Environmental effects of fertilizers

Over-application of chemical fertilizers, or application of fertilizers at a time when the ground is flooded with water can lead to surface run-off (this happens particularly when phosphorus is applied).
Besides, excess nutrients – especially nitrates – may leach out of the soil into groundwater, streams, rivers and lakes, making their water unfit for consumption or increasing the growth of algae, which can suffocate entire aquatic ecosystems.
The problem of over-fertilization is mainly associated with the use of artificial fertilizers, because of the massive quantities applied and the destructive nature of their chemical components on soil structures.
For these reasons a knowledge of the nutrient content of the soil should be carefully balanced with the application of inorganic fertilizers.
It is also possible to over-apply organic fertilizers. However, their nutrient content, their solubility, and their release rates are usually much lower than those of chemical fertilizers.

ACTIVITIES

1 *Decide if the following statements are true or false, then correct the false ones.*

1	Surface run-off can happen when fertilizers are applied to the soil in great quantities.	T ☐	F ☐
2	Nitrates can pollute the air.	T ☐	F ☐
3	Algae foster the growth of a healthy ecosystem.	T ☐	F ☐
4	The chemical components of artificial fertilizers alter the soil structure.	T ☐	F ☐
5	Over-application of organic fertilizers is not harmful.	T ☐	F ☐