

Adel's Alphabet Trail

At Yorkshire Wildlife Park
we are wild about wildlife.
We want to see if your
students are too!



When you visit YWP, look out for Adel's Alphabet Trail. This sign trail will provide children with the opportunity to test their knowledge on wildlife and further enhance their learning as they explore YWP.

All of the Adel Trail documents are available to download and print before you visit. Simply click the link to the hidden part of the education website received when you booked your visit. On the back of each answer sheet is a map of YWP showing where the 26 Adel signs are located.

All of the Alphabet Trail signs can be found along the main paths of YWP.

The Signs

Each sign is divided into two sections.

In **Adel's thought bubble** is a question. The answer to each question begins with that letter of the alphabet.

At the bottom of each sign is a section titled **'Think about it'**. These questions promote enhanced, in depth thinking on topics for children and adults to contemplate. Teachers may wish to choose some 'Think about it questions' to copy into their diaries. Students can then answer these questions when they return to the classroom.

www.yorkshirewildlifepark.com/school-trips-educational-visits



How does Adel's Alphabet Trail fit into the National Curriculum?



As children explore YWP, read the interpretation, observe the animals and take in all of the sights and sounds, there are many opportunities for learning to take place. Adel's Alphabet Trail provides children with an opportunity to test their knowledge. It also encourages children to think in a different way across the curriculum.

Geography

Use maps and plans on a range of scales

Each child completing Adel's trail will be given a copy of the park map. This map shows the location of each Adel sign. Students can practice valuable map reading skills whilst locating the Adel signs and navigating throughout YWP.

Citizenship

To share their opinions on things that matter to them and explain their views. Equip them with skills and knowledge to explore different issues to weigh up evidence, debate and make reasonable arguments.

The following are examples from the 'Think about it' sections of Adel's Alphabet trail.

Sign D

Think about it 'Why do you think it matters if plants and animals become extinct?'

Sign O

Think about it 'In some countries, exotic animals such as tigers are sold as pets. Do you think it is ok for someone to keep an exotic animal as a pet? Why or why not?'

English

Opportunities to read, listen, write and communicate. Also provides the opportunity for creative writing ideas.

The 'Think about it' sections of Adel's Alphabet Trail provide students with various opportunities to create. For example, Sign P, the 'Think About It' asks; If you could explore any of the world's habitats which habitat would you choose and why?

Personal, social and health education

To take part in discussions with one other person or the whole class

Students can complete Adel's Alphabet Trail in pairs or small groups. The content of the signs provides excellent discussion material.

Science

To enhance their scientific knowledge and conceptual understanding.

Adel's trail provides opportunities for students to expand their scientific knowledge.



Adel's Alphabet Trail

Teachers Guide



A What is your favourite insect and why?

This might be a tough decision! Insects are the most diverse group of animals on the planet, including more than a million described species and representing more than half of all known living organisms.

B Animals have many adaptations to help them survive in their habitats. What special adaptations do polar bears have to survive in the Arctic?

Polar bears have many adaptations. They are fantastically well adapted to their extremely harsh environment, for example their coat is waterproof. Their fur scatters and reflects light providing excellent camouflage and it is also very thick for good insulation. Underneath their coat their skin is black, excellent for absorbing and retaining heat.

Our Bear Necessities education session is the perfect way for schools to learn more about these iconic animals. This session is available to book as part of your visit, and as a primary outreach session. We also run a Bear Necessities Assembly on behalf of the Wildlife Foundation
wildlife-foundation.org.uk

For further information on polar bears visit www.polarbearsinternational.org Polar Bears International is the only conservation organisation whose sole passion and focus is on polar bears. They're known for their cutting-edge science, inspired use of media, and relentless drive to ensure polar bears remain a part of the Arctic forever.

C Why do animals need to camouflage? Can you think of any other animals at the park that use camouflage?

Different animals use camouflage in different ways, but it is a means to survive in the wild. Predators like our leopards, tigers and polar bears use camouflage to get as close to their prey as possible without the prey spotting them. Other animals such as our zebras use their stripes to hide from predators. Some animals even change colour and patterns, just like the chameleon.

D Why do you think it matters if plants and animals become extinct?

Extinction should matter to all of us. Our existence is dependent on biodiversity. Biodiversity is the variety of life on earth. If you imagine earth as a puzzle, every species no matter how large or small, fits into that puzzle. You may feel that you are not very fond of some animals so if they went extinct you would not care, but every animal has a purpose. If one animal becomes extinct then a piece of the puzzle is missing. When a piece of the puzzle is missing, it is not complete. Losing one plant or animal can lead to the loss of many other species. Small changes lead to big problems that aren't easy to fix.

It is hard to believe that beautiful animals such as painted dogs, polar bears, tigers and leopards may one day become extinct. Fortunately, around the world, conservationists are working hard to protect these species. Yorkshire Wildlife Park is home to the charity, the Yorkshire Wildlife Park Foundation. The Foundation was created in 2013 to be a dynamic catalyst for inspiring people to support conservation and welfare. Visit www.wildlife-foundation.org.uk to find out more and how you can get involved.

E Why do you think animals become endangered?

The main danger for wildlife comes from human activities that destroy their natural homes. This happens when land is cleared for farming, mining or building. An example is the deforestation of the tropical rainforests. Habitats are also damaged by pollution such as pesticides or oil spills.

Some animals are hunted to the point where they are in danger of becoming extinct. The black rhino is an example of an animal that has in some cases been hunted to extinction. You can see the eastern black rhino at YWP, their numbers are very low in the wild due to poaching for its horn and it is listed as critically endangered.

Animals also become threatened when people introduce a new, non-native species into their habitat. The new species may compete with them for food or even kill them. This happens right here in the UK. An example is that of the red and grey squirrels. Red squirrels are native to Great Britain and grey squirrels are not. Predators, viruses, changes to landscape and the grey squirrel are major threats to our native red squirrel.

Global warming is also a major issue affecting animals and habitats around the world. An example of one species which is affected by this is the polar bear. Historically hunting was the major threat facing polar bears, causing a drastic population decline. Hunting is now strictly regulated. The threats caused by global warming are now the main concern, but because humans are causing the problem, humans can fix it! This means all of us, individuals, communities, businesses and governments. If present emissions of greenhouse gasses are significantly reduced the polar bear and Arctic habitat can be saved.

Use the International Union for the Conservation of Nature (IUCN) red list scale to find out the population status of the animals that you have seen at the park today. Visit www.iucnredlist.org to find out more.

F Great Britain is home to 7 amphibians. Can you name all of them?

- | | |
|--|---|
| ■ Great crested newt (<i>Triturus cristatus</i>) | ■ Smooth newt (<i>Lissotriton vulgaris</i>) |
| ■ Palmate newt (<i>Lissotriton helveticus</i>) | ■ Common frog (<i>Rana temporaria</i>) |
| ■ Pool frog (<i>Pelophylax lessonae</i>) | ■ Common toad (<i>Bufo bufo</i>) |
| ■ Natterjack toad (<i>Epidalea calamita</i>) | |

G Animals vocalize for many reasons. How many reasons can you think of?

Sound travels quickly so it is a great way for animals to communicate. Animals can make a huge variety of sounds. Sounds or vocalizations are used by animals for many different reasons, including:

- To warn each other of approaching predators
- To let others know they have found a food supply
- To mark their territory
- To attract a mate
- To locate others of their species
- Social learning

H Bactrian camels have lots of adaptations. How many can you think of?

Wild Bactrian camels have evolved some remarkable adaptations which you can see by looking at our camels. Probably their most noticeable adaptation is their two big humps, which contrary to popular belief do not store water but store fat as a reserve for when food is scarce, as their fat is depleted their humps become floppy.

Another adaptation that you may see (if you come often enough) is their fur coat, because temperatures vary so much in their habitat (38°C in the summer and -29°C in the winter) they can grow thick coats in the winter and shed their coats ready for the summer.

Other adaptations include:

- Two rows of long eyelashes to keep out the sand
- Nostrils that can close in sand storms
- Wide, padded feet to stop them sinking in the sand
- Tough leathery knee pads for lying on the ground
- Tough mouth for eating thorny plants

I Can you create your own minibeast?

- Think about all the special adaptations that insects have and then have a go at designing your own minibeast.

J Can you list how many different ways animals can move and what body parts they use to help them?

Animals of all shapes and sizes move around in many different ways using different body parts to help them. Answers can include;

- Hop, skip, jump, run, slither, slide, glide, fly, swim, burrow, climb, soar, hover, creep, crawl, wiggle.
- Legs, arms, fins, flippers, wings, tails.

K Compare some feathers. Why are they so different?

Example of ostrich and parrot feathers; An ostrich feather is big and fluffy, they are the largest birds in the world. Their feathers are not waterproof and there are gaps between the different parts of the feather so they cannot fly. When they try to take off the air goes straight through their feathers. Male ostrich have darker feathers than females, as this provides camouflage when they sit on the nest at night.

Parrots feathers are very colourful as they live in the rainforest. The feathers are waterproof as it rains a lot there. Parrots feathers are long, straight and strong with all of the different parts of the feather together, this means they can fly.

L Your back garden can provide a valuable home for native wildlife. What can you do to encourage wildlife to visit and live in your back garden?

Adults tend to like neat and tidy back yards, but if you create a corner that is a bit more messy and natural, you will be sure to attract some wildlife! Piling logs in a corner of your garden, and just leaving them alone, is a great way to attract wildlife. Insects will be drawn to your log pile. Insects will attract other animals such as black birds, toads and of course hedgehogs. Hedgehogs may even use your log pile as a hedgehog hotel!

What if you do not have a back yard, but only a balcony? You can still plant some flowers in tubs or planters. Butterflies and bumblebees will feed from these plants and this will help them to pollinate other plants.

If you put up a bird feeder in your back yard, you will join more than half of UK homes that already do! If you put up a bird feeder or table, and birds do not visit you, don't give up! It might take a few weeks for birds to realize that it is there

Remember, no matter how small or large a space you have, you can still make a difference to wildlife.

How many bug hotels can you spot around YWP on your visit? Native conservation is important to YWP. Keep an eye on our website for upcoming events at the park such as the BIAZA Big Bug Bonanza and the BIAZA BioBlitz.

M Different animals have different needs. How would a lion's nutritional needs differ from that of a meerkat's? Are they carnivores, herbivores or omnivores?

Lions are carnivores so they need a meat diet. In the wild, lions prey on animals like zebra and antelope. In Romania, the staff at Oradea Zoo could not afford to feed the lions their correct diet. The lions were therefore fed mainly chicken. In the wild, lions do not prey on chicken! Because the lions were not getting meat that was suitable for them, they were lacking in essential vitamins and because of this quite unhealthy. At Yorkshire Wildlife Park the lions are now fed red meat such as cow and horse. They are also given vitamins which are sprinkled onto their meat.

Meerkats are omnivorous. This means they eat vegetables, fruit and meat. Our meerkats get a variety of fruit and vegetables during the day. Their favourites seem to be grapes and sweet corn. We also feed our meerkats insects and chicken chicks. Our meerkats do not need vitamins because they receive such a varied diet.



N Observe the animals in the 'Into Africa' reserve. Have a close look at each one and see if you can think how each species protects itself.


Lechwe use their beige coat colourings to camouflage themselves. They are also strong swimmers and will move into water to escape from predators. The males also have horns.

Zebra have stripes to protect themselves from predators. When threatened they all group and move together dazzling the predators.

Black rhinos are very large animals and have thick protective skin. They have two horns on their heads and can charge at fast speeds of over 30mph.


Giraffe are the tallest animal in the world, which intimidates many potential predators. They also have a very powerful kick and can run at fast speeds.

Eland are very large antelope and can jump 2.5 meters from standing. They also have large horns and have a camouflaged coat.



O In some countries, more and more exotic animals are kept as pets. Do you think it is ok for someone to keep an exotic animal such as a monkey or a tiger as a pet? Why or why not?

Exotic animals are animals that are not normally kept as pets. Exotic animals are not domesticated meaning that they have not been bred to coexist with humans. Different countries have different laws on which species may be legally kept as pets. In the UK dangerous wild animal licences are required to keep animals that are considered to be wild, dangerous or exotic. These are granted by councils, provided essential safety measures at the owner's home are met and a fee is paid.



Keeping exotic animals such as tigers as pets is not a clever idea. Large cats such as our lions and tigers are dangerous. Even if they are raised by humans, when these animals grow up, all too often their wild instincts take over.

An example here in the UK, is that some people think they want a meerkat for a pet. Meerkats will not make good pets for many reasons –sharp teeth, sharp claws, very smelly poo, their need to dig and forage and their need for a very large home. The main reason is that they are very social animals and depend on each other for survival. One meerkat being kept by itself would lead a lonely life and may even get aggressive.



P If you could explore any of the world's habitats which habitat would you choose and why?


Where would you explore? A dripping dense rainforest, Arctic tundra, a hot sandy desert or perhaps a tropical island with warm sunny seas? Let your imagination take you there!

What animals might you see there?

Q Observe the birds on the wetlands. Which is your favourite bird and why?

There are many species of birds that live on the wetlands. A few examples are mallard ducks, oyster catchers, moorhens, shelducks, mute swan and kingfishers!






R Imagine you could fly like a bird! On your first flight, where would you go and what would you do?

There are probably not many people that haven't dreamed of being able to fly! Why not let their imaginations run wild and do some creative writing to explain their journeys?

S As you walk around the park think about which sense different animals use the most. How and why do they use them?

Think of some of the animals at YWP and how they rely on their senses in the wild. Polar bears can smell up to a meter underneath the ice to find their food! The big cats rely on their whiskers to heighten their sense of touch, especially when hunting and moving around at night. Rhinos have poor eye sight, but extremely good hearing. Their ears can even rotate independently. Painted dogs rely on their incredible vision to locate their prey and the lemurs have a very good sense of smell.

Snakes even have extra senses than we do. They have heat pits on their top lip, which work like thermal imaging cameras, so that they can see in the dark! Other animals such as bats and dolphins rely on echolocation to survive.




T With so many new animals and plant species being discovered every year, how do you think scientists decide what to name them?

Can you imagine discovering a plant or animal that has never been seen or identified before? When a biologist finds a new plant or animal, they compare it to collections of similar plants and animals. If they cannot find a match, the biologist can construct a new species name. This must be described in detail and published. New species are constantly being discovered and identified so the process of naming them is ongoing.



All species have a unique classification that results in a binomial name. All organisms are known by their binomial name which is the genus and species e.g *Myrmecophaga tridactyla* (giant anteater).

Being able to classify species is important to scientists as it allows them to accurately identify individual species wherever they are. Many different animals are given the same common name, so using just the name anteater could mean either of the 4 different types.



U Animals make their homes in various places. How many different names can you think of for an animal's home?

You could link this question to work on habitats. Include names for native animals homes as well.. squirrel drey, otter holt, badger set etc.



V Read all about the lions rescue story as you walk around lion country. What are the five main aspects of animal care?

The Five Freedoms outline five aspects of animal welfare under human control. They were developed in response to a 1965 UK Government report on livestock husbandry.

The five freedoms as currently expressed are:

- **Freedom from hunger or thirst** by ready access to fresh water and a diet to maintain full health and vigour
- **Freedom from discomfort** by providing an appropriate environment including shelter and a comfortable resting area
- **Freedom from pain, injury or disease** by prevention or rapid diagnosis and treatment
- **Freedom to express (most) normal behaviour** by providing sufficient space, proper facilities and company of the animal's own kind
- **Freedom from fear and distress** by ensuring conditions and treatment which avoid mental suffering

W Tigers are mammals. What are the main characteristics of a mammal?

- All mammals have hair. (Even dolphins are born with fur – tiny hairs along their snout or rostrums).
- All mammals breathe air.
- All mammals are warm blooded or endothermic.
- All mammals give birth to live young.
- All mammals feed their young milk.

X Think about the animals that would live in the wild in Africa. Can you think of a food chain or a food web that includes some of them?

Use some of the African animals that you have seen at YWP as examples. A really simple food chain to start with would be grass – zebra – lion. Add key words such as herbivore, carnivore, producer and consumer.

Y Which animals at YWP are herbivores, carnivores or omnivores? How are their teeth different?

Animals have many different types of teeth;

- Canines -for tearing and ripping food.
- Incisors -to bite off and chew pieces of food.
- Molars - to crush and grind food.

Compare a lions teeth to a giraffes!

Z A group of Zebras are called a dazzle. Do you know any other animal group names?

- Rhinos = Crash
- Painted dogs = Pack
- Camels = Caravan
- Meerkats = Mob
- Giraffes = Tower

Why not try to find out why the groups are called that?

Adel's Alphabet Trail

Answers

- | | | |
|------------------|---------------------|-----------------------|
| A Ants | B Black | C Camouflage |
| D Den | E Endangered | F Frog |
| G Growl | H Humps | I Invertebrate |
| J Joey | K Kick | L Legs |
| M Mane | N Nails | O Oak |
| P Piranha | Q Quack | R Robin |
| S Seals | T Tongue | U Underground |
| V Vet | W Whiskers | X X-ray |
| Y Yawn | Z Zebra | |

