

Lesson Plan 1

Introduction to the Cheetah

CRITICAL OUTCOMES

CO #1: Identify and solve problems and make decisions using critical and creative thinking.

CO #2: Work effectively with others as members of a team, group, organisation, community.

CO #3: Organise and manage oneself and one's activities responsible and effectively.

LEARNING OUTCOMES

LO #2: The learner will know and be able to interpret and apply scientific, technological and environmental knowledge.

Process Skills:

Observing and Comparing

Recording Information

Sorting and Classifying

ASSESSMENT STANDARD

Categorises information to reduce complexity and look for patterns

TEACHING THE LESSON

Using the picture of the cheetah supplied briefly introduce the cheetah as an African predator to the learners, using the information sheet titled "Introduction to Cheetahs" found on page 6. Give a brief background to its history and behaviour, leaving out the characteristics for the activities.



ACTIVITY 1 - similarities and differences

Divide the class into groups of two or three. Using the pictures given, have the learners identify similarities and differences between the six cat species. Some examples of leading questions are offered below:

Which cats look the same?

Any similar patterns/shading? Body size? Body shape? Head size?

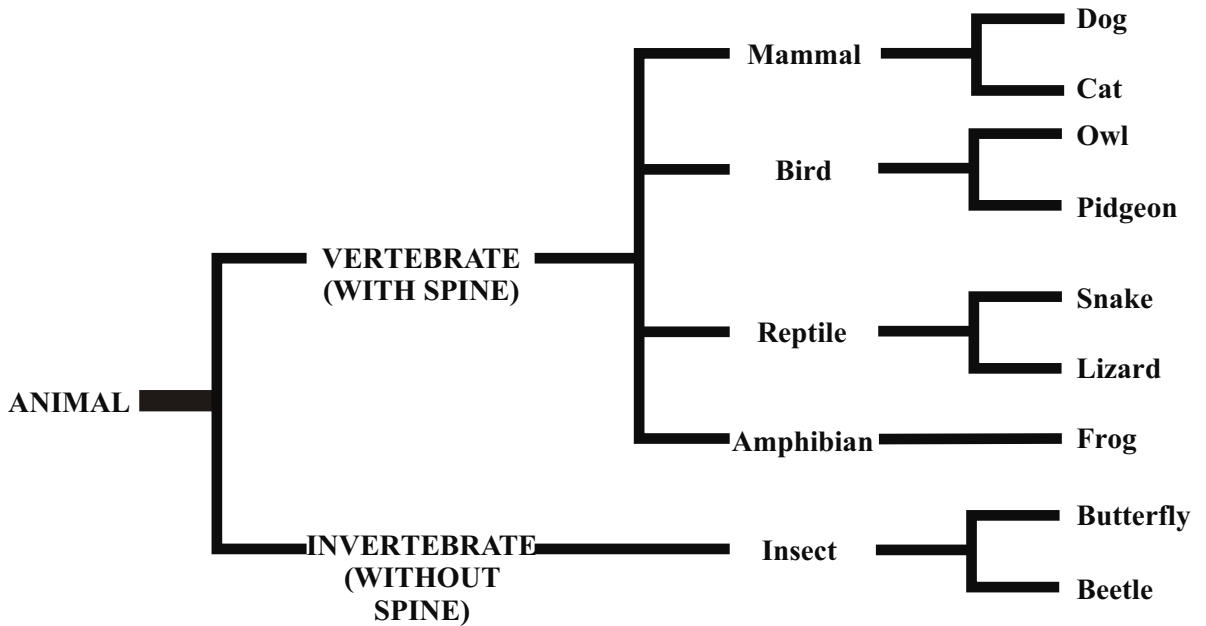
Are their legs all the same size?

Let the learners write up their observations on a sheet of paper headed similarities and differences. Give the learners 15 minutes to complete their lists before asking for feedback. Ask each group for one similarity or differences from their list. Using the table of comparison on page 7 discuss with the learners the main differences/similarities between the six cat species.

Discuss the concept of a family tree (a method by which you show the relationship between different objects) with the learners, by developing an example as below on the board with their input.

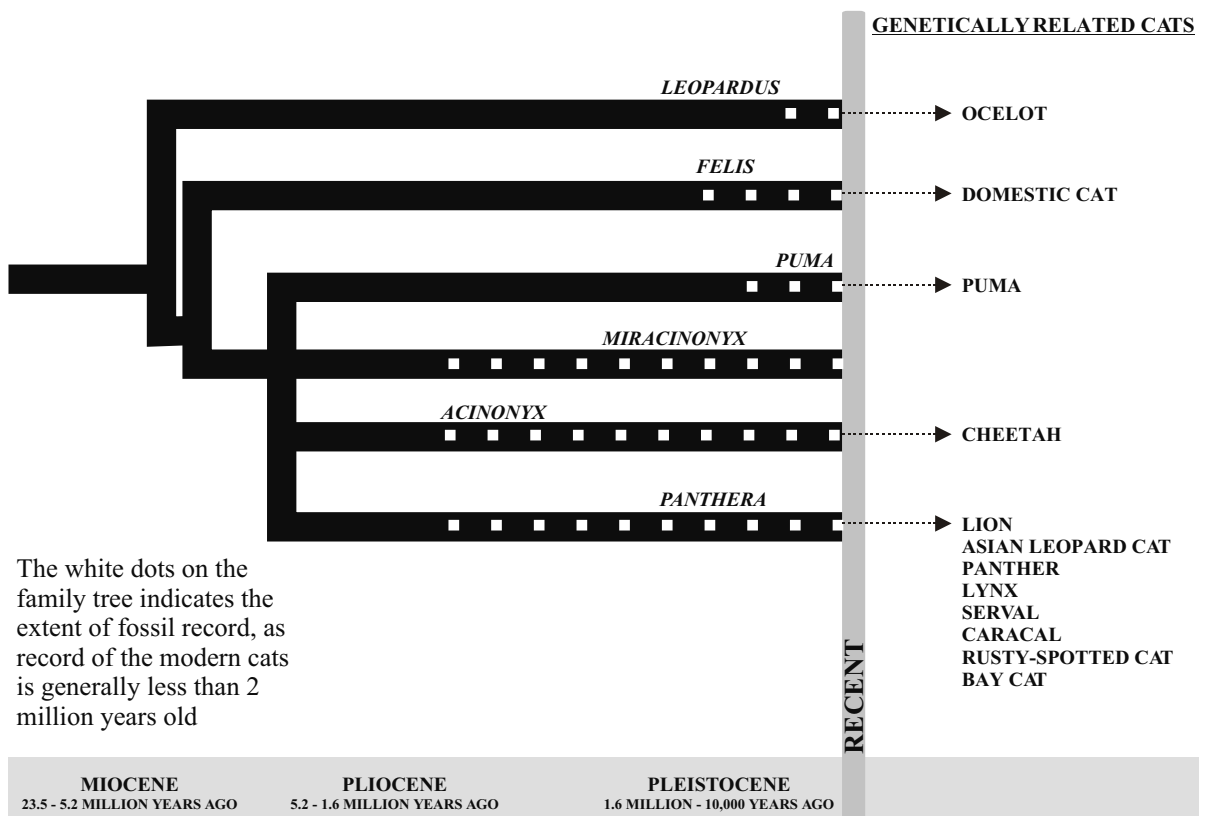


EG1: Basic Animal Family Tree



Have the learners draw up their own family tree of the cats using the similarities and differences previously identified. Give them about another 15 minutes before showing them the correct tree below.

Eg 2: THE CAT FAMILY TREE





ASSESSMENT

Assessment Rubric for Family Tree:

1	2	3	4
The learners could not fully distinguish differences and similarities and did not show any reasoning behind their groupings. Labelling and layout were confusing.	The learners could not fully distinguish differences and similarities between the cats. The grouping showed some reasoning. Labelling and layout is poor.	Learners could distinguish differences and similarities. Learners could group cats showing good reasons. The layout however is poor and labelling is confusing.	The learner exceeded expectations in distinguishing differences and similarities and showed good reasoning behind grouping of cats. The layout is good, with clear labelling.



ACTIVITY 2 - snap game

Photostat the cards given on pages 3 and 4 so that you have 48 cards making sure you have 8 copies of all 6 cats. Divide the class into groups of four, and hand out a set of 48 cards to each group. Mix the cards and deal each learner in the group a hand of 12 cards. Starting with 2 of the four, start the game by placing one card each down, next to each other, face up so that all players can see them. The next two players in the group then place one card each on top of the two piles formed by the previous two players. At any time that these cards match, the learner, which calls snap first followed by the name of the cat gets a point. Once all the cards have been dealt, the learner with the most points wins.

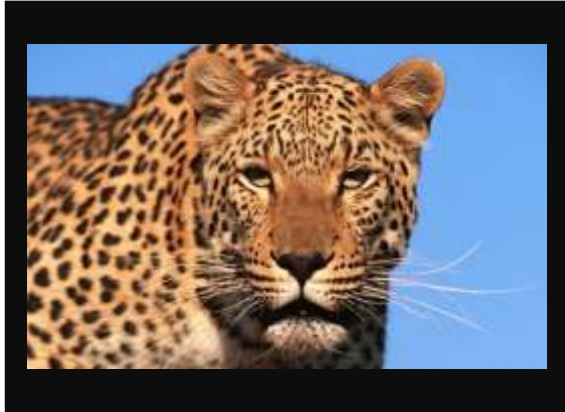
Have the learners assess themselves in the group as to whether they feel capable of moving up to the next level of the game. Use the cards on page 5 to produce 24 more cards. Remove half of the cards from the previous deck making sure that you have four copies of each cat and add these to the 24 new cards. Play the games once again to see if the learners are still able to identify the different cats when they are in different positions. This game can be used to assess whether the learners can distinguish the between the six cats based on their differences and similarities.



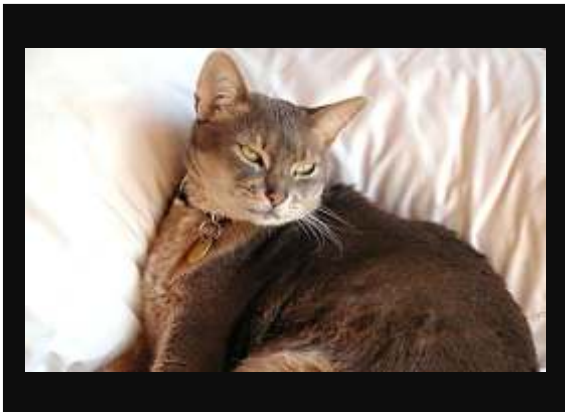
Card Set for easier snap game







Card set for
more difficult
Snap Game:



BACKGROUND - introduction to the cheetah (*Acinonyx jubatus*)

History:

The cheetah is Africa's most endangered big cat and is a protected species in Southern Africa. It is considered endangered under the United States Endangered Species Act and is listed on CITES Appendix 1. (CITES Convention on International Trade in Endangered Species is an international treaty that monitors trade in wild species. Appendix 1 indicates that the species is threatened by trade and is in danger of extinction.)

Characteristics:

The oldest cat species on earth, fossil remains date back 3.5-4 million years. The cheetah is a highly specialised animal adapted for speed, at a top speed of 110-120 km/h the cheetah is the fastest land animal. In appearance, cheetahs are of light build, making them the lightest of the big cats at 35-45kg for females, and 45-60kg for males. They have long streamlined bodies and long, slim legs. Their size and build is one of the ways that they can be distinguished from Africa's other spotted big cat the leopard. The leopard in comparison is short and stocky, with a large, heavy bone structure and a lot of muscle mass. Cheetahs have on average 3000 solid black spots covering their entire body, together with their short tan fur this creates camouflage. Leopards have brown spots surrounded by incomplete black circles called rosettes on their backs and sides. One of the most prominent, distinguishing features of the cheetah are the tear marks running from their eyes to their mouths.

Behaviour:

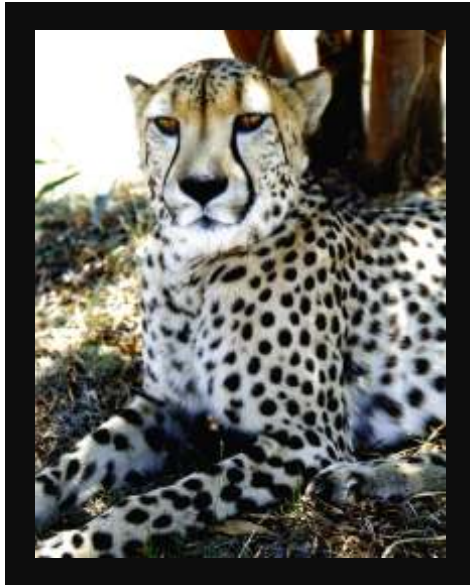
Cheetahs kill other animals for food, we therefore refer to them as predators. They are day hunters due to their speed and are mostly found in open savannah / grassland. They are normally solitary animals sometimes forming groups amongst brothers. Mothers will spend up to two years with their young teaching them how to hunt and to avoid other predators, which is not an instinct for a cheetah. Due to their slight build for running, cheetahs do not make good fighters, preferring to run from a threat, we therefore refer to them as non-aggressive. Due to this avoidance of confrontation with other predators, the cheetah is the only predator that has not been known to attack humans in the wild.



TABLE 1: comparison of general information

	Cheetah	Leopard	Lion	Caracal	Tiger	Domestic Cat
Scientific name	<i>Acinonyx jubatus</i>	<i>Panthera pardus</i>	<i>Panthera leo</i>	<i>Felis caracal</i>	<i>Panthera tigris</i>	<i>Felix domesticus</i>
Distinguishing features	<ul style="list-style-type: none"> ▪ Long slender body ▪ Tan coat with solid black spots ▪ Black “tear marks” on face ▪ Small head ▪ Amber eyes ▪ Semi-retractable claws 	<ul style="list-style-type: none"> ▪ Largest spotted cat, short and stocky, muscular ▪ Coats marked with rosettes ▪ No “tear marks” ▪ Large head, powerful jaw ▪ Green eyes ▪ Retractable claws 	<ul style="list-style-type: none"> ▪ Largest African carnivore ▪ Uniform tawny / sandy coat ▪ Males have long mane ▪ Tail sometimes black on tip ▪ Retractable claws 	<ul style="list-style-type: none"> ▪ Long, slender body ▪ Yellow-grey to reddish-brown coat ▪ Short tails, tapered ▪ Ears narrow and pointed ▪ Long black tufts on ears (4.5cm) ▪ Hind-legs longer than forelegs ▪ Retractable claws 	<ul style="list-style-type: none"> ▪ Largest of all cats ▪ Black stripes on an orange coat ▪ Males have prominent ruff / collar ▪ Retractable claws 	<ul style="list-style-type: none"> ▪ Belong to the small cats ▪ Variety of colours and patterns ▪ Retractable claws
Size	<ul style="list-style-type: none"> ▪ Total length: 180 – 220 cm ▪ Adult body length: 112 – 135 cm ▪ Tail length: 60 – 80 cm ▪ Shoulder height: 73 – 80 cm ▪ Weight: 30–45 kg (F) 45–60 kg (M) 	<ul style="list-style-type: none"> ▪ Body length: 91 – 243 cm ▪ Tail length: 68 – 110 cm ▪ Shoulder height: 70 – 80 cm ▪ Weight: 17–60 kg (F) 20–90 kg (M) 	<ul style="list-style-type: none"> ▪ Total length: 230 – 270 cm (F), 250 – 330 cm (M) ▪ Tail length: 100 cm ▪ Shoulder height: 100 cm (F), 120 cm (M) ▪ Weight: 110-152 kg (F) 150-222kg (M) 	<ul style="list-style-type: none"> ▪ Body length: 60 - 92 cm (F), 80 – 105 cm (M) ▪ Tail length: 20 – 35 cm ▪ Shoulder height: 40 – 50 cm ▪ Weight: 11–15 kg (F) 13–20 kg (M) 	<ul style="list-style-type: none"> ▪ Body length: 119 – 170 cm (F), 170 – 290 cm (M) ▪ Tail length: 53 – 119 cm ▪ Shoulder height: 85 – 124 cm ▪ Weight: 75-300 kg Sumatran Siberian 	Weight: 3-5 kg
Range	Africa: 26 countries Iran: 200 individuals	Africa: Widely dispersed Also in South Asia, Far East and Arabia	Africa: Southern / East Few in Asia	Africa: Asia, Turkestan, North West India, Arabia	Not found in Africa India, China and Indonesia	Found world-wide where humans have settled
Habitat	Grasslands, savannahs, woodlands, bushlands, hill country. Majority live outside of protected areas.	Very adaptable – habitats include woodlands, lowlands, forests, mountains, savannahs, dry steppes.	Wide habitat tolerance: grassy plains, arid woodlands and semi-desert. (Not found in forests)	Wide range from open savannah and woodland to semi-arid areas. Not found in forests.	Not found in open habitats, they tend to live in a variety of forests and mangrove swamps, requiring cover and water.	Human settlements
Period of activity	Hunt early morning, late afternoon	Nocturnal and diurnal	Nocturnal and diurnal	Mostly nocturnal, will be active during the day	Nocturnal	Mostly nocturnal
Threats to humans	Not a threat to humans	Can and do attack humans	Are a threat to humans	Are not a threat to humans	Are a threat to humans	Are not a threat to humans

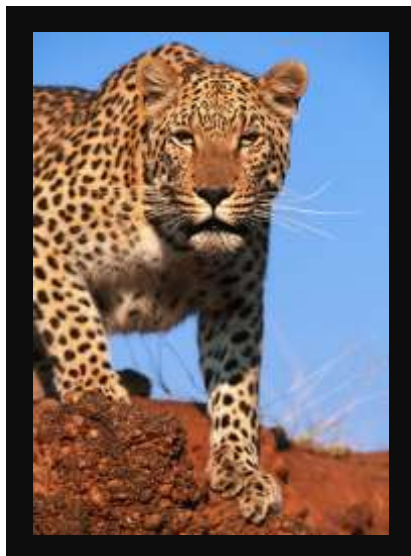




Cheetah



Lion



Leopard



Caracal



Tiger

**Domestic
Cat**

