, 4

Edexcel: Topic 1, 1.1;
1.2, 1.16