

Digital Technologies Content Descriptor

ACTDIP019: Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition)

NSW Syllabus Outcomes

MA3-1WM - describes + represents mathematical situations in a variety of ways.

Title and Introduction which way, Robot?

Metalanguage position, location, route, grid, direction, ... iterations, branching, compass, rotations, degrees, loops.

Activity Introduce activity: Robot Cleaner.
program robotic 'vacuum' (Edison, NXT), to ~~through~~ efficiently clean every part of a simple maze (ie go over all parts), then go back to 'charger' (icon of ⚡)
Frame as 'challenge'. teach group gets resources + time, then 'present'.

Assessment and Reporting

- Time runs. Quietest most efficient!
- Monitor group participation.

Extension

Express/^{record} path using mathematical language

Differentiation
less able: manually push robot (NXT)
then enter data.

or Goals
- record in degrees

Resources 'Bots' 'Maze'