Introducing Endangered Species Slide Show Teacher’s Script

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| Slide 1 | The concept of extinction is not a new one. Just as any plant or animal is “born”, lives, and dies, so does every species – new species are generated through a process known as speciation, exist for a period of time (the average age of a species being about 1 million years), and then go extinct. As a matter of fact, 99.9% of all species that ever existed on the planet have become extinct through natural processes/disasters. The problem that we are facing in this day and age, however, is the rate at which species are becoming extinct. The earth is estimated to have anywhere from 3-30 million different plant and animal species and scientists estimate that we lose anywhere from 50-150 species per day. This current rate of extinction is as much as 10,000 times faster than the natural rate. |
| Slide 2 | Under the Endangered Species Act, species may be listed as either endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” species are those likely to become endangered within the “foreseeable future.” All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. Once a species is no longer present on the planet, the species is said to be extinct. |
| Slide 3 | The rapid loss of species throughout the years has not gone unnoticed by our government. Congress passed the *Endangered Species Act* in 1976. This legislation allows for the identification, protection, and recovery of threatened and endangered birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees. Not only are the organisms themselves protected by this law, but so is the habitat, or home, the protected organism requires for survival. The ESA is administered by two federal agencies, the United States Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA). |
| Slide 4 | At one time, the passenger pigeon had the most abundant bird in North America Population estimates from the 19th century ranged from 1 billion to close to 4 billion individuals. Conversion of the Eastern forests to farmland by settlers and uncontrolled hunting eventually led to the bird’s extinction. Since there were no laws restricting the number of pigeons killed, millions of passenger pigeons were slaughtered for either private consumption and for sale on the market. By the early 1890’s the passenger pigeon had almost completely disappeared. The last known passenger pigeon died at the Cincinnati Zoological Garden on September 1, 1914.  |
| Slide 5 | The majestic and powerful bald eagle is making a spectacular comeback from the brink of extinction. From the 1950s - 1970s, scientists became concerned by a drastic drop in eagle populations that had been caused by habitat loss, the cutting of tall trees used for nesting sites and the impact of pesticides like DDT on eagle eggs. The plight of the bald eagle, our nation’s symbol, spurred America to pass the Endangered Species Act. Bald eagles are now found in every state with over 5,800 nesting pairs in the United States. The recovery of the bald eagle is an Endangered Species Act success story. |
| Slide 6 | The whooping crane is the tallest bird in North America with dazzling white feathers, a red cap and a loud whooping call. The birds migrate from the Canadian north to the southern United States. Because whooping crane populations were dropping alarmingly, the government listed them as endangered and began a captive breeding program. In partnership with non-profit organizations, they trained cranes to follow behind aircraft to teach them how to migrate. If you live in the Midwest, keep your eye out for a flock of airplanes and endangered cranes. |
| Slide 7 | These amazing whales migrate throughout the oceans, sing complex vocalizations and use nets of bubbles to capture schools of fish. The humpback whale populations were decimated by whaling and they are currently listed as endangered. |
| Slide 8 | The Florida panther is the most endangered cat in North America. With less than 100 cats in the wild, the panther most likely would not exist without the Endangered Species Act. Panthers have been reintroduced into the Everglades in southern Florida. |
| Slide 9 | Alligators live in the wetlands of the southern United States. The reptiles were hunted close to extinction. After they were listed under the Endangered Species Act, hunting was prohibited and their habitat was protected. The species has made a dramatic recovery and was removed from the endangered species list in 1987. Because American alligator populations have recovered so well, hunting and egg collecting are allowed and a multi-million dollar industry has thrived in the South. |
| Slide 10 | The polar bear lives only in the Northern Hemisphere on the arctic ice cap. Because of ongoing and potential loss of their sea-ice habitat resulting from climate change, polar bears were listed as a threatened species, across their range, under the Endangered Species Act in May of 2008. Today, it is estimated that there are 20,000 to 25,000 polar bears worldwide. |
| Slide 11 | When Lewis and Clark explored the country, 50,000 to 100,000 grizzly bears roamed the wilderness of the West. As their habitat was destroyed by logging, mining, oil and gas drilling and land development, the powerful bears were threatened with extinction. Grizzly bears are an important symbol of wilderness. |
| Slide 12 | Sea otters live and play in the waters off the Pacific coast. They are one of the few animals known to use tools – they use small rocks to open shellfish. The otters play an important role in controlling sea urchin populations, which would otherwise damage the kelp forest ecosystem. They were thought to be extinct from the California coast, until 50 otters were found near Big Sur. |
| Slide 13 | The secretive spotted owl lives in the ancient forests of the Pacific Northwest. They nest in large trees and fly under the forest canopy to hunt. The dwindling numbers of this shy and speckled bird are an indicator of the declining health of the old-growth forests. The logging of the gigantic trees in the ancient forests in the region has severely fragmented their habitat. |
| Slide 14 | Wolves are highly social animals that live in family groups called packs. At the top of the food chain, they have a very important role in the ecosystem. In the years since they were reintroduced to Yellowstone National Park, wolves have helped reduce an overpopulation of elk in the Park, and have kept elk from lingering undisturbed in Aspen groves and along streams. As a keystone species, biologists believe their reintroduction has led to the recovery of over-browsed trees and shrubs in these areas, which in turn, has helped birds, fish, beavers, moose and other wildlife find new places to call home. |
| Slide 15 | The migration of the salmon is one of nature’s most dramatic and exciting journeys. We still do not know how they find the river where they were born to return to spawn. People from Alaska to southern California depend upon the annual salmon migration as an important food source. Salmon fishing provides tens of thousands of jobs in the sport and commercial fishing industries and hundreds of millions of dollars in economic benefit to the West Coast. Because salmon need pure, cold water, they are extremely vulnerable to water pollution and diversion. Twenty-seven West Coast salmon runs are endangered. |
| Slide 16 | The endangered songbird, Kirtland's warbler, is one of the rarest members of the wood warbler family. It nests in just a few counties in Michigan's northern Lower and Upper peninsulas, in Wisconsin and the province of Ontario and, currently, nowhere else on Earth. A pair of Kirtland’s warblers requires at least eight acres of young jack pine forest to nest and 30 to 40 acres to raise a nest of young. Their precise nesting habitat requirements, as well as cowbird parasitism\*, caused a drastic decline in its numbers and led the U.S. Fish and Wildlife Service to list the Kirtland’s warbler as an endangered species in 1973.\*Cowbirds lay eggs in the nests of other birds. The host bird usually raise cowbird young at the expense of their own eggs or young. |
| Slide 17 | The Karner blue butterfly is a small butterfly, with a wingspan of about one inch. The male's wings are distinctively marked with a silvery or dark blue color. The Karner blue's habitat is mostly composed of pitch pine and scrub oak scattered among open grassy areas. These areas would be created by periodic wildfire. Karner blue butterfly habitat has been lost through human activity to suppress wildfire, cultivate forests and develop communities. Much of the remaining habitat occurs in small fragments which prevent the Karner blue from moving and spreading, resulting in small populations that are isolated from each other.  |
| Slide 18 | Mountain sweet pitcher plant is a carnivorous perennial herb with tall, hollow pitcher-shaped leaves and red sweet-smelling flowers. The hollow leaves contain liquid and enzymes. When insects fall into the pitchers, they’re digested and the nutrients are incorporated into the plant’s tissues. The plant is currently found in just a handful of counties in upstate South Carolina and southwest North Carolina. The most serious threat to mountain sweet pitcher plant is the destruction of its wetland habitat. Collecting from wild populations is another problem for this carnivorous plant. |
| Slide 19 | Endangered species is a worldwide problem. Tigers, apes, elephants, turtles, and rhinos are among many of the species imperiled worldwide. |
| Slide 20 | The largest threat to species diversity is habitat loss. Humans have altered approximately 50% of the land on this planet. Drainage of wetlands for housing developments, fragmentation of large land areas for roadways and commercial development, destruction of prairie and forest for agriculture and cattle ranches, logging, mining, oil drilling, and exploiting other natural resources is just the beginning of a long list on how mankind has destroyed natural habitats.  |
| Slide 21 | Species loss can also be contributed to the introduction of new species to an area. Introduced or exotic species are organisms that have been brought to a region, either purposefully or accidentally, in which they were never previously found. Some introduced species have a positive or no impact on the habitat but in many instances introduction of nonnative species has caused a decline in many native species. Since the introduced organisms have not evolved with the native species, they lack the natural predator-prey balance that forms over long periods of time which may lead to an introduced species directly killing off native species. Introduced species may also cause species extinction by outcompeting the native species for resources. When these negative effects happen to the native species, the introduced species is referred to as an invasive species. |
| Slide 22 | The release of excess nutrients, waste products, or poisons into the environment is known as pollution. Pollutants have had a large impact on species populations by directly poisoning the species or its environment. Examples of this include: the release of PCBs and pesticides have caused serious genetic malformations in frogs, birds and fish; Carbon dioxide released from human activity has led to global climate change; oil spills pollute the oceans, affecting many species; and acid rain flows over and through the ground, it affects a variety of plants and animals.  |
| Slide 23 | Overexploitation is when a human uses or destroys a species faster than the species is able to reproduce. This could be for food, shelter, sport, pets, or medicine. Examples of when this occurs include using plants or animal species as medicinal therapies (tiger bones, Pacific Yew tree, the wild herb Echinacea); over hunting and fishing ( cod, swordfish, tuna, whales, grey wolf); and the use of animal parts in trade (rhino horns, elephant tusks). |
| Slide 24 | Saving imperiled species requires a tremendous amount of public, political, and financial support. Numerous conservation groups have surfaced to fight threats like habitat loss and poaching and to education individuals, communities, and nations in order to save imperiled species. |
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