CLIMATE SUPERHEROES

Investigating the salt tolerance of pea plants

Overview:

You are part of a university science research team investigating the salt tolerance of pea plants.
You will investigate how well pea plants grow in water contaminated with salt.

You will use your evidence to advise farmers about the salt tolerance of pea plants.

To make sure the results you get are repeatable and reproducible, you must follow the method carefully.

Method:

- Your lead researcher will tell you which strengths of solution to use when you set up your investigation.
- Before you start, label your beakers with the strength of each solution you have been asked to set up.
- Pour 200 ml of the first solution into a beaker. (The volume marks on a beaker are only approximate but are accurate enough for this investigation)
- Place three germinating seeds in the holes in the foam disc.
- Float the disc in the beaker so that the root of each plant is in solution and the shoot is above the disc.
- Repeat for the other solutions you have been asked to set up.

Everyone in the research group will now leave their pea plants to grow for 14 days. Whilst they are growing:

- Observe and record their appearance including root development and the height of the pea plants in each beaker every 2-3 days.
- Check the water level in the beaker every 2-3 days. If the level has dropped, top it back up to the 200 ml mark with FRESH water from the tap. Take care not to overfill.

After 14 days:
- Observe and record the appearance of the pea plants including root development and their height.
- For one of your beakers, snip each pea plant off using scissors where the stem of the plant meets the roots. Find the mass of the three pea plants together and record the total mass.
- Now record the mass of each pea plant separately to check if there are big differences in growth.
- Repeat this for the pea plants from your other beakers.

FARMVENTION

NFU EDUCATION

Safety:

- Mop up any spills straight away.
- Keep all equipment away from the edge of the bench

Results:

Use this space to draw a table to record your results: