

# STEM Showdown

An Adelaide University, School of Education  
STEMpire program

## Mystery Message

**Name:** \_\_\_\_\_

*The STEM Showdown is a series of STEM challenges to solve by the end of the season. You can complete the tasks individually or in small groups (up to 3 people). Make sure you write all the names of the people in your group above. The student with the most tasks completed over the season will be crowned the Adelaide University STEM Showdown Champion. Good Luck.*

### Mystery Message

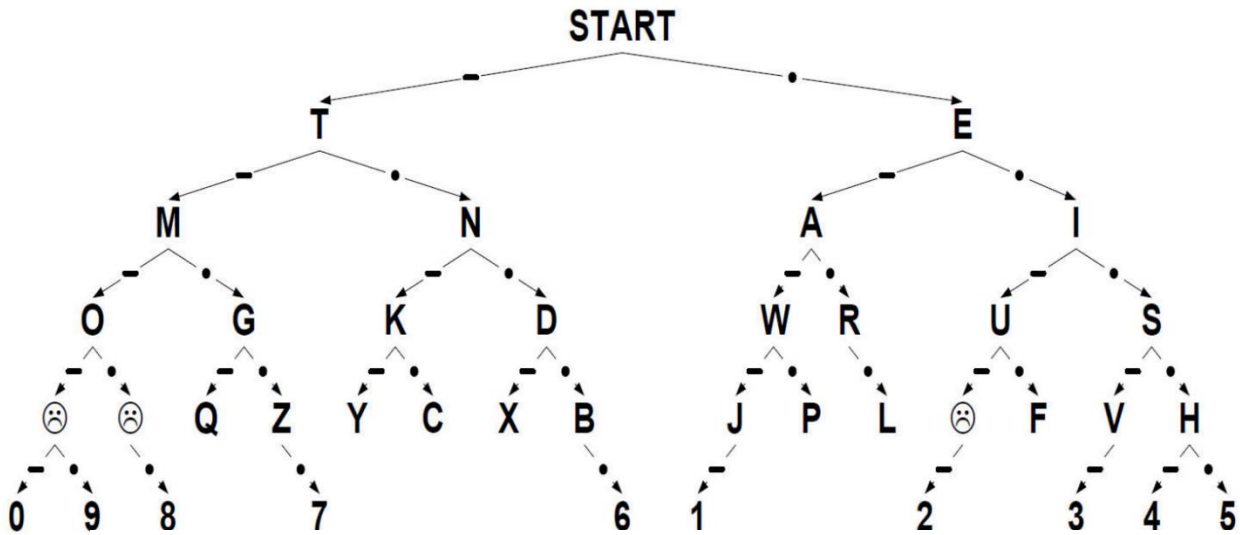
The astronauts on the International Space Station have lost their standard communication channels. They have sent a Morse Code message and you need to translate it to help rescue them.

### Your Task

- Listen to the message
- Write down the dots and dashes

- Use the tables and charts on the next page to decode the message
- If you get stuck you can access help
- Once you have solved the message get your sheet signed

### The Decoded Message

A	..	J	.....	S	...	1	.....
B	....	K	---	T	-	2	.....
C	....	L	....	U	...	3	....-
D	---	M	--	V	....	4	....-
E	.	N	--	W	---	5	....
F	....	O	---	X	....	6	.....
G	---	P	....	Y	....	7	.....
H	....	Q	....	Z	....	8	.....
I	..	R	...	0	.....	9	.....

STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)

### Extension task

Write a short Morse Code message and get someone else to work it out

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Work out a way to message numbers using only 3 coloured discs as signals (no talking allowed). What extra signals might you need to get your number message across?

Number	Signal (red, blue and yellow lights)
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

Send your favourite number using this code to your friend. Did they guess it? \_\_\_\_\_

Now can you work out a code system using the three colours for the entire alphabet?

For each extension task you complete get the umpire to sign the sheet below.

STEM Showdown Umpire Comments	Completed (STEM Showdown Umpire to sign)
Own Morse Code message created	
Morse Code message solved by someone else	
Coloured code system for numbers 0-9	
Coloured code system for the alphabet (A-Z)	

**Make sure you hand up your signed sheet to the umpire at the end of the session to have your points allocated to the leaderboard.**



Red



Blue



Yellow