**AICE Biology Guided Reading: Biodiversity and Conservation (J&F Ch 18)**

*Complete the following using your textbook pp. 424-454. This assignment is worth 60 points and is due on Tuesday, January 3.*

Answer SAQ questions 18.1-18.20 as you read this chapter. (19 pts) (Skip 18.12b, 18.13b, 18.15)

1. Define the following bold-faced terms (located throughout the chapter) on a separate sheet of paper using the three-column note format (one column for the term, one column for the definition, and one column for a picture, diagram, or visual to help remember the term): (6 pts)

Species

Binomial system
Ecosystem

Community

Habitat

Niche

Biodiversity

Species diversity

Genetic diversity

Quadrat

Mark-release-recapture

Transect

Correlation

Classification

Taxonomy

Taxa

Domain

Alien species

Overexploitation

Endangered species

Artificial insemination

In vitro fertilisation

2. Differentiate between random and systematic sampling. Explain why biologists sample organisms and what information we can learn from this. (2 pts)

3. Differentiate between species density and species frequency. What does each measurement tell us about an area’s biodiversity? (2 pts)

4. What is Simpson’s Index of diversity and what do each of the variables in the equation represent? What is this equation used for? (2 pts)

5. Differentiate between a line transect and a belt transect. What does each tell us? (2 pts)

6. Examine worked example 3 on page 432. What is a kite diagram and how do we use them to display transect data? (1 pt)

7. Turn to pages 501-504. Read the sections on Spearman’s rank correlation and Pearson’s linear correlation. Do your best to describe when each of these tests are used and what each test can tell us. (4 pts)

8. List the hierarchical classification from domain-species that we use to classify life. Look up your favorite animal’s classification and list it here. (2 pts)

9. Create a table differentiating between the three domains of life. Include important morphological, biochemical, and reproductive features for each domain in your chart. (3 pts)

10. Create a table that compares and contrasts the four kingdoms of life in domain Eukarya. This table should be thorough and include information on: generalized morphology, how the organism gets energy, diversity, cell type, examples, and at least one drawing. (8 pts)

11. What is a virus and how do we classify them? (1 pts)

12. For each of the five threats to biodiversity, outline what the threat is, how it threatens biodiversity, and how humans have made that threat worse. (5 pts)

13. Read the five reasons why biodiversity matters on pages 444-445. Select two of these reasons and describe them in detail. (4 pts)

14. Turn back to pages 417-418. What group determines whether or not an organism is threatened or endangered and how are these decisions made? (1 pts)

15. How are National Parks used to protect biodiversity and endangered species? Describe at least one example. (2 pts)

16. How are zoos important in protecting biodiversity and endangered species? (1 pt)

17. What is the role of international conservation organisations in conserving biodiversity? Describe both CITES and the World Wide Fund for Nature in your response. (2 pts)

18. Describe in detail at least one effort to restore degraded habitats. (1 pts)