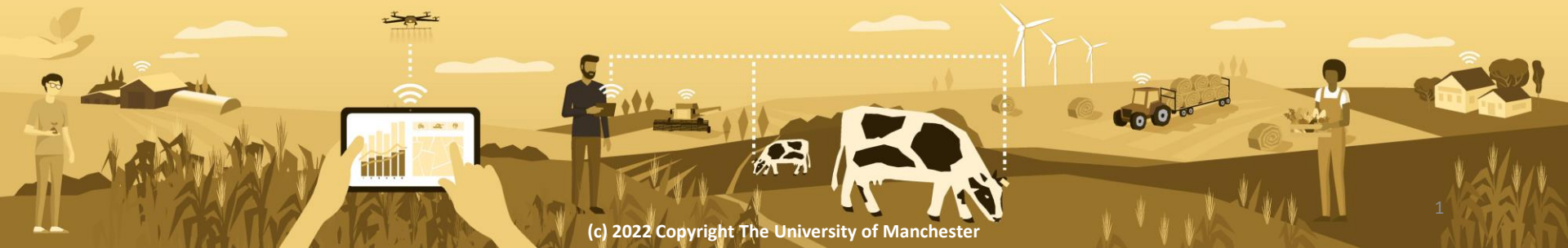




SESSION 2

Do farmers face problems with soil quality?



Listen & Match

Spraying
artificial
fertilisers

Spraying
natural
fertilisers

Soil compaction

Ploughing



1

My soil becomes too compacted.

2

My soil needs extra nutrients to grow crops.

3

I know too much ploughing can damage the environment.



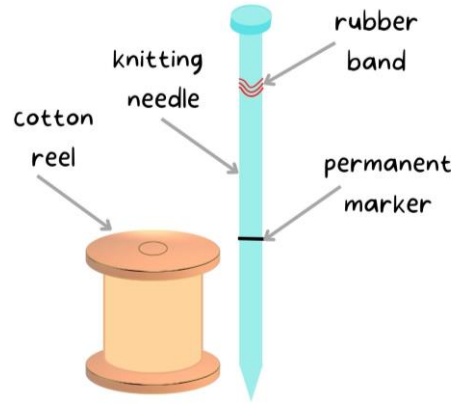
What did you find on your soil trail?

What is the soil like around our school?

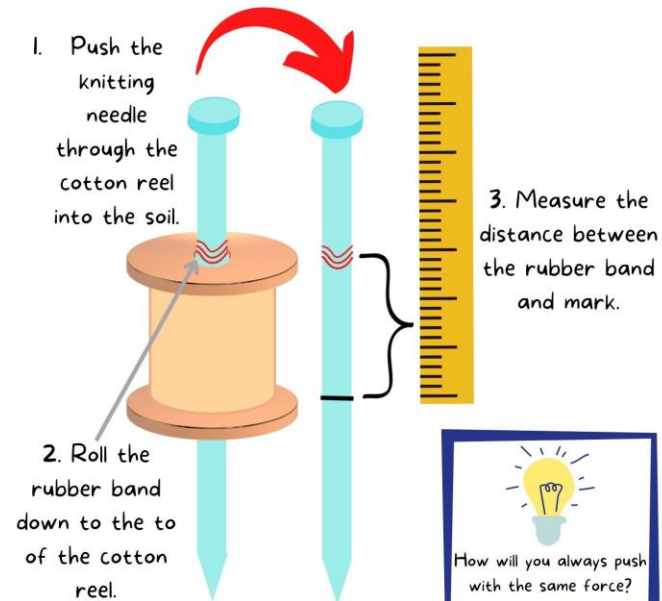
Where is it most compact? Why do you think that is?

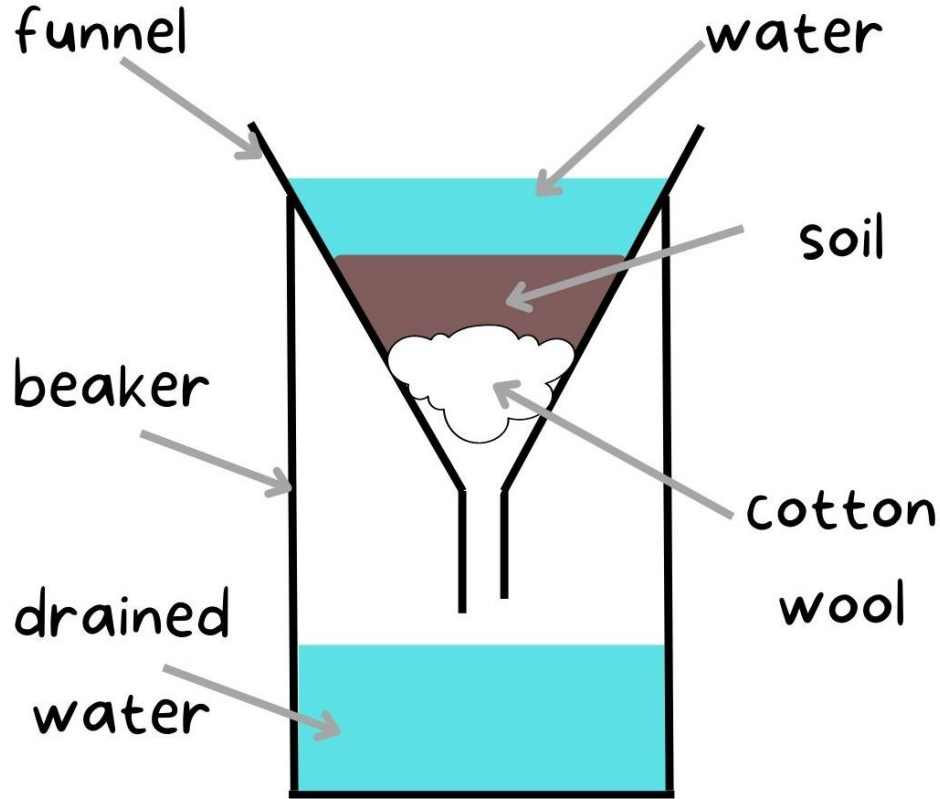
Where is the soil loose? Why do you think that is?

A Simple Penetrometer



Measure soil compaction





How does compaction of soil affect the time it takes for water to drain through it?

- What variable will we change? How will we change it?
- What variable will we measure to compare the soils? What equipment will we use?
- What variables will we need to keep the same so that they don't affect our results?

Have you found a problem to solve?



What conclusions have you drawn?

What link is there between what you've found out and what happens with machinery on arable farms?

What problem have you found that an agri-engineer can solve?

Scientists in China carried out a comparative test to find out the effect of soil compaction on soybean seedlings.

Which of these seedlings do you think grew in soil with no, moderate and high compaction?





Today we have been working like an engineering by **asking questions** to better understand the problems that farmers face with efficiency and sustainability.

Some of our questions have led to science enquiries where we have **worked scientifically** to gather evidence to answer them.



SOIL DEFENDERS

