Why It Matters

- Name three causes of habitat destruction:
 - Industrial pollution
 - Mining
 - Farming
 - Transporting species into habitats where they had not been
- A change in one <u>niche</u> is likely to affect other niches and their occupant species.
- Dumping toxins into our lakes and oceans can concentrate in food webs like mercury in fish.
- A species arises only when there is a great deal of genetic <u>diversity</u> in a population that matches the opportunities provided by a unique and <u>unoccupied</u> niche.
- Human activity is <u>eliminating/removing/destroying</u> many niches by making habitats for our own species. Our <u>selective</u> <u>breeding</u> of plants and animals creates uniformity in gene pools which decreases the rate of evolution of new species.
- Dr. Norman Borlaug was the "father of the Green Revolution" and promoted making the land we already use for farming more efficient rather than destroying more ecosystems for farmland.

How We Know

- Farms and lakes that drain from heavily <u>fertilized</u> farm fields can cause overgrowth of certain plants and limit species <u>diversity</u>.
- After being placed in a warm oven (incubator), bacteria will grow over every part of a culture plate except around discs with antibiotics that are <u>effective/ineffective</u> at killing the bacteria. Over time <u>more/fewer</u> antibiotics are losing their effectiveness.
- Rivers carry rich soil at can enrich fields when rivers flood.
 However, much of this good soil does not settle out until reaching the <u>ocean</u>.
- Name a way to prevent oil spills.
 - Replace old, leaky pipelines
 - o Avoid human errors in handling oil cargo
 - Prevent accidents of tankers and barges
 - Prevent leaks and spills from offshore drilling rigs
- Overfishing can lead to extinction because by decreasing the <u>population</u>, you reduce the chances for successful <u>reproduction</u>.

What We Know

- Deliberate introduction of species into new environments can lead to unintended consequences. These non-native organisms are called <u>invasive species</u>.
- Goats are an invasive species in the Galapagos Islands that have displaced iguanas and turtles as the primary

- plant-eating animals, leaving almost no food for these species.
- While <u>fertilizer</u> can help crops grow better and help combat starvation, overfertilization can cause plant life to explode. This overgrowth can choke of waterways or rob the water of <u>oxygen</u> as they rot.
- Overuse of the same antibiotic can act as a natural selection force that could select for the creation of a new species or strain of bacteria that is <u>resistant</u> to that antibiotic.
- Overfishing threatens human food supply but also that of other <u>species</u>. For example, the Russian Brown Bear.
- Oil/gasoline <u>is/is not</u> a renewable resource.
- Give two examples of endangered species that have recovered after conservation efforts:
 - American Bald Eagle
 - Whooping crane
 - Kemp's Ridley Sea Turtle
- A possibility for reducing fossil fuel use is to add <u>alcohol</u>, made from fermenting grain or crop residues, to gasoline.