## Engineering Science @ Forfar Academy Flowcharts

## Challenge \#3-Toy Train

A toy shop owner has asked for your assistance to develop a program which will carry out the sequence shown on the right.

## Pin Out Diagram:

| Input connection | Pin | Output connection |
| :---: | :---: | :---: |
|  | 7 | train motor |
|  | 6 | points |
|  | 5 | green signal |
|  | 4 | red signal |
|  | 3 |  |
|  | 2 |  |
|  | 1 |  |
|  | 0 |  |

## Flowchart:

## Start

| Step | Process |
| :---: | :--- |
| 1 | Switch the green signal on |
| 2 | Switch the train on for 30seconds |
| 3 | Stop the train |
| 4 | Switch the green signal off and <br> the red signal on |
| 5 | Switch the points on |
| 6 | Switch the train on for 30 seconds |
| 7 | Stop the train |
| 8 | Switch the points off |
| 9 | Switch the red signal off and the <br> green signal on |
| 10 | Jump back to step 2 |

Marks Gained:

## Student comments:

## Teacher comments:

