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Hint:

You will need to print out these resources single sided so you can cut out the stakeholder and animal profile cards.

Conservationist

I am a conservationist with a non-governmental group which works to raise the profile of endangered species around the world.

Palaeontologist

I have spent my career studying the remains of extinct animals from across the world. By studying fossil remains I can gain an understanding of animals that lived millions of years ago.

Farmer

I run a large, mixed farm near Hobart, the capital of Tasmania. I grow crops and rear sheep and cattle.

CEO of BioGen

I run a small, ambitious bio-technology company. We are involved in work that is at the cutting edge of genetic science.

CEO of leisure tours Ltd

My company books and runs holiday tour groups across the world. Our clients are becoming more and more demanding always wanting to see or do something new. I am always on the lookout for the next 'big thing'.

Anthropologist

My work involves the study of human evolution. Working to understand who we are and where we have come from.

Record sheet



Use this sheet to record your thoughts on the species that the stakeholders will consider

Name of animal:

Pros of cloning	Cons of cloning

Stakeholder's views:

Thylacine (extinct)



Information

- The thylacine is better known as the Tasmanian tiger or Tasmanian wolf
- It became extinct on the Australian mainland 1000s of years before settlement by Europeans
- Survived on Tasmania until 1936 – extinction was possibly due to bounties placed on the animals which encouraged hunting
- Thylacine were hunted as farmers believed they were a threat to livestock. They were the top predator in their habitat, with few natural enemies before the arrival of man

Blue whale (endangered)



Information

- The blue whale is the largest animal that has ever lived
- Blue whales were found in large numbers in almost all of the world's oceans up until the beginning of the 20thC
- Pre-whaling population estimates were over 350,000. Today there are 8-14,000 left alive
- Even with a reduced population, numbers are today high enough that a diverse genetic sample could be obtained for a cloning program to be attempted
- Whale watching is a multi-million pound industry

Neanderthal (extinct)



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Information

- Extinct member of the *Homo* Genus
- Disappeared from Europe ~30,000 years ago
- Neanderthal brain capacity was only slightly smaller than modern humans
- Neanderthal were almost exclusively carnivorous and were the top predators of their habitat
- 5% of the modern European gene pool has contributions from neanderthals
- Neanderthals were adapted for the cold climate of the Pleistocene era
- Initial sequencing suggests that humans and neanderthals are >99% similar

Bee (at risk)



Wiki user: Jon Sullivan; public domain

Information

- There are about 20000 species of bee
- Many species are kept by humans
- Farmed bees are kept for the honey they produce and to pollinate commercial crops
- Insects, mainly bees, are responsible for pollinating about 33% of human food
- In the past decade many hives in the UK and Europe has died out. The reason is unknown but pollution has been suggested as a cause
- If bees disappeared many eco-systems would collapse

Banteng (endangered)



Information

- A species of wild cattle from south east Asia
- There are around 1.5 million domesticated Banteng, they are used as working cattle and for their meat
- They are classified as being endangered
- Was the second endangered species to be successfully cloned
- Australian Banteng are relied upon as a source of income from game hunting
- Some conservationists argue that the Banteng is an invasive introduced species in Australia and should be removed

T-Rex (extinct)



Wiki user: David Monniaux; CC BY-SA

Information

- Dinosaurs became extinct ~65 Million years ago
- Dinosaurs were driven to extinction by a combination of factors, long before humans evolved so we are not responsible
- It has been reported that DNA has been extracted from bones of large dinosaurs
- Research suggests that birds evolved from dinosaurs – would it be possible to manipulate bird DNA in the future, activating dormant dinosaur genes?

Pyrenean ibex (extinct)



Information

- An extinct sub-species of the Spanish Ibex
- Last known individual died in the wild in 2000, killed by a falling tree. DNA was taken from the corpse and stored
- Exact reason for extinction is unknown but likely to include a combination of being out competed for food, infection and disease and poaching
- 1st animal to become 'unextinct' through cloning
- This cloning was carried out by a private company who have pledged to return all successful clones to the wild