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**M1 Maths – Fun and Games**
# Walk the Plank

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## Aim

To reinforce the idea of addition and subtraction of positive and negative numbers.

## Procedure



Arrange 7 desks in a line, touching. This is the plank. Place a card on each table with a number on. The numbers should be integers going from −3 at the left end (as viewed by the students) to 3 at the right end.

The boat and safety is at the −3 end. Get a student to stand at that end and look friendly and encouraging. A shark infested sea is at the 3 end. Get another student to stand at that end and look hungry and menacing.

Get a volunteer to be the pirate who is going to walk the plank. Get them to stand on table 0 facing the sea.

Click on the xlsx link, then download the file, open it and enable editing. Have the Pos sheet showing on the classroom projector. This will instruct the pirate whether to add or subtract and how many. With the cursor in an empty cell, press Del. The display will change at random. If it gives +, then the pirate faces the sea (towards the bigger numbers). If it displays −, they face the boat. Then they move the number of steps (desks) indicated in the direction they are facing. This is repeated until they go past the −3 desk and are safely back in the boat or they go past the 3 desk and are eaten by the shark. Tell the shark not to actually eat the pirate, just pretend.

Once students have the hang of this, change to the Pos & Neg sheet on the spreadsheet. Now the number of steps can be positive or negative. If positive, the pirate walks forwards as before; if negative, s/he walks backwards. So, for example, if the spreadsheet gives − −2, then the pirate faces the boat and takes 2 steps backwards (towards the shark).

Give a bit of a commentary to help the students see how this relates to adding and subtracting positive and negative numbers.

## Tips

The desks make the activity more dramatic, but students standing on desks could be a bit of a safety issue. If you feel there could be an accident, it might be better to lay the numbers out along the floor.