



Translations Lesson Plan

Main focus of activity:

- To introduce the idea Translations using the arrangement of a stage

Learning objectives:

- To be able to interpret co-ordinates
- To be able to describe in words a translation
- To be able to describe a translation using a column vector

Links to curriculum: Links to the maths curriculum are as follows

- Co-ordinates
- Translations
- Column vectors

Activity outline:

The idea here is that we make a real world link with the use of translations. Pupils are asked to describe the translations that would be required for each shape to make the desired stage layout. These instructions can be communicated via the use of a fictional email which the pupils are writing to the stage manager.

Introduction

- Students should work in pairs for this task.
- The problem is brought in to a real life context as the stage blocks have been prepared and delivered to the arena but have just been unloaded and put anywhere.
- Lower ability pupils can describe their translations in words if needed, e.g. "The yellow triangle needs to be moved three co-ordinates to the right and two up". A more able student could be asked to write this in column vector form.
- The fact that is going into an email which will be sent places an emphasis on clear communication of the maths. Something that is a pillar within the new curriculum.

Starter

The starter activity consists of describing translations. Pupils are encouraged to use vector notation if possible Pupils will need to understand the meaning of corresponding points if they are to successfully complete this task, and the starter should highlight any misconceptions.

Main Activity

The main activity is in the prepared resource pack and covers some different assortments of stage layouts. Each stage layout needs to be communicated in the form of an email. There is a link to literacy at this point.

Teachers may feel it prudent to start more able pupils off on harder stage layouts as they will be more challenging. Some of the translations involve moving circles so pupils will need to decide how to do this. Will they use the centre of the circle to create the translation?



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More able pupils are expected to describe the translations using column vectors. In some cases teachers may want to create their own loading area so that the translations require the use of negative numbers even more.

Plenary

Pupils need to reflect on what was simple about the task. They should think about other types of transformations that could have occurred – leading nicely into the next lesson of rotations.