

Home EDUCATOR DAY

- Suggested activities

HOW STEM IS USED IN ZOOS:

Match the photo to the topic:



Science

This can include biology, chemistry or physics. Zoos most commonly use biology through nutrition, conservation, animal behaviour and more.

Technology

This can include machinery, electrical equipment, computer software and more!

Engineering

Building, developing or innovating new enclosures, structures and equipment is important to help us care for the animals.

Maths

Adding, subtracting, multiplying and dividing are essential every day. Enclosure space requirements, medications, analysing data, and more are vital to animal welfare

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THE IMPORTANCE OF STEM IN ZOOS:

Modern zoos strive to conduct **research** into the natural world in order to **educate** others on how to **conserve** the many and important ecosystems. This would not be possible without STEM. There are hundreds of examples of this including using camera trap and drone technology to evaluate wild species populations, designing and building enclosure elements such as climbing structures for captive animals, conducting animal behaviour research, and more. Using your own research and what you learn during your day at the zoo, write your answers to the following questions. You could also use these answers to create an informative letter outlining the importance of STEM in zoos!

Questions:

- Why is it important to use technology to evaluate wild animal populations? Can you name the list we use to understand the size of wild populations? Have a look at our signs around the park for a hint!
- Why is it important for zoos to understand the diets and nutrition of wild animals?
- We use maths every day at the zoo. For example, for a new enclosure design, or when giving out any medications. Why do we need maths to do this?
- A lot of important animal research happens in zoos. Can you think of examples where STEM is used to carry out research? Think about designing experiments, data collection, analysing results etc.



We would absolutely love to see any work completed after and inspired by our Home Educator day – please feel free to send any work to: education@dartmoorzoo.co.uk if you would like us to see it.

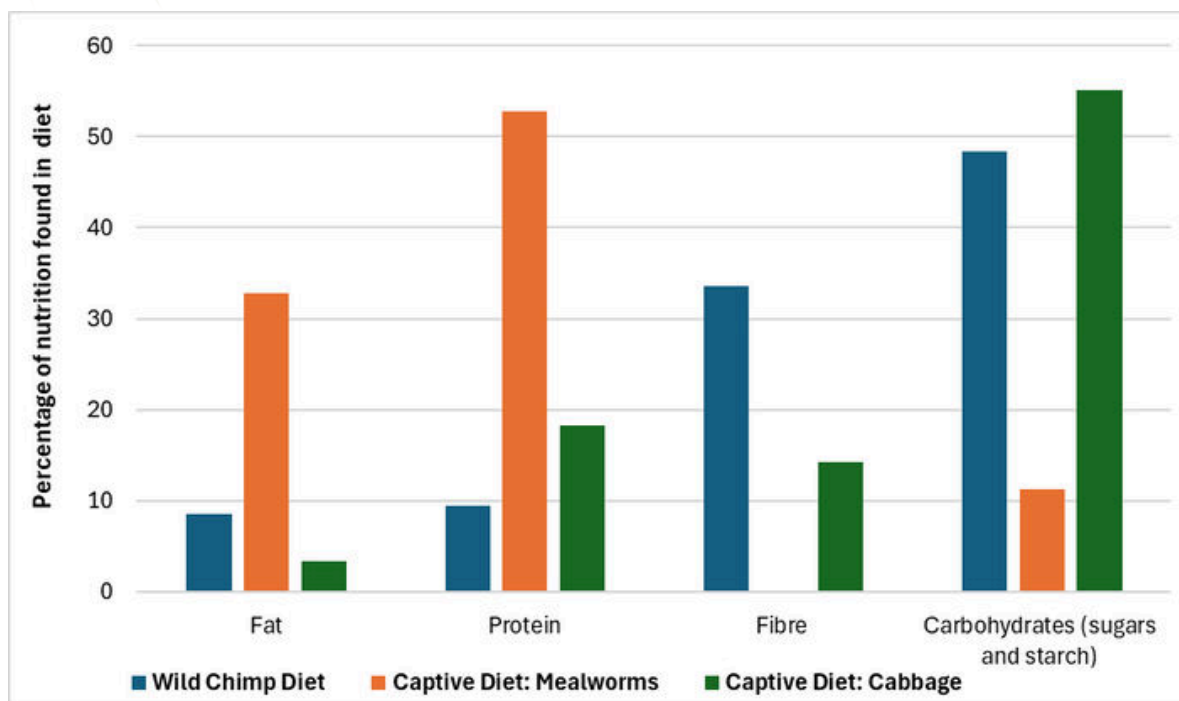
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DIETARY GRAPHS

It is now your turn to use your STEM knowledge and interpret some data! Our keepers and research team regularly evaluate our animals' diets and collect data about their nutrition. This can be compared to wild animals.

The graph below details the captive and wild diet of chimpanzees. Can you look at the graph and extract information to answer the questions below?



USING THE GRAPH...

- Which kind of nutrition makes up the largest proportion of the wild chimp diet?
- Using the graph data, suggest why it is important to provide a range of food items for captive chimps.
- Suggest some impacts of feeding too many mealworms to captive chimps.



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