

## Teacher Notes: Design your own safe platform

### Activity Aim:

This activity promotes the use of Excel spreadsheets from the Technologies Curriculum, Location (grid references) from the Mathematics Curriculum and the notions of safety on platforms. The activity is a modified version of the Battleship game. However, students seek the location of safety features on their opponent's platform. The Battleship concept of 'blowing up' the opponent's ship is not a part of this game – instead, the players look for safety messages on a platform.



### Victorian Curriculum Alignment

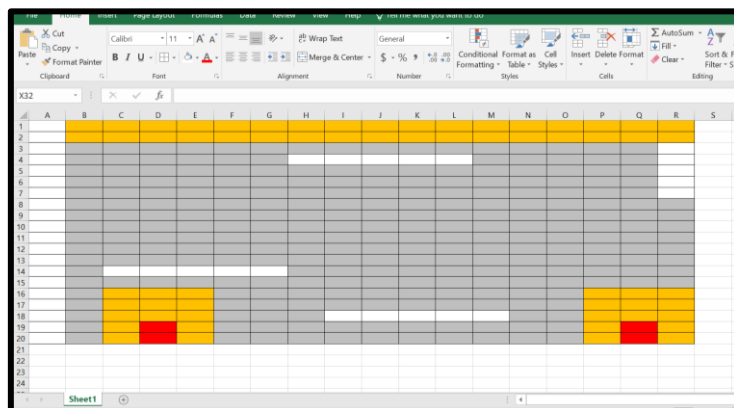
Mathematics (Levels 5)	
Location and Transformation	Use a grid reference system to describe locations. Describe routes using landmarks and directional language (VCMMG199)
Technologies (Levels 5 and 6)	
Data and Information	Acquire, store and validate different types of data and use a range of software to interpret and visualise data to create information (VCDTDI028)
Critical and Creative Thinking (Levels 5 and 6)	
Questions and Possibilities	Identify and form links and patterns from multiple information sources to generate non-routine ideas and possibilities (VCCCTQ023)
Meta-Cognition	Investigate thinking processes using visual models and language strategies (VCCCTM029)

### Resources:

- 1 computer/laptop per player that has Excel or similar installed
- Class resource: Design your own safe platform instruction sheet (created to illustrate Excel spreadsheet)

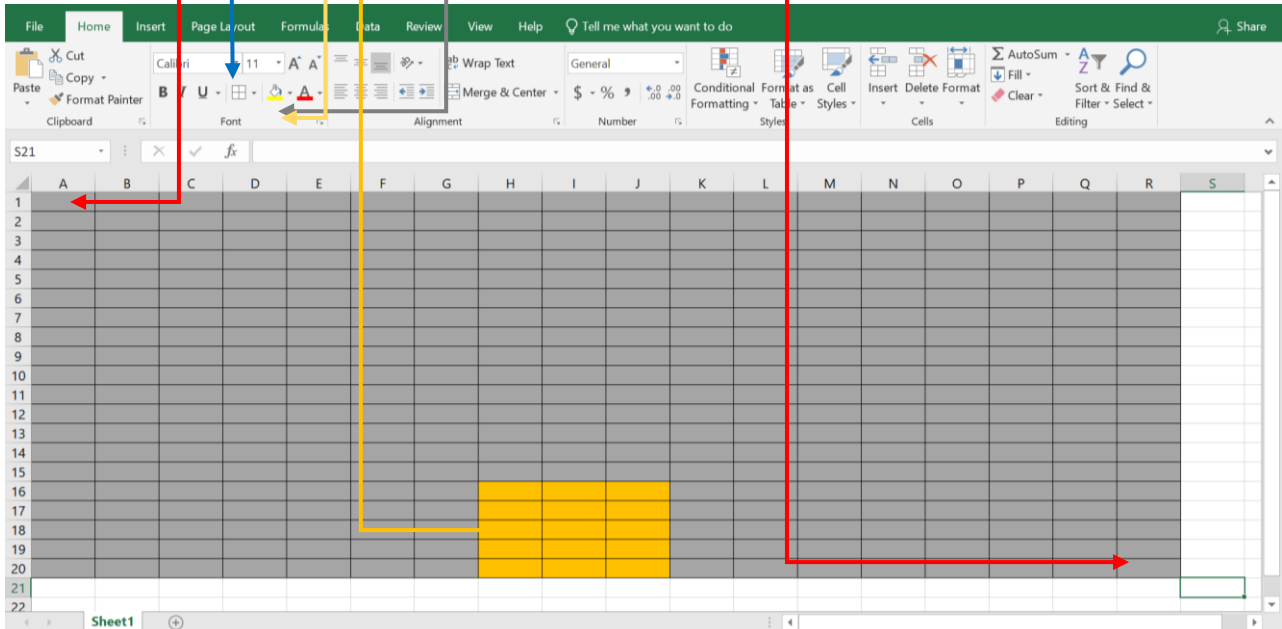
### Tuning-in Activity: (10 minutes)

- Have students work in pairs, each with a computer/laptop (although a small group of 4 is OK if computer/laptops are limited – pairs play against pairs)
- Depending on student spreadsheet skills and literacy level, familiarise students with Excel and the game rules. These are provided on the student sheet as well as below. A designed platform might look like the following. For shorter game-time, the size (total number of cells) of the platform can be changed or adjusted.



# Instructions:

1. Open Excel
2. Create a *platform* on your screen – this is where you will locate your safety features
  - Highlight Row **A1 through R 20** (your platform)
  - Turn on **All borders**
  - Fill to a grey shade for the platform surface
  - Place your **safety features (change the colour to “yellow”** on your platform – you can only place safety features vertically and horizontally not diagonally. Information for safety features is on next page.



- Safety feature table – The example on the platform above is a 15 cell (3 column x 5 row) safety zone. You can put the safety zone where you want it – this is only an example location. You add your safety features by changing the cell fill colour and filling the correct number of cells)

Safety Features	Number of safety features	Number of cells	Cell block	Fill colour
Yellow line	1	36	18 x 2	Yellow
Safety zone	2	15 each	3 x 5	Yellow
Safety signs	4	5 each	5 x 1 or 1 x 5	White
Safety button	2	2 each	1 x 2	Red
Safety fence	1	20	1 x 20	White

Safety Features	What do these safety features do?
Yellow line	Standing behind the yellow line helps you to be safe as your train arrives or trains go past.
Safety zone	Safety zones allow you to press the emergency button if you need help and to be monitored on video camera in a well-lit place.
Safety signs	Provide important warnings and messages to help keep you safe.
Safety button	Green and red buttons. Pressing the red button will call the emergency operator.
Safety fence	A safety fence protects commuters from any danger as they move across the area.

## Playing the Game

- 1) Two players sit so they do not to see each other’s screens. The idea is to locate all of the safety features on an opponent’s platform.

2) Decide which player will go first.

3) That player calls out the column and row – i.e. “C5”.

4) The opponent looks at their screen and answers “yes found” or “no not found”.

5) On the student’s computer screen, they type **Y** in the cell if you find part of your opponent’s safety feature or an **N** if they did not find part of your opponent’s safety feature. They get a second guess if they locate part of a safety feature. A student cannot have more than 3 guesses in a turn. If, on the 3<sup>rd</sup> guess, they think they know what the safety feature is (for example, a safety sign), they can identify ALL the cells involved by saying “M12 to Q12”. All cells must be correct for the guess to be a “yes, you found a safety sign.”

6) Students take turns to guess locations of safety features on each other’s platforms.

The first player to locate their opponents’ safety features wins the game.

## Lesson Body: (30 minutes)

- Students work on creating their platform and deciding upon the location of their 10 safety features
- Encourage students to follow the correct convention or order for calling a grid reference: columns and rows. In the above instructions, the player correctly calls ‘C5’. A call of ‘5C’ is incorrect. If this has not been explored with the students prior to playing the game, time might be needed to familiarise them: C is for column, R is for row, C is before R in the alphabet.
- Students play the game of guessing and then logically describing safety feature locations on their opponent’s platform.
- This game does not have a time limit; use the ability of students to adopt grid referencing conventions and Excel ability as a guide for time to spend playing.

## Formative Assessment:

The ability of students to use the Excel spreadsheet to record information symbolically, and to use correct grid referencing nomenclature.



**Listen up, look around, be aware**