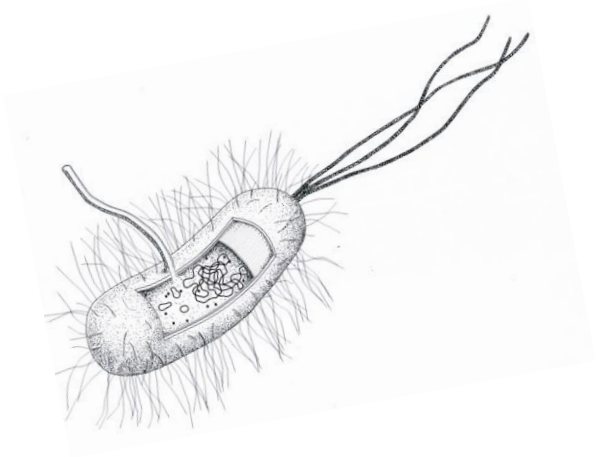
ARTIS MICROPIA

A closer look at poo

No poo without microbes



Answers to the questions to the experiment.

Question 3: Can you tell from an animal's poo what it has eaten?
Answer: Yes, you can often see remnants of what the animal has eaten in its poo. The structure, too, will vary depending on whether the animal is a herbivore or a carnivore, for example. Herbivores tend to have much softer poo than carnivores.

Question 4: Horse or elephant poo often still contains a lot of hay. Why do you think this is the case?
Answer: Because they cannot digest it completely. Non-ruminant herbivores, such as horses and elephants, often still have a lot of plant fibres in their poo. The cellulose contained in the cell walls of plant cells is difficult to digest.
Ruminants, such as cows and sheep, chew their food multiple times. They also have multiple stomach compartments, allowing them to absorb as many nutrients as possible from their food.

Question 5: Why do these large herbivores often have fat bellies?
Answer: Because they have an elaborate gastrointestinal tract for digesting their food. Ruminants, for instance, have four stomach compartments: the rumen, reticulum, abomasum and omasum. The bacteria inhabiting the reticulum and rumen are capable of effectively breaking down the hard-to-digest cellulose in the cell walls of plant cells. The absence of these kinds of bacteria in other mammals makes it difficult for them to survive on plant material alone.

Question 6: Certain birds, such as pigeons and chickens, swallow particles of stone to improve their digestion. Can you see that from the poo? If so, how?
Answer: From time to time, a particle of stone can also be found in the poo.