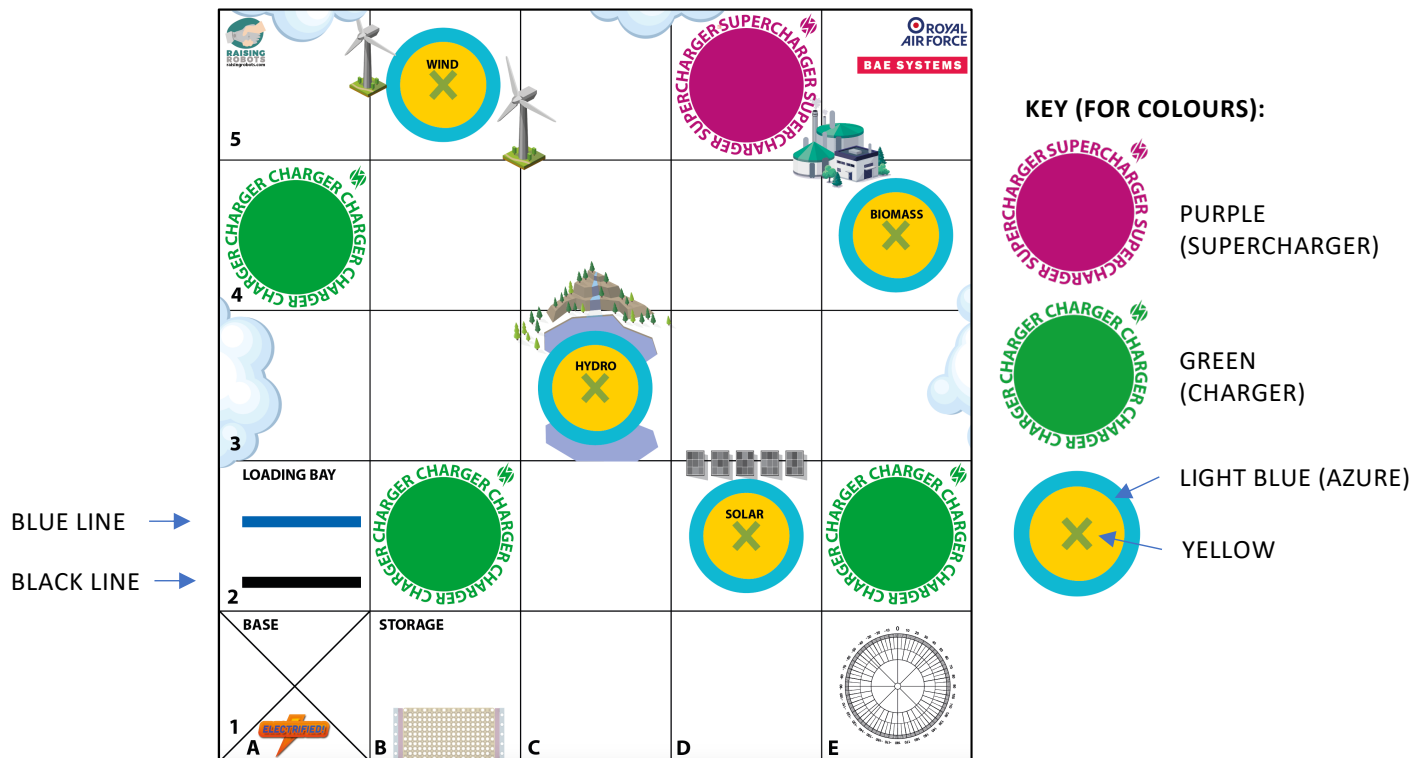


MISSION 3: On the Move!

Deliver and Relocate

Outline of Mission 3:

It's time to code your SPIKE Prime EV to deliver a wind turbine, a biomass container, a hydro turbine and a solar panel to key locations! Your EV will need to be precise and accurate so let's code the SPIKE Prime Colour Sensor to help with this...



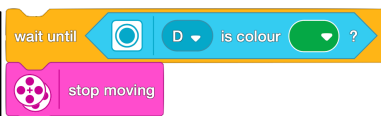
CHALLENGE A

SENSE AND CHARGE UP!

You need to:

Create a program named: **M3A**
STARTING AT BASE (A1), design the program to:
MOVE your EV to **CHARGER (A4)** using the Colour Sensor
WAIT for 3 seconds
Return to BASE (A1)

TIP: These blocks will STOP your EV at GREEN



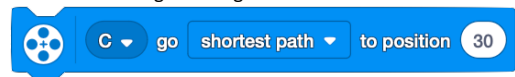
CHALLENGE B

SENSE AND DELIVER!

You need to:

Create a program named: **M3B**
STARTING AT E1 (with the BIOMASS on the EV Lifter), design the program to:
MOVE your EV to **BIOMASS (E4)** (using the Colour Sensor) and deliver the **BIOMASS**
Return to E1

TIP: This block is a good height to release the BIOMASS



Developed in partnership with

CHALLENGE C

HYDRO TURBINE DELIVERY!

You need to:

Create a program named: **M3C**

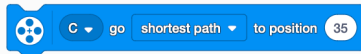
STARTING AT C1 (with the HYDRO TURBINE on the EV Lifter), design the program to:

MOVE your EV to **HYDRO (C3)** using the Colour Sensor

WRITE a message 'DELIVERED'

Return to **(C1)**

TIP: This block is a good height to drop the HYDRO TURBINE



TIP: This block will write "Hello" on the LED



CHALLENGE D

SOLAR PICKUP!

You need to:

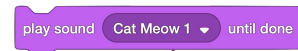
Create a program named: **M3D**

STARTING AT A1, design the program to:

MOVE your EV using the Colour Sensor to the **BLACK LINE** in (A2) to pick up the **SOLAR PANEL**. **PLAY** a **SOUND** to confirm collection.

Deliver the **SOLAR PANEL** to **SOLAR (D2)** using the Colour Sensor. **PLAY** a **SOUND** to confirm delivery.

Return to **BASE (A1)**.



TIP: This block will allow you to play a recorded sound.



CHALLENGE E

THE TRICKY TURBINE...

You need to:

Create a program named: **M3E**

STARTING AT B1, design the program to:

MOVE your EV using the Colour Sensor to the **BLACK LINE** in (A2) to pick up the **WIND TURBINE**.

MOVE your EV to **WIND (B5)**.

Carefully deliver the **WIND TURBINE** to **B5** using the Colour Sensor.

Return to **BASE (A1)**.

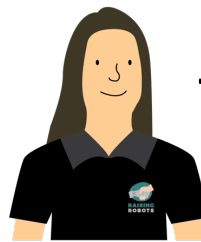
TIP: There is a block that might help you carry heavy objects BUT you will have to install it first. On your programming screen click on:



You can then tick **More Motors**. You will now see you have **MORE MOTOR** blocks available to use, including this one:



This block will hold the motor in position – it's really useful when lifting heavy objects!



TINKERING TIME...

After completing Challenges A-E successfully, take time to tinker!

Why not:

- Program your EV to pick up the HYDRO TURBINE from A2 using the Colour Sensor. Then deliver it to HYDRO (C3) - play a SOUND and display a MESSAGE on arrival?
- Collect BIOMASS from E4 using the Colour Sensor, WAIT at a CHARGER. Return to B1 and store the BIOMASS on the STORAGE shelf (B1). Play a SOUND and display a MESSAGE?