

Science 9: Environmental Chemistry Final Exam Review

1. Explain the difference between organic and inorganic compounds.

2. Complete the table

Organic Compounds	Nutritional Role
Carbohydrates	
Lipids	
Proteins and Amino Acids	
Nucleic Acids	

3. What is the difference between a macromineral and a trace element?

4. Provide three examples of foods suggested in each category of Canada's Food Guide.

Grain Products (5 – 12 servings)

Vegetables and Fruits (5 – 10 servings)

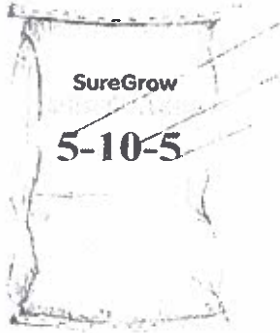
Milk Products (3 – 4 Servings)

Meat & Alternatives (2 – 3 servings)

5. Explain the process of diffusion.

6. Explain the process of osmosis.

7. Identify what each number on the fertilizer bag stands for. What does the other 80% include?



8. What are the advantages and disadvantages of using artificial fertilizers?

9. What is a monoculture?

10. Why was DDT developed?

11. Explain the process of bioaccumulation.

12. What are the harmful effects of using DDT?

13. Identify the properties and give 3 examples of acids, bases and neutral substances.

Acids:

Bases:

Neutral:

14. What is pH a measure of?

15. How does an indicator work?

16. Write a neutralization word equation.

17. Identify three negative effects of acid precipitation.

18. What is acid shock?

19. Calculate ppm, (parts per million) if 1 milligram of mercury was found in 30 L of water.

20. Why is it not necessary to add lime to neutralize lakes and rivers in Alberta that have been exposed to acid precipitation?
21. Explain the difference between dispersion and dilution.
22. What are catalytic converters used for and how effective are they?
23. What is a scrubber and why it is used?
24. What is a pollutant?
25. What is a toxin?
26. Explain the difference between acute and chronic toxicity.
27. What does LD50 stand for? Where does most of the Human LD50 information we currently have come from?
28. Explain what environmental monitoring is intended to do.4

29. How is water quality determined?

30. What types of aquatic organism would you likely be able to find in polluted water? What types of aquatic organisms would you likely be able to find in unpolluted water?

31. Explain the difference between point and non – point sources of pollution.

32. What are the three stages of transport with regards to substances in the environment?

33. Airborne chemicals will travel certain distances and in certain directions depending on what?

34. What are some natural sources of airborne particles?

35. What is the thinning of the ozone layer above Earth caused by and why is it a concern?

36. Explain the 3 stage sewage treatment process in Calgary or Edmonton.

37. Describe the difference between permeable and impermeable soil zones.

38. What is an aquifer?

39. What processes are used to biodegrade toxins in the environment?

40. What is a hazardous waste?

41. What does WHMIS stand for? What does MSDS stand for?

42. Identify the 4R's and give an example of how you can practice each one.

43. How are sanitary landfills secured?