Year 9 Science: Ecosystems: biotic and abiotic factors, quadrats and transects

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Sort into biotic or abiotic: a dead kauri leaf, soil pH, a weta, rainfall, a fungus on a log.

2. Mosses grow thickly on the south side of a building but hardly at all on the north side. Suggest two abiotic factors that explain this, remembering New Zealand is in the Southern Hemisphere.

3. Six random 1 m² quadrats on a 300 m² lawn hold 2, 4, 1, 3, 0 and 2 clover plants. Estimate the clover on the lawn.

4. You want to know how plants change from a sunny paddock into the shade of bush. Would you use random quadrats or a transect? Say what you would measure.

5. Give one way a tohu and a scientific survey are alike, and one way they differ.

Fix the mistake

6. Correct this statement: "A fallen log or dead leaves are abiotic, because they are not alive any more."

7. Correct this statement: "Put the quadrats where there are lots of plants, so you get good data."

8. Correct this statement: "With 0.25 m² quadrats, multiply the mean per quadrat straight by the area of the field."

9. Correct this statement: "To see how plants change from the beach up a dune, scatter quadrats at random."