U3-1.4a Change it up: Edison the designer

Lots of things that run using computer programs have repeating patterns. There are also many programs that have patterns that repeat inside of other patterns. These programs often use nested loops to repeat whole sets of commands inside a program.

What to do

Try using loops to write a program for your robot which makes Edison drive a pattern. If that design has a pattern with a repeating pattern inside of it, try using a nested loop.

Look at activity sheet U3-7 and choose one of the designs to use. For this activity, you will need to create a workspace to test your program. Make a workspace that is large enough to test your program with Edison. You could draw the pattern onto a large sheet of paper or mark it out using dark coloured tape on the floor. Copy out the design onto your workspace. Then write a program in EdScratch that gets Edison to drive that design.

 Hint!

Stuck? Try breaking down the pattern into smaller sections and writing code to get Edison to drive each part of the pattern. Link all of the chunks together to get Edison to drive the whole pattern. This can help you to find places where the code repeats. Make your program more efficient by replacing repeating code with loops.

If there is a pattern inside a pattern, be sure to try a nested loop!

Mini challenge!

If you want, you can also design your own pattern to use for this activity. Make sure your design has a pattern repeating inside another pattern. Test your design by writing a program that gets Edison to drive your pattern.

Does your pattern need nested loops?