

CODING SUCCESS 3

Teacher Guide: How to set up the Mission Mat

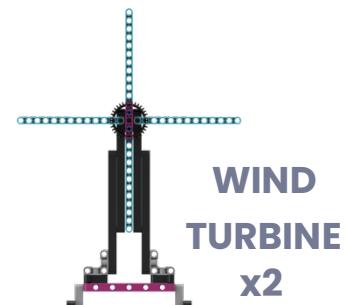
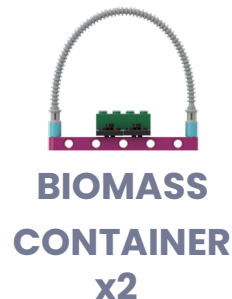
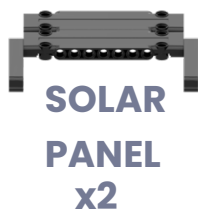
In Mission 2, pupils will be introduced to the Mission Mat which shows the location of the SOLAR farm (D2), the WIND farm (B5), the BIOMASS plant (E4) and the HYDRO electric power station (C3). Marked on the mat is the BASE (A1), the LOADING BAY (A2), the STORAGE zone (B1) and a protractor (E1) to support pupils with coding turns and movement. 3 green charging points and 1 magenta supercharging point are also marked on the mat.

In Missions 2 - 4, pupils will learn to program a SPIKE™ Prime Electric Vehicle (EV) to explore the area and deliver or relocate 'green' infrastructure in a series of Mission Challenges.



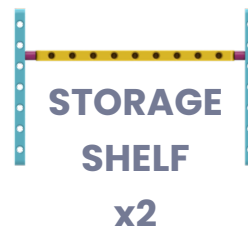
The 'green' infrastructure is represented by LEGO models which can be built using the parts left over after building the EV from 1 box of SPIKE Prime. This means that if you are using 2 SPIKE Prime sets, you can build 2 of each of the LEGO models for use by multiple students.

The 'green' infrastructure:



The storage:

This STORAGE shelf (B1) will be used in Mission 3 Intermediate and Advanced. But it's nice for Beginner pupils to use it when they are 'tinkering' too!



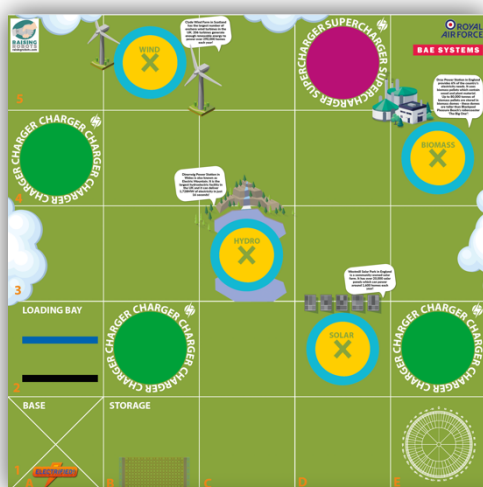
The build guides for the 'green' infrastructure and storage can be found in:
[Essential Resources/Build Guides/MatElements_BuildGuide.pdf](#)

How to set up the Mission Mat:

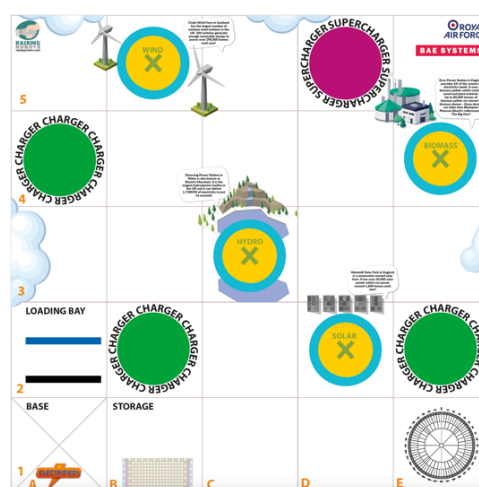
You can choose to use 1 or 2 mats in your Coding Success 3 mission sessions, with one or more EVs running on each mat. The Mission Mat can be set up in 3 different ways...

OPTION 1: You can print a mat in colour

There are two choices here. There is a **FULL COLOUR** version that will print in tiles which you can then stick together. But there is also a coloured mat with a **WHITE BACKGROUND** that you can also print and stick together (but it will use less ink!) For each of these options, you need to print in tiles on your printer (as it's pretty big!) It will vary from printer to printer, but if you are able to select 'Print Poster' and then select 'Cut Marks' and 'Labels' it will help you to put the tiles together. After printing, match up the tiles carefully, following the number sequence. Then trim off the excess paper margins and glue or tape the tiles together carefully to replicate the Mission Mat:



The **FULL COLOUR** printable mat can be found in:
Essential Resources/Mission Mat/[Mat_FullColour.pdf](#)



The **BACKGROUND WHITE** printable mat
can be found in:
Essential Resources/Mission Mat/[Mat_NoColouredBackground.pdf](#)

NOTE: THE 'SQUARES' ARE 25CM X 25CM

OPTION 2: You can create the mat

Use large sheets of white flipchart paper, white sugar paper or white display backing paper. Measure out and draw on a 5x5 grid with each square measuring 25cmx25cm. Mark the key locations and grid references. The images in A2, A4, B2, B5, C3, D2, D5, E1, E2 and E4 will need printing off in colour on A4 plain paper (the colour sensor will be coded to respond to the colours on these tiles). Stick these tiles down carefully onto your Mission Mat (as shown above).

The **COLOURED MAT DISCS** can be found in: Essential Resources/Mission Mat/[Mat_Discs.pdf](#)

OPTION 3: You can create the grid

Use tape to mark out the 5x5 grid with each square measuring 25cmx25cm, label the key locations and grid references and print and stick down the **COLOURED MAT DISCS** referenced above. Be aware that the colour sensor might detect the colour of the floor!

Have fun creating your Mission Mat!