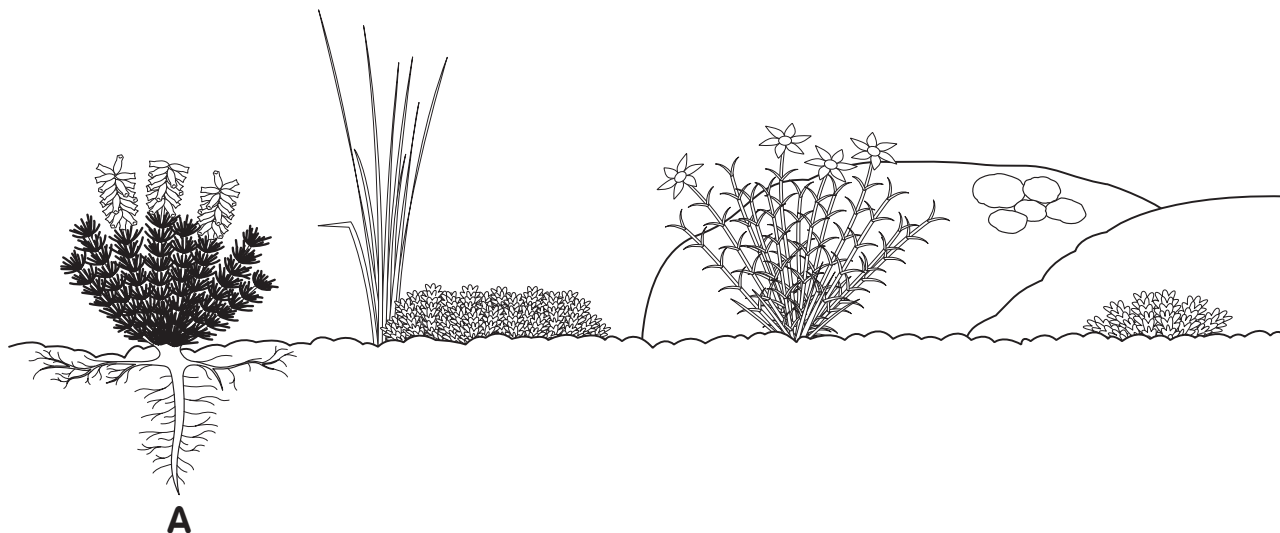


Mountain plants

Alpine plants live in the harshest conditions of all. They have many features that help them to survive.



Q1. The diagram above shows an alpine plant with a deep root (marked **A**). What is this kind of root called?

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Q2. Draw on the diagram above what you think the roots look like for the other plants.

Q3. Why do alpine plants have small, tough leaves?

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Q4. The growing season is very short where alpine plants grow. Give two examples of how plants make the most of the short season.

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Q5. Alpine plants are usually small and hug the ground, growing between rocks and boulders. Why is this?

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Answers

1. Tap root (designed to reach water in rocky ground, it also acts as an anchor in high winds).

2. Students should draw roots similar to A.

3. To help hold water against the drying effect of strong winds.

4. Flowers bloom early in spring so seeds can set in the short summer.

Many plants are evergreen and so do not have to spend time growing a new set of leaves.

Many are perennials and so do not have to grow from seed.

Many flower while still covered in snow so they will have pollen ready for insects as soon as the snow melts.

5. Low height keeps plants out of strong winds and allows them to benefit from the warmer microclimate away from windchill.

Notes

There are many alpine plants on sale in garden centres and so it is possible to bring examples of these plants into the classroom.

This is also a good subject for cross-curricular studies. The Science syllabus contains a section called “Making plants grow well”.

Students may find it surprising to learn that alpine plants will not grow well in warm conditions and with deep, fertile soils. It could be useful to explain that adaptation for one environment may mean that plants will not be able to thrive in another (even if it is apparently better). For example, many alpine plants are not lime-tolerant, a property of many fertile soils.