

Section 4 – Sustainability

*Student Name*_____
*Class***4.1 There are Intended and Unintended Consequences of Human Activities within Ecosystems**

1. The malaria problem facing the Dyak people of Borneo was addressed by using DDT to kill the malaria-carrying mosquitoes. Who's bright idea was this?
 - A. **NATO** (North Atlantic Treaty Organization)
 - B. **WHO** (World Health Organization)
 - C. **WDCC** (World Disease Control Centre)
 - D. **CDC** (Centre for Disease Control)

2. The DDT also killed a parasitic wasp. This was unfortunate, because the wasps were needed to keep this population under control ...
 - A. **rats**
 - B. **cats**
 - C. **geckos**
 - D. **caterpillars**

3. The organization that contributed to the first problem, actually made it worse by parachuting these in to the infested area
 - A. **Live cats**
 - B. **Super rats**
 - C. **Flying geckos**
 - D. **Malaria-eating bacteria**

4. DDT was found to negatively affect the population of Bald Eagles. When the DDT entered the water system it was in a concentration of 0.000003 ppm. When the Bald Eagles ate fish further up in the food chain, the DDT concentration had increase to 25 ppm. The DDT concentration had increased about ...
 - A. **10,000 times**
 - B. **100,000 times**
 - C. **1, 000, 000 times**
 - D. **10, 000, 000 times**

5. The reason the Bald Eagle population declined was the same reason the Peregrine Falcon population declined. The DDT caused ...
 - A. **infected habitats**
 - B. **soft egg shells**
 - C. **featherless young**
 - D. **nerve damage**

6. Extinction occurs when no individuals of a species are left ...
 - A. **in a particular area**
 - B. **anywhere in the world**
 - C. **In a specific ecosystem**
 - D. **In a controlled area**

7. Ginseng is a natural root that is used to improve the human immune system. Because of its widespread and increased use as a medicine, it has been added to the list of living organisms that is Extinct, threatened or endangered in Canada. Ginseng is listed as ...
 - A. **extinct**
 - B. **extirpated**
 - C. **endangered**
 - D. **threatened**

8. The Pemberton potato is respected internationally because it is ...
 - A. **very large**
 - B. **tasty**
 - C. **disease free**
 - D. **easily harvested**

4.2 Information from Scientific Investigations Can Assist Environmental Decision-Making

1. Scientist and researchers study the life cycles of insects so they can better control them ...
 - A. teach them tricks
 - B. without using pesticides
 - C. and lengthen their overall life span
 - D. to use as food for other research animals
2. Scientists who study the relationships among living things and their environment are called ...
 - A. egocentric
 - B. ecologist
 - C. economics
 - D. ergonomics
3. An organization in Canada that observes, monitors and assesses the status of endangered wildlife is called **COSEWIC**. This acronym stands for ...
 - A. Canadian Organization Selecting Endangered Wildlife In Canada
 - B. Canadian Wildlife Service's Committee on the Status of Endangered Wildlife In Canada
 - C. Canadian Observation Service Examining Wildlife in Canada
 - D. Canadian Wildlife - Endangered In Canada Agency
4. The goal of this committee is to increase ...
 - A. funding for the organization
 - B. numbers of extinct species in Canada
 - C. numbers of at-risk species in Canada
 - D. public recognition of their work
5. The pesticide that caused the tinning of the Peregrine falcon's eggshells was banned. The chemical used by agricultural operators was ...
 - A. CDC
 - B. ABC
 - C. DAT
 - D. DDT
6. Recovery programs developed to help rescue populations of the Peregrine Falcon were called ...
 - A. Captive Breeding
 - B. Controlled Habitat
 - C. Tag and Monitor
 - D. Search and Rescue
7. The recovery program was so successful with the Peregrine Falcon that their status on the COSEWIC list was downgraded from ...
 - A. extinct to endangered
 - B. threatened to endangered
 - C. threatened to released
 - D. endangered to threatened
8. High cliffs are natural nesting spots for peregrine falcons, but when they are release close to a city, the Peregrine Falcons will build nests on...
 - A. Playground structures
 - B. Ledges of tall buildings
 - C. Elevator shafts
 - D. Chimneys and Smokestacks

4.3 There are Limitations to Scientific Knowledge

1. Ultraviolet radiation comes to us from space. The primary source of this radiation is the Sun. Luckily for living organisms on our planet, most of this deadly radiation doesn't reach us, because it is ...
 - A. **absorbed by oxygen in the atmosphere**
 - B. released as a by-product of ozone
 - C. bounced off our atmosphere into space
 - D. resistant to our atmosphere

2. The case of the golden toad is one in which scientists and researchers have no idea about. What are they puzzled about?
 - A. The change in colour
 - B. The toad's resistance to disease
 - C. **The disappearance since 1988**
 - D. The lack of webbed feet it has developed

3. Scientists believe they know what has happened, with certain amphibian populations, around the world. The top 4 theories include:
 - A. **Global warming, thinning of the ozone, pollution, earthquakes**
 - B. Disease, climate change, pollution, volcanic activity
 - C. **Climate change, thinning of the ozone, pollution, disease**
 - D. Volcanic activity, hurricanes, pollution, climate variation

4. Wildlife overpasses and underpasses were completed in Banff National Park in 1996. This project was designed to help prevent 'road kill'. Wolf populations in the Banff Park ...
 - A. **only use the underpasses**
 - B. only use the overpasses
 - C. don't use either type of walkway
 - D. use both types of wildlife walkways

5. Monitoring devices have been set up to observe the use of the overpasses and underpasses. The monitoring devices have observed elk, deer, coyotes and other mammals using this many overpasses ...
 - A. **2**
 - B. 3
 - C. 5
 - D. 10

4.4 Analyzing local problems – Reducing Ecological Footprint

1. Living beyond our means can have a devastating effect on our environment. So how much of an impact we make determines our ...
 - A. sustainability
 - B. consumer bias
 - C. ecosystem balance
 - D. **ecological footprint**
2. To determine your ecological footprint, all of the following calculations are necessary, EXCEPT for ...
 - A. energy supply needed
 - B. **type of house you need**
 - C. amount of water you use
 - D. amount of waste you produce
3. One way of changing our impact on the environment we live in is to ...
 - A. pack our garbage in smaller bags
 - B. using a car instead of a bus to get to work
 - C. take a bath every day instead of showering
 - D. **become aware of all the resources you use**
4. The average Canadian has an ecological footprint of ...
 - A. 5.0 ha
 - B. **7.7 ha**
 - C. 75 m²
 - D. 10,000 m²
5. To reduce our ecological footprint, we can ...
 - A. consume more water and less food
 - B. create more waste and recycle it
 - C. **use materials that require less energy to produce**
 - D. take longer more relaxing showers
6. There are many waste-reducing practices, which are being suggested to lower the impact we are making in our environment. The most effective practice is ...
 - A. reusing
 - B. **reducing**
 - C. reclaiming
 - D. recycling
7. When materials that have been used once are used over and over again the environmentally friendly practice is ...
 - A. **reusing**
 - B. reducing
 - C. recycling
 - D. reclaiming
8. When used materials are turned into new materials like kitchen scraps placed in a compost bin the practice being used is ...
 - A. reusing
 - B. reducing
 - C. **recycling**
 - D. replacing