

Tractors and Harvesting

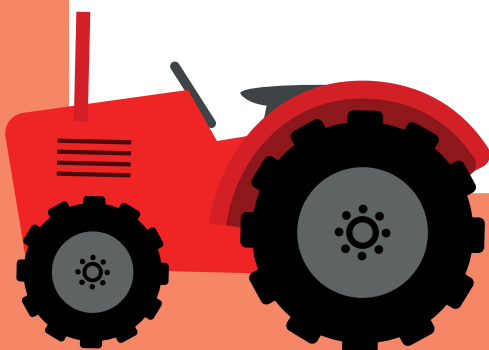
Modelling investigation

Farm tractors are designed to work on soft and uneven ground. Even so, tractors can become stuck in mud.

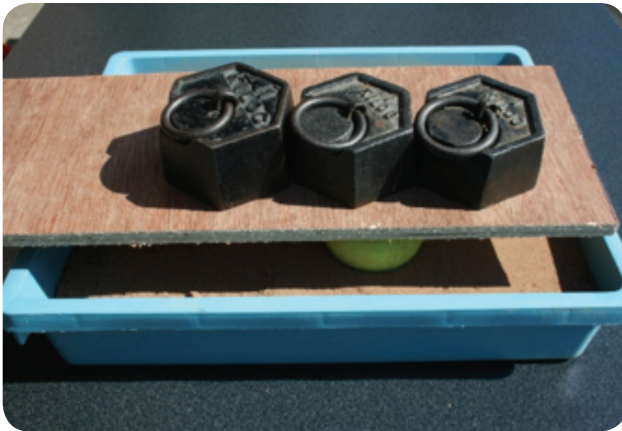


- Have you ever noticed that tractors have large wheels?
- Have you ever wondered why?

In this investigation, you will use a ball to model a tractor tyre, sand in a tray to model soft ground and weights to model the weight of a tractor.



Initial investigation



- Smooth and level your sand by using a 30cm ruler;
- Put a tennis ball at one end of the tray;
- Balance your board on the ball keeping it steady with your hand;
- Place three one-kilogram weights on the board; and
- Slowly pull the board and so the ball rolls through the sand.

The main investigation



- Observe the track left by the ball; and
- Can you think of a good way to measure how deep the track is?

- You will now work in your group to think of a question to investigate using similar equipment;
- Once you have thought of a question, plan your investigation together;
- Carry out your investigation, gathering and recording observations and measurements; and
- Use your observations and measurements to write a letter or create a presentation to inform tractor designers about the importance of tractor weight and wheel size.

