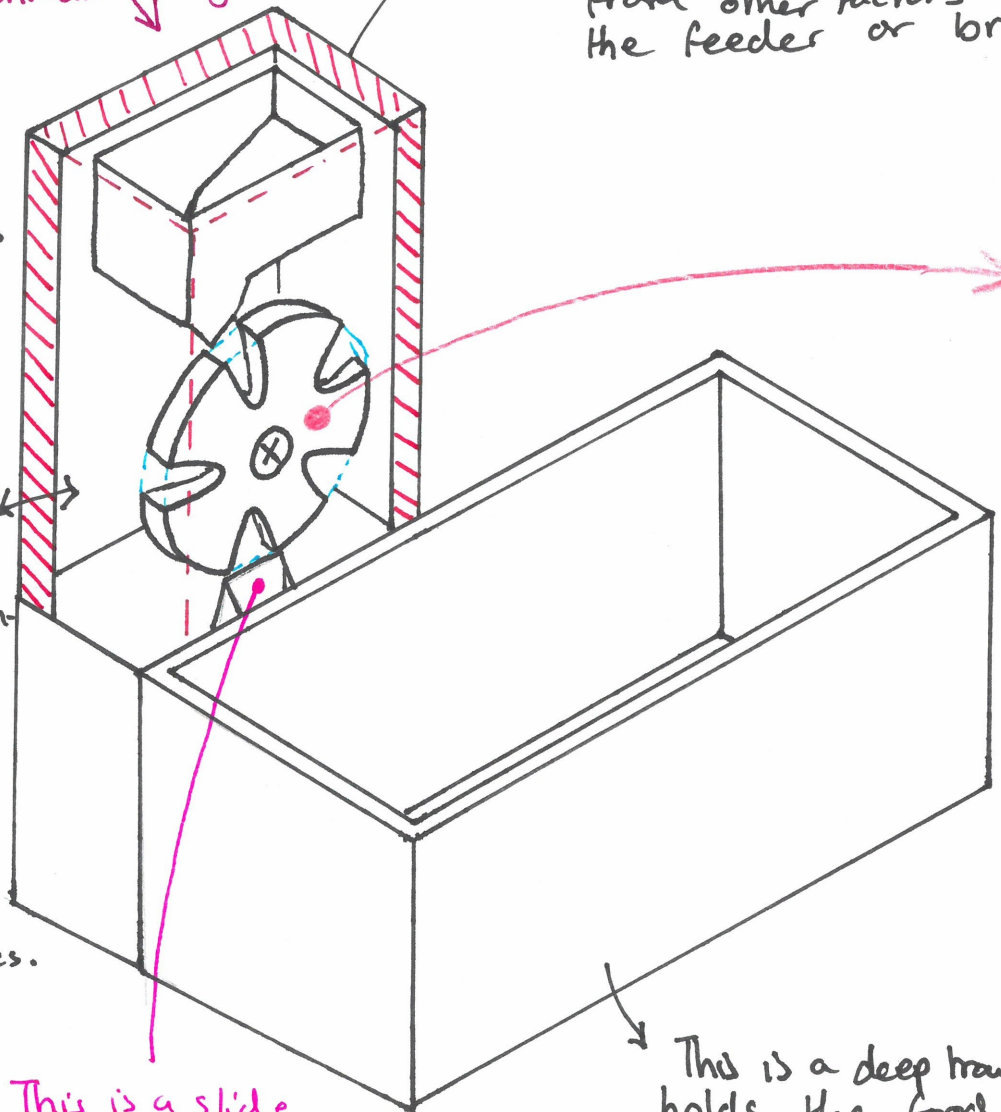


Automatic Food Dispenser

A lid will cover the whole dispenser case. This will make it water tight and prevent things such as animals getting to the food.

The main structure of this automatic Sheep feeder is made from stainless steel. This allows it to be outside without being corroded by water. Stainless steel being strong, it should also be able to withstand erosion from other factors that could erode the feeder or break it.

This cross-sectional drawing shows the inside of the casing that holds the electronic system and automatic feeder. It shows the casing is made of stainless steel that has been made into a water tight case. This prevents water getting to the food and electronics.

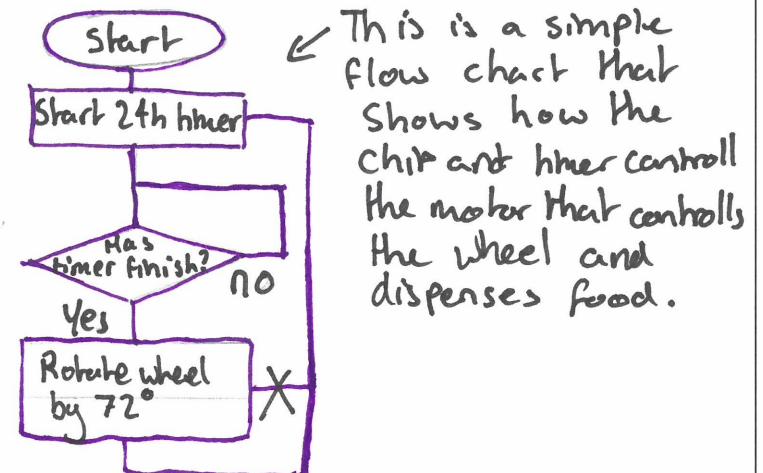
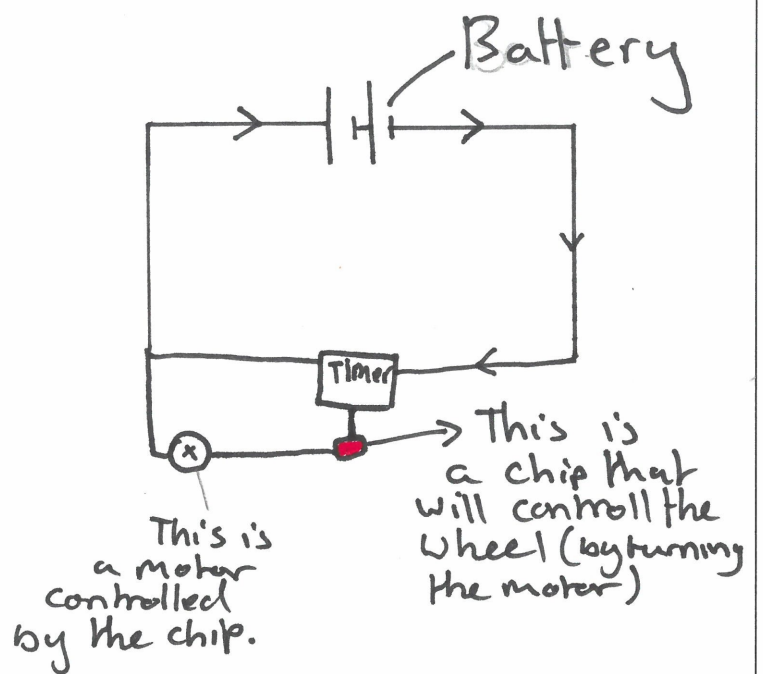


This is a slide that directs the food into the feeding trough.

This is a deep trough that holds the food after it has been dispensed. It being deep, allows for it to potentially be pre-stocked with food for the sheep to eat.

This is the main feeder. It dispenses 2kg of food every 24 hours. It can be filled with 10kg at a time and will be loaded every 24 hours with 2kg of food in a capsule by the funnel. When it has been 24 hours, it will rotate by 72° and this will cause one of the capsules to drop its load of food down the funnel at the bottom and into the trough.

The blue around the food dispenser represents a seal created by a cylinder of stainless steel that encloses the feeder. It leaves two holes though. One for filling capsules with food and one for emptying the capsule into the food trough.



This answer is clearly communicated, and the method of pellet delivery is clever and simple. However, the scale of the device is not thought through: if the top storage container for the machine is designed to hold 100kg of pellets then the size of the trough would be too big for sheep to feed from! Many other applicants who answered this question failed to consider scale.

It is a shame that the applicant did not provide details of the whole of the workings of the machine: i.e., how is the central wheel mounted? How is it rotated exactly 72 degrees by the motor? How is the motor connected to the central wheel? Why isn't the wind turbine included in the circuit diagram?

Name: _____

School: _____

Section
A or B