



Apple TV+ Documentary *The Year Earth Changed*  
 Teacher's Worksheet Guide 2021 - 48 minutes

<b>Animal/Location</b>	<b>Human Impact discovered</b>	<b>Changes we can make</b>
<p><b>White Crowned Sparrow</b> San Francisco, California, USA</p>	<ul style="list-style-type: none"> <li>- Traffic reduced on Golden Gate Bridge allows mating calls to be heard and hope to have best breeding season in years.</li> </ul>	
<p><b>Sea Turtles Loggerhead</b> Juno Beach, Florida, USA</p>	<ul style="list-style-type: none"> <li>- Reluctant to visit ever-busier beaches to lay eggs</li> <li>- Average nesting success rate has been 40%, 2020 with beaches closed it was 61%</li> </ul>	<ul style="list-style-type: none"> <li>- nightly beach closures</li> </ul>
<p><b>Humpback Whales</b> South East Alaska, USA</p>	<ul style="list-style-type: none"> <li>- ship noise</li> <li>- Now 25 times quieter underwater</li> <li>- Talking to each other more often and in new ways</li> <li>- Mother and calf communication increased</li> <li>- Elaborate conversation</li> <li>- Communication across greater differences and leave calfs alone to feed and yet still hear calf if it needs her</li> <li>- Nursing mothers can hunt with other animals to get energy to feed calf - can do this more often.</li> <li>- In the past as few as only 7% of calfs made it to adulthood. Chance this year many more will survive</li> </ul>	<ul style="list-style-type: none"> <li>- ask vessels to go slower</li> <li>- Group vessel traffic to have a smaller footprint to protect underground soundscape and the whales</li> <li>-</li> </ul>
<p><b>Dolphin</b> Hauraki Gulf, New Zealand</p>	<ul style="list-style-type: none"> <li>- triple their range of communication now ocean traffic is down 17%</li> </ul>	
<p><b>Killer Whale</b> Salish Sea, Vancouver, Canada</p>	<ul style="list-style-type: none"> <li>- 4x reduction in ship noise</li> <li>- Killer whales can now use their sonar more effectively in hunting their prey.</li> </ul>	

<p><b>Sika Deer</b></p> <p>Nara, Japan</p>	<ul style="list-style-type: none"> <li>- meadows used for food have been taken over by buildings</li> <li>- Normally shy animals, begged for food from tourists at temples</li> <li>- Bowing head for food - rice bran crackers</li> <li>- With people gone had to find food, older generation lead group to where they use to feed.</li> <li>- New diet made them healthier, less plastic trash which kill deer</li> </ul>	
<p><b>Capybara</b></p> <p>Buenos Aires, Argentina</p>	<ul style="list-style-type: none"> <li>- enjoy eating in former habitat</li> </ul>	
<p><b>Leopard</b></p> <p>Africa</p>	<ul style="list-style-type: none"> <li>- safari season cancelled in Africa</li> <li>- Leopard lives in tourist lodge and hunts during the day (Usually nocturnal)</li> </ul>	
<p><b>African Jackass Penguins</b></p> <p>Cape Town, South Africa</p>	<ul style="list-style-type: none"> <li>- breeding season head out to sea to go fishing in early morning</li> <li>- Chicks eat 15% of their body weight every day</li> <li>- Delivering the catch to the chicks is a problem due to beaches being packed with people when they returned from fishing</li> <li>- Needed to wait off shore until sunset when the people left the beach</li> <li>- With the beaches deserted the penguins can head back after only a few hours, feed their chicks and can go out fishing again.</li> <li>- Chicks fed 2 r 3 times a day - healthier chicks and can raise a second cluck of chicks</li> <li>- We thought penguins and people were getting along fine, in reality people were impacting the penguins</li> <li>- Penguin population has dropped 70% in last 30 years</li> </ul>	

<p style="text-align: center;"><b>Cheetahs</b></p> <p style="text-align: center;">Maasai Mara, Kenya</p>	<ul style="list-style-type: none"> <li>- the noise from safari vehicles and cameras made it hard for the mother to communicate with her cubs</li> <li>- Soft chirping call to tell cubs to join her at a kill, but can't do it too often or the rival animals will hear it and take her kill.</li> <li>- All the noise mask natural cue cheetahs need to survive.</li> <li>- Mother make fewer calls, cheetah cubs are doing better</li> <li>- In the past only 1 of 3 cubs would survive, now more cubs that are over 3 months old</li> </ul>	<ul style="list-style-type: none"> <li>- Recommendations to promote good conduct among tourist and guides.</li> </ul>
<p style="text-align: center;"><b>Mountain Gorillas</b></p> <p style="text-align: center;">Bindi National Park, Uganda</p>	<ul style="list-style-type: none"> <li>- less disturbance in 2020, gave birth to twice the number of babies</li> <li>-</li> </ul>	
<p style="text-align: center;"><b>Spiny Seahorses</b></p> <p style="text-align: center;">Dorset, England</p>	<ul style="list-style-type: none"> <li>- numbers not seen for at least 10 years</li> <li>- Seagrass home recovers from damage caused by visiting boats</li> <li>-</li> </ul>	
<p style="text-align: center;"><b>Rhinos</b></p> <p style="text-align: center;">Laikipia, Kenya</p>	<ul style="list-style-type: none"> <li>- no rhinos were killed for their horns for first time since 1999</li> </ul>	
<p style="text-align: center;"><b>Asian Elephants</b></p> <p style="text-align: center;">Assam, India</p>	<ul style="list-style-type: none"> <li>- elephants eat 150 Kilos of food a day</li> <li>- Only 5% of natural habitat remaining.</li> <li>- Forest home replaced by farmland</li> <li>- Elephants raid crops to survive; farmers loose half rice crop to them</li> <li>- In India elephants have trampled people while searching for food in villiages, 400 humans and 100 elephants killed each year</li> </ul>	<ul style="list-style-type: none"> <li>- city workers who have returned to village due to lockdown aer providing the extra hands for a local conservation trusts project to plant crops for wild elephants.</li> <li>- Along forest edge, plant a buffer zone of fast growing wild rice and grasses for the elephants to eat</li> <li>- 500 people helped transform 400 acres</li> <li>- Elephants eat only crops planted for them, did not go into village or raid farm crops.</li> </ul>