

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

- (1) On your own
- (2) With your notes
- (3) With another student



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

True or False: Identify the following statements as true or false. If FALSE, rewrite the UNDERLINED WORD with the correction (1 mark each)

1. T Water is stored in the geosphere in the form of ground water.

2. T Non-point source pollution is difficult to track and regulate.

3. F Global warming is a result of excess water vapour in the atmosphere.
_____ greenhouse gasses

4. F In a food chain, the first organisms always starts with a consumer.
_____ producer

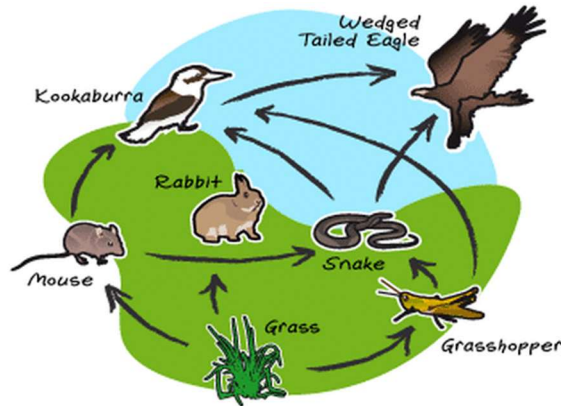
5. F Nutrients are distributed around Earth due to the winds.
_____ ocean currents
(great ocean conveyer belt)

Multiple Choice: Choose the BEST answer (1 mark each)

- b 6. Which of the following is an abiotic part of an ecosystem?
- a. Decomposer
 - b. Sun
 - c. Spider
 - d. Cacti

- b 7. Which of the following is responsible for the **energy flow** from the first trophic level to the fourth trophic level in a pyramid of energy?
- a. Decomposition
 - b. Predation
 - c. Photosynthesis
 - d. Limiting Factors
- c 8. The process that is almost the reverse of photosynthesis is _____?
- a. Transpiration
 - b. Carrying Capacity
 - c. Respiration
 - d. Precipitation
- a 9. Plants get most of their supply of carbon from ...
- a. Air
 - b. Soil
 - c. Water
 - d. None of the above
- b 10. Bacteria and fungi etc. break down organic matter in a process known as _____?
- a. Photosynthesis
 - b. Decomposition
 - c. Algal bloom
 - d. Cellular Respiration
- c 11. All food chains start with a ...
- a. Decomposer
 - b. Primary consumer
 - c. Producer
 - d. Apex consumer
- d 12. A consumer that only eats other consumers is called a ...
- a. Herbivore
 - b. Omnivore
 - c. Decomposer
 - d. Carnivore
- c 13. The correct term to describe the non-living components of an environment is ...
- a. Dead
 - b. Biotic
 - c. Abiotic
 - d. Zombie
- d 14. Which of the following spheres is **not** part of the phosphorus cycle?
- a. Hydrosphere
 - b. Biosphere
 - c. Lithosphere
 - d. Atmosphere
- d 15. Which wind pattern is responsible for the prevailing winds across North America?
- a. Trade Winds
 - b. Great Ocean Conveyor Belt
 - c. Polar Easterlies
 - d. Westerlies
- d 16. The starting process in the water cycle is always ...
- a. Evaporation
 - b. Precipitation
 - c. Condensation
 - d. Any of the options
- a 17. Which of the following is considered a long-term store of carbon?
- a. Fossil fuels
 - b. Plants
 - c. Animals
 - d. Decomposers

Use the following food web for questions #18 - 20:



- d 18. Which of the following could be considered the primary consumer?
 a. Snake
 b. Wedged tailed eagle
 c. Kookaburra
d. Grasshopper
- a 19. Which organism is on the second trophic level?
a. Mouse
 b. Kookaburra
 c. Wedged tailed eagle
 d. Grass
- a 20. If grass is able to create 100% of its own energy, how much energy would the mouse gain after consuming the grass?
a. 10%
 b. 25%
 c. 90%
 d. 100%
- d 21. Which of the following is a biotic part of the ecosystem?
 a. Soil
 b. pH
 c. Water
d. Decomposer
- a 22. An algal bloom is caused by an excess of nitrogen or phosphorus in which of the following?
a. Hydrosphere
 b. Biosphere
 c. Atmosphere
 d. Lithosphere
- b 23. An ecosystem is able to support a maximum of 100 organisms. What is this idea describing?
 a. Limiting factors
b. Carrying capacity
 c. Small population
 d. Lack of resources
- d 24. Which of the following describes **decomposers**?

I.	Recycles dead organisms	✓
II.	Causes biodegradation	✓
III.	Makes nutrients available to producers	✓

- a. I and II only
 b. I and III only
 c. II and III only
d. I, II, and III
- a 25. Which trophic level contains the **most overall energy**?
a. First
 b. Second
 c. Third
 d. Fourth

Matching: Match the term on the left with the descriptor on the right. (5 marks)

Term	Descriptor
<u>c</u> 26. Cellular Respiration	A. Organisms that make carbohydrates during photosynthesis
<u>a</u> 27. Producers	B. Substances that are required for energy or growth in organisms
<u>e</u> 28. Sedimentation	C. Process that releases carbon dioxide back into the atmosphere
<u>b</u> 29. Nutrients	D. Steps in a food chain
<u>d</u> 30. Trophic Level	E. Process in which soil and decaying organisms accumulate in layers

Short Answers

1. Draw and label each level of a **food chain** that includes YOU. It must contain at least 3 trophic levels. Include arrows (3 marks)

1st trophic lvl → 2nd trophic lvl → 3rd trophic lvl → 4th trophic lvl

Grass → Crickets → Chicken → Human

Producer → Primary Consumer → Secondary Consumer → Tertiary Consumer

2. Explain why the **sun** is essential to... (2 marks)

a. food chains

Sun is the energy source that producers need in order to create its energy. Without it, producers cannot make its own energy and transfer the energy through the food chain.

b. the carbon cycle

Then sun is a driving force for photosynthesis to occur in plants. Without photosynthesis the Earth's supply of oxygen is depleted.



3. Why are decomposers not drawn as part of food pyramids? (1 mark)

They exist on all trophic levels in the food pyramid

sugar
(glucose)

4. List each of **earth's 4 spheres**, along with **2 examples** of things from each (4 marks)

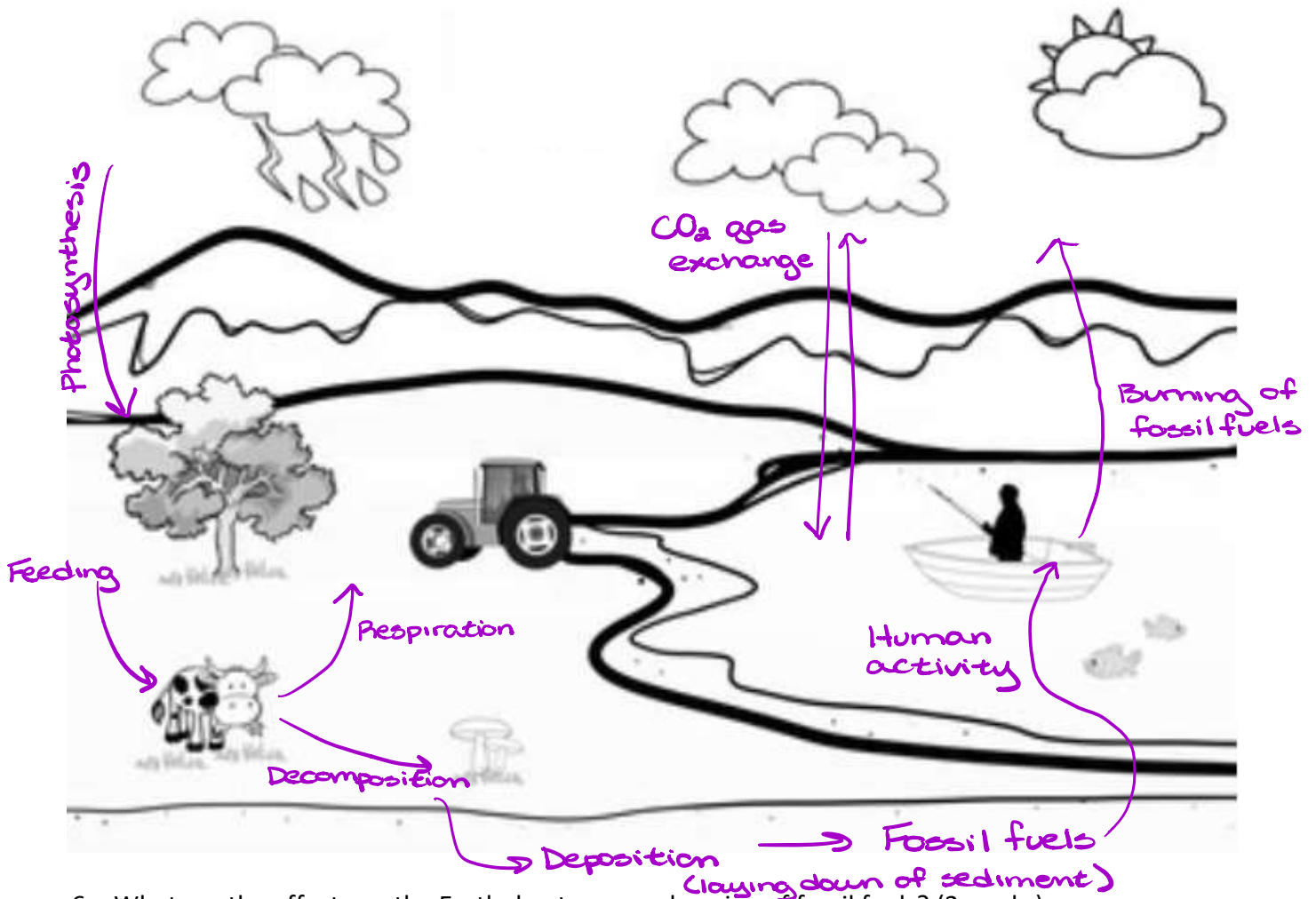
Lithosphere = rock, granite, marble

Hydrosphere = water, ice, snow, water vapour

Atmosphere = air, gas, clouds

Biosphere = plants, animals, insects

5. In the following diagram, show how the **carbon cycle** interacts in the following ecosystem. Be sure to **draw and label** arrows to show the flow of the carbon cycle. (3 marks)



6. What are the effects on the Earth due to excess burning of fossil fuels? (2 marks)

Excess burning of fossil fuels have resulted in global warming and global climate change. This has led to:

- ↳ Melting glaciers
- ↳ Rising sea levels
- ↳ Flooding
- ↳ warmer & more acidic sea water
 - ↳ aquatic ecosystems (especially coral reefs) being harmed
- ↳ extreme weather events.