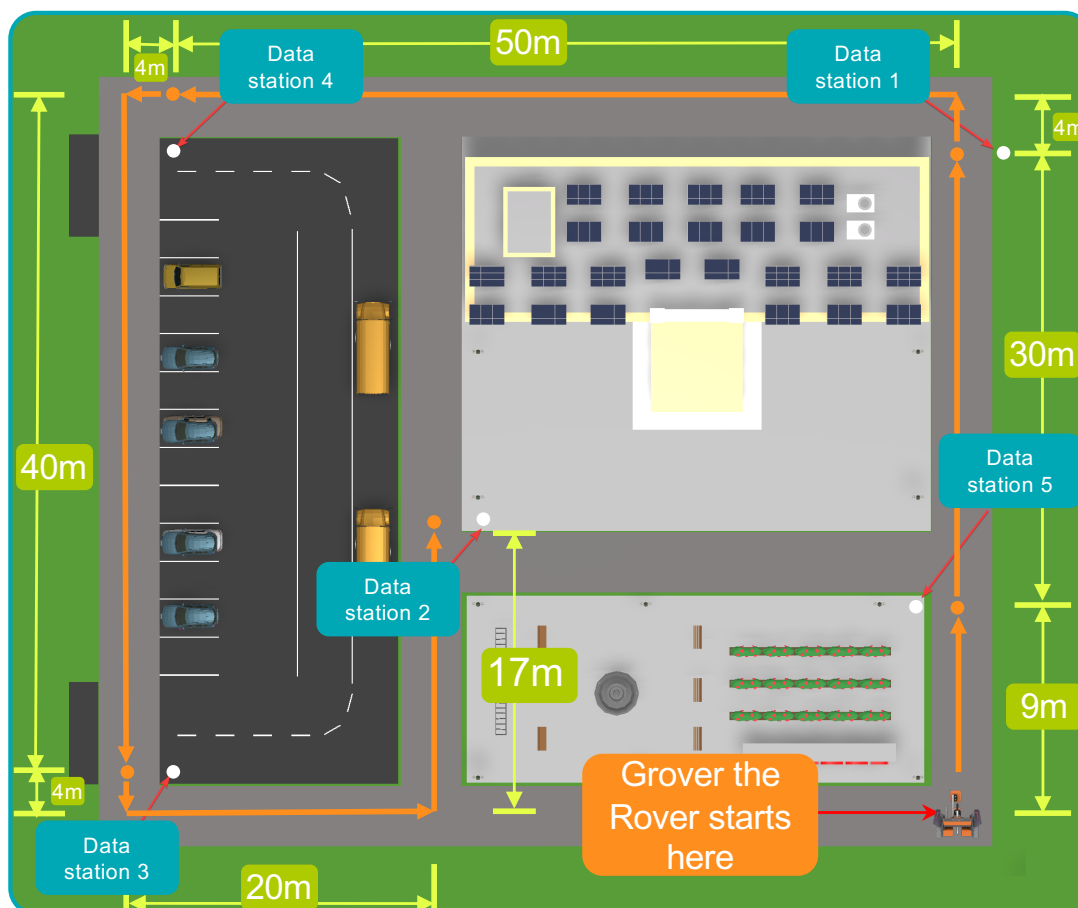


Pre-Session 1 challenge – design a route for Grover the Rover to drive around the school

Below is the aerial view of the school where Grover the Rover is collecting data. You are going to use VEXcode VR block code to program her (it's a lot like Scratch if you've used that before).

You can see distances e.g. 9 metres straight ahead takes Grover to data station number 5. On the next page, can you design the code we will need to get her around the school as shown in this picture?



What steps will the Grover the Rover need to follow to stop at each of the data stations? (marked with white circles with a blue label). Use the table on the next page to write it down - the first steps have been done for you! Use instructions like 'drive forward 9m', 'turn left 90 degrees' and 'collect data'.

Use this table to design the steps for Grover, matching the route already planned out in the map

Step no.	Instruction	Step no.	Instruction
1	Drive forward 9m	10	
2	Collect data	11	
3	Drive forward _____m	12	Collect data
4	Collect data	13	
5	_____ 60m	14	
6	Turn left ____ degrees	15	
7		16	
8	Collect data	17	
9		18	Collect data

Use this table to design a different route for Grover the Rover if you have time

Step no.	Instruction	Step no.	Instruction
1		10	
2		11	
3		12	
4		13	
5		14	
6		15	
7		16	
8		17	
9		18	

When it's time, the Session 1 Challenge will be to write the program using **your first design** above, and test it out ...
(can you spot the 'intentional' error with the units of measure!)

To run the program, we use the sliders below to allow us to input values into the virtual school environment, to set the data to approximately match a school – what values would you choose for your school?

We usually recommend:

- setting 1 (the first spot on the slider) or
- setting 2 (the next one along)



Renewable Electricity



= CO₂ avoided

1

Your value ____



Transportation EV
Adoption



= CO₂ avoided

2

Your value ____



Land Use



= CO₂ absorbed

1

Your value ____



Building Efficiency



= CO₂ avoided

2

Your value ____