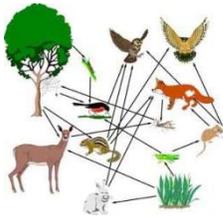


Science 7 Final Exam Review

The following content will help you review for your Science 7 Exam. The page numbers are there to help you, but you may also use your labs, activities, and projects that we've done to help you explain the answers. Create the study guide that best suits your learning style. Good Luck!!



Interactions and Ecosystems:

1. What do the words biotic and abiotic mean? Give an example of each (Pg. 9). What is the best way to determine if something is living or nonliving? What is the environmental interaction of Mr. Keraiff drinking his water?
2. What are the basic needs of all living things? Do all living things need food, sunlight and water (Pg. 12-13)?
3. Define and give an example of each of the following types of relationships: parasitism, mutualism, commensalism (Pg. 16-17)?
4. What is 1 positive and 1 negative effect that humans can have on their environment (Pg. 20-23)? How has Parks Canada allowed for free movement of wildlife in their parks?
5. What do plants need in order to photosynthesize? Draw a diagram showing the flow of materials in and out of a leaf during photosynthesis. What is the process of photosynthesis ((Pg. 30)?
6. Define the following terms: producer, consumer, decomposer and give an example (in order) (Pg. 35). What is a Primary Consumer?
7. Define an Omnivore and Carnivore.
8. What is Condensation and how is it formed (Pg. 45)?
9. What is bioinvasion (Pg. 56)?
10. Explain how predator and prey populations move up and down in relation to one another (Pg. 60). Example: Cougars and Deer.

11. What is an ecological footprint? What does an Ecological footprint help us understand (Pg. 78-82)?
12. What is a Sanitary Landfill? Describe how it is constructed (Pg. 23).
13. Biomass (mass of living organisms) decreases as you move from the producer level up to the consumer level.
14. Prairie Dogs and the Black Footed Ferrets have a lot in common, especially if they are living within the same community. They have the same predators (foxes, coyotes, and eagles), they eat plants, and they both breed quickly to replace their numbers. However, their population may go up and down at different rates. What are four reasons for these different rates of change?



Plants for Food and Fibre

1. Where do plants lose the majority of their water (Pg. 103)?
2. Explain Capillary Action (Pg. 103)?
3. Draw the life cycle of a plant (Pg. 110).
4. Explain the differences between diffusion and osmosis (Pg. 106-107).
5. Review the Cell Membrane. What function do the "pores" have (Pg. 106)?
6. Name and explain the 3 methods of natural vegetative reproduction (Pg. 114).
7. Name three things that plants can provide for us (Pg. 131)?
8. What is a living resource and give three examples. How did settlers affect the living resources? What is the name of a living resource that is being used quicker than it's being produced (Pg. 133)?
9. What is humus, and how does it help soil (Pg. 141)?
10. The spaces between the particles in soil are filled with what?
11. What is fertilizer? What are the two types of fertilizers we discussed in our textbooks (Pg 144)?
12. What is irrigation? Discuss the affect that poor irrigation would have on a crop (Pg. 145).
13. What is meant by "clearing the land"? How is it harmful (Pg.145)?
14. Draw a diagram to explain "crop rotation" (Pg. 147).
15. What is a hydroponic system (Pg. 155)?
16. What is meant by the term yield (Pg. 151)?

17. Name and explain two methods of creating crops that have specific traits (Pg. 158-159).
18. Environmental Management: Effective land use decisions involve balancing the needs of what two important environments (Pg. 163)?



Heat and Temperature:

1. List and explain the four parts of the Particle Model of Matter. Why is liquid water able to turn into ice (is heat energy added or taken away from the liquid water (Pg. 193)?
2. Illustrate the particles in a solid state, liquid state, and gas state (Pg. 194).
3. If you were to heat up an iron rod what would happen to its length?
4. Define the words conductor and insulator. Give 3 examples of each (Pg. 211).
5. Explain what happens during conduction using a diagram (Pg. 209).
6. Explain what happens during convection using a diagram (Pg. 213).
7. A pot of water is put on the stove to boil. Heat is transferred from the burner to the pot by which process? Convection or conduction?
8. Explain what happens during radiation using a diagram (Pg. 217).
9. Describe what colour you would wear if you wanted to stay cool on a hot summer day...use the words absorb and reflect in your answer (Pg. 220)
10. Fossil Fuels: Why do we use them (Pg. 240)?
11. In the Fall the city pours a new sidewalk outside your home. In the Spring you notice several large cracks in the cement. What is the cause of the cracks?
12. Passive Energy: Describe what that means (Pg. 225).
13. If you were building a new home where would you put the heating vents and why?



Structures and Forces

1. Explain and give examples of the three basic structural forms (Pg. 266-267).
2. When we build a structure, we look at the function, the design and aesthetics. What is meant by each of these terms and why are they important (Pg. 269-275)?
3. What is "centre of gravity" and how does it affect the balance of a structure (Pg. 286)?
4. What are two ways you could make a structure more balanced (Pg. 287)?
5. What is the difference between a static load and a dynamic load? Give an example of each (Pg. 288-289).
6. Explain Mass and give an example (Pg. 285).
7. What are performance requirements and why would they be important (Pg. 294)?
8. What is an internal force (Pg. 296)?
9. List and explain the three types of internal forces. You may use a diagram if you like (Pg. 297).
10. Define corrugation. Why is corrugation important (Pg. 330)?
11. The force that results when the surface of one object moves against the surface of another is referred to as: Friction, Stress or Gravity (Pg. 313)?
12. What does "margin of safety" mean? How would we test and monitor the margin of safety (Pg. 326-327)?
13. Explain four ways to strengthen an existing material (Pg. 330-332).
14. Explain what deformation is. What happens to a structure that suffers from too much deformation (Pg. 310)?



Unit E - Planet Earth

1. How is the strength of an earthquake measured (Pg. 359)?
2. Seismologists would look at what part of the earth to see where the Earthquake originated (Pg. 361)?
3. Define the following terms: weathering, erosion and deposition (Pg. 363).
4. Discuss Cleavage and Fracture. How are they different (Pg. 371)?
5. What are glaciers and what happens as they flow (Pg. 366)?
6. Name the three types of rock and tell how each is formed. Discuss four characteristics of each type of rock (Pg. 377-380).
7. Who was Wegener and what was his hypothesis? Did others believe him? What evidence did he have to support his ideas (Pg. 393-394)?
8. Evaluate what caused the jagged peaks of the Rocky Mountains: Folding, Faulting or Heat and Pressure (Pg. 405)?
9. When wood appears to look like rock what has happened to the wood particles?

