Year 11 Science: Human-induced change in Aotearoa: soil, water and plastic

Name: _____ Date: _____

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

Practice

1. A new subdivision of houses and roads is built. Name the change it causes and two spheres it affects.

2. Explain why nitrate leaches through soil much more easily than phosphate.

3. A catchment was changed from pine forest to dairy farming. Nitrate in its spring water has kept rising for 15 years, although the farm has not changed since. Explain why.

4. Explain how clearing forest from steep hill country can harm an estuary downstream.

5. Discuss one implication of microplastics reaching the sea.

Try it: litter on our beaches

Litter Intelligence volunteers count every item of litter in marked areas of beach. The table gives average items per 1000 m² by region.

Region	Average litter items per 1000 m²
Wellington	558
Auckland	416
Hawke's Bay	317
Canterbury	275
Bay of Plenty	104
Gisborne	74
West Coast	27

6. How many times more litter per 1000 m² did Wellington's surveyed beaches have than the West Coast's?

7. Suggest one reason for the difference.

8. Paper and wood are only 4.5% of items, while plastic and foamed plastic are 74.9%. Explain why plastic builds up on beaches more than paper and wood.

Fix the mistake

9. Correct this statement: "The West Coast has the most erosion, so it has the worst human-induced erosion."

10. Correct this statement: "Nitrate gets into rivers mainly by fertiliser washing off the paddock surface in rain."

11. Correct this statement: "Listing more effects is how you get Excellence."

12. Correct this statement: "Plastic in the sea breaks down and disappears after a few years."