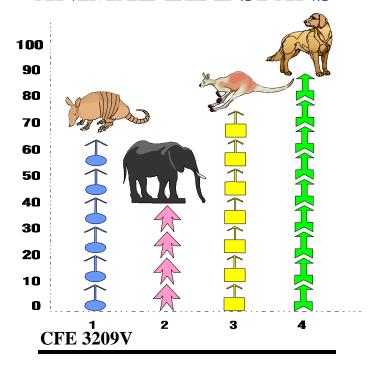
ANIMAL LIFE SPANS



OPEN CAPTIONED
NATIONAL GEOGRAPHIC
SOCIETY

1992

Grade Levels: 4-8

15 minutes

DESCRIPTION

How long do people usually live? What about dogs, elephants, big or small animals? What are some factors that influence life span? Shows how scientists determine the ages of animals in the wild. Using long-and short-lived animals, concludes that environment, size, food, shelter, a place to have and care for young, number of babies, and maturity rate all affect an animal's life span. ANIMALS AROUND YOU SERIES.

INSTRUCTIONAL GOALS

- To compare the average number of years animals and humans exist on earth.
- To analyze some of the factors that influence life spans.
- To observe changes in humans and animals as they age.
- To stimulate discussion on perspectives of longevity.

BEFORE SHOWING

- 1. Read the CAPTION SCRIPT to determine unfamiliar vocabulary and language concepts.
- 2. Explain that this video was made in England and there will be some reference to kilograms instead of pounds.
 - 3. Discuss visual signs of aging.
 - a. How does one specifically know that someone is old or young?
 - b. Is it more difficult to estimate animals' ages than humans'?

DURING SHOWING

- 1. View the video more than once, with one showing uninterrupted.
- 2. Pause for answers and comments each time the video questions whether the animal shown will have a long life or a short one.
- 3. Pause and identify that *kg* stands for *kilogram*, and is just over two pounds in comparison to customary weight.
- 4. Pause and note that some of the animals shown are eating grass and leaves while others hunt and eat other animals.

AFTER SHOWING

Discussion Items and Questions

- 1. Define and discuss development.
- 2. Discuss ways that lifestyles can affect human life spans. Include smoking cigarettes, jogging, junk food, and pollution.
- 3. Insects have very short life spans. Discuss why this might be so.
- 4. Generate examples of small animals with long life spans and larger animals with short life spans. Discuss reasons for this.
- 5. Determine the meaning of *instinct*. Contrast human and animal instincts and interpret ways they relate to life spans.
- 6. Discuss the roles medical advances might play in the life span of humans.
- 7. Relate these three ideas: population growth, extinction, and life span.

Applications and Activities

- 1. Research human life spans from prehistoric times to the present.
 - a. Determine whether they have increased or decreased.

- b. Speculate on human life spans in the next 1000 or 5000 years.
- 2. Create a chart of ten to fifteen animals. Include:
 - a. Information on environment, such as whether they are zoo, wild, or domestic animals
 - b. Adult weight
 - c. Adult height
 - d. Food sources
 - e. Life span
- 3. Make a time line illustrating 200 years.

Demonstrate linearly the life spans of the animals.

- 4. Redwood trees can live to be many centuries old. Write a letter from an ant to a redwood tree.
 - a. Include what experiences the ant has in the same surroundings as the tree.
 - b. Ask for advice on how to live a long and prosperous life.
 - c. Write a response letter from the tree to the ant.
- 5. Play a game of "Predator vs. Prey." Choose animals at random and interact with each other, emphasizing the food chain in nature.
- 6. Imagine the average life span of a human is eight years. Describe the physical characteristics, environment, and lifestyle of a four year old.
- 7. Select an animal and devise a graph showing the relationship between age and size in height or length.
- 8. Gather a collection of school pictures of the same person from grades 1-8. Shuffle and sequence them correctly.
- 9. Acquire, at or near birth, a mouse, hamster, or bird for the classroom. Record weight and length periodically until maturity.

WEBSITES

Explore the Internet to discover sites related to this topic. Check the CFV website for related information (http://www.cfv.org).

CAPTION SCRIPT

Following are the captions as they appear on the video. Teachers are encouraged to read the script prior to viewing the video for pertinent vocabulary, to discover language patterns within the captions, or to determine content for introduction or review. Enlarged copies may be given to students as a language exercise.

(female narrator)

Ginger is a 1-year-old puppy.

Jane is 7.

Most dogs live

for around 12 to 15 years.

That's

their average life span.

Most people you know

will probably live a long time--

around 70 years.

Elephants have a long life, too.

Life span is the amount of time

between the moment an animal is born

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and when it dies.

While we live longer

than dogs,

they develop quicker.

Jane is a child at age 7,

but Ginger's fully grown

at age 1.

Most animals have shorter life spans than we do.

Cheetahs aren't likely to live more than 20 years.

Most big cats live for around this time.

Can you guess whether these lemmings

will have long or short lives?

And these antelopes?

How long is this lemur

likely to live?

And this tiger?

Is this giraffe

likely to live as long as this gorilla?

It's not easy to tell,

is it?

Animals usually grow larger

as they get older.

An animal's size is often a clue to its age.

There may be other clues.

Our skin becomes wrinkled,

and our hair begins turning gray.

Fully grown male gorillas

turn gray, too.

They're called silverbacks.

Jane's grandmother is 60.

This silverback's a grandparent, too,

although he's only lived for 30 years.

These measures tell us

one animal is older than others of the same kind.

But they don't tell us how many years it's lived.

We usually know

how many years zoo animals have lived

because we keep records

of when they're born and when they die.

This zoo keeps records of each elephant's age

and how large it is at each age.

They're measuring Juba, who's 15.

Once we know how large most 15-year-old elephants are,

we can guess whether other elephants

are older or younger,

just by looking at them.

Tortoises are among the longest-lived of all animals--

up to 170 years.

They grow much slower than elephants,

so it's difficult to tell their age

from their size alone.

A tortoise's shell

shows growth rings--

usually one each year.

By counting the rings,

we can get a rough idea

of its age.

Little is known

about how long wild animals live.

There are few records

of when wild animals are born or when they die.

We need other ways of telling their age.

We can find out

how long most animals of one kind live

by keeping records on large numbers of them.

Each bird that's caught receives a band

with a number that matches information

in the scientist's records.

The information includes the bird's weight and size.

When this bird is recaptured,

scientists

will know by its band

how old it is

and how much it has grown since it was first measured.

Where an animal lives affects its life span.

An animal's life span may be different

from the life span of the same kind of animal

living in a different environment.

Elephants eat grass and leaves.

This food is usually plentiful

in the warm lands where they live.

To survive,

all animals must find food, shelter,

and somewhere to have their young.

All these things affect their life span.

The care young animals receive

can affect their life span.

Some animals are born with the instincts

they need to survive.

Others learn from their parents.

Elephants usually have one baby at a time.

They care for their young for many years.

Mothers and their young

live together in large family groups.

Elephants grow large as they mature.

Their huge size protects them from enemies--

another factor

that influences their life span.

They may live 70 years.

Lemmings, on the other hand, have very short life spans--

around two years.

Like elephants, they eat grass and leaves.

But lemmings live on the cold Arctic tundra,

where summers are very short.

Lemmings may have 11 babies at a time.

The lemming mother cares for her young

for less than three weeks.

They can start having babies themselves

when they're only 9 weeks old.

So lemmings

can become grandparents

when they're only 1 year old.

This ability

to reproduce quickly...often...

and in large numbers

ensures the lemming population's survival,

despite the short life span of each individual lemming.

Usually, natural causes limit the number of animals

and how long they live-their life span.

One common cause of death

is disease.

When animals of one kind are crowded together,

disease may spread quickly.

Weather

is another environmental factor

that affects life span.

Harsh weather

can kill many animals.

Sand grouse chicks can survive desert heat,

but they need water.

Their father flies long distances

to find water,

carrying it back to the nest.

If anything happened to their parents,

these chicks might die.

The most common way wild animals meet their end

is by becoming a meal for some other animal.

Predators limit life span.

Young fish make a meal for many other fish.

Most fish

lay many eggs at once

so at least some will survive.

There's safety in numbers,

much as there is for lemmings.

This mouthbrooder has fewer young,

but he protects them.

They hide in his mouth when danger threatens.

They're let out

once the threat has passed.

Baboons, like elephants,

usually have

only one baby at a time.

They protect it from danger

and teach it

to take care of itself.

These factors help make the baboon's life span

relatively long.

Wild baboons live for around 20 years.

Young baboons stay with their mothers

for several years.

They learn to avoid enemies,

find food and shelter,

and behave with other baboons.

Baboons and chimpanzees live in family groups.

Mothers will likely see their infants

grow into adults and have young.

This takes time.

This life pattern is typical

of animals with longer lives.

Usually, animals that care

for their young

live longer than those that don't.

As they live longer, they often also grow larger.

But there are exceptions:

animals

that don't grow large,

don't take special care of their young,

yet still live a long time.

These bats are the same size as lemmings,

but some bats

live much longer than lemmings--

as long as 30 years.

Generally,

animals that grow slowly

tend to live longer.

Animals

that care for their young

generally live longer.

Animals in zoos usually live longer

than their relatives in the wild.

This is because they live in safer surroundings

and they're given all the food they need.

Lions in zoos

usually live much longer than wild lions.

Zoo workers

look after their animals' health and well-being.

They care for everything,

from their toes...

all the way up to their teeth.

Zoo animals are given care and attention.

They're also given shelter,

and they're protected from attack by other animals.

In an environment as secure as a zoo,

most animals can live the longest life possible.

Given care and kindness,

Ginger and Jane should live for many happy years.

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