Topic	NC Links: Pupils should be taught to: Geometry						
Day	**Mental/Oral Starter**		**Main Lesson**				**Plenary**	**Assessment**
	Objectives	**Activity**	**Objectives**	**Teaching**	**Activities**	**Key Vocabulary**	**Activity**	
Mon	**L.O. 11x table** **L.O. fluency** 203 x 11 = 764 ÷ 11 = 675 - 289 = 4075+3885=	**TMM** **L.O. To fill in a web**	**L.O. To describe position using coordinates** **Must:** write coordinates within brackets **Should:** read coordinates in the first quadrant **Could:** Identify errors	Introduce children to coordinates for the first time and they describe positions in the first quadrant. They read, write and use pairs of coordinates. Children need to be taught the order in which to read the axes, x axis first, then y axis next. They become familiar with notation within brackets. What are the coordinates for Where would (__ , __) be? How do we know where to mark the point?	Chn write coordinates from a grd (x first, y second) within brackets. The alphabet is plotted on a grid and chn write the coordinates of their name. Chn identify errors and correct them Maths No Problem 4B p155 -158 Worksheet 2	Coordinates x axis Y axis Quadrant Brackets Notation Grid	Which is the x axis? Which is the y axis? In which order do we read the axes? Does it matter in which order we read the axes? How do we know where to mark on the point	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Write the coordinates for the points shown.

✖ (__ , __) ✖ (__ , __)

✖ (__ , __) ✖ (__ , __)

Write out the coordinates that spell your name.

The point is plotted at (7, 3)

Teddy

The point is plotted at (3, 7)

Rosie

Who is correct?
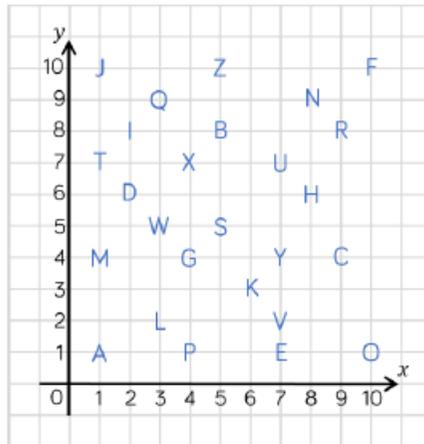What mistake has one of the children made?
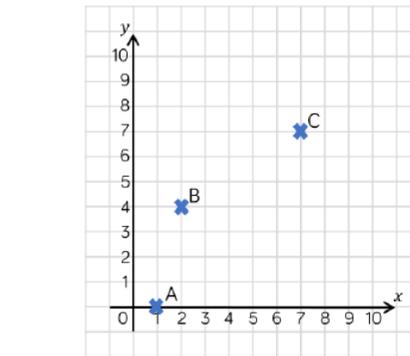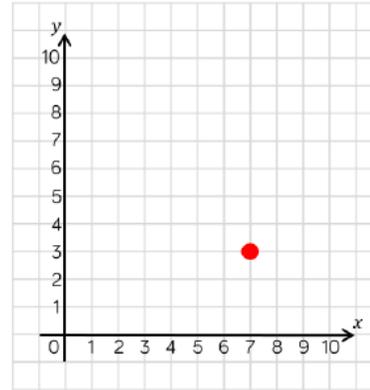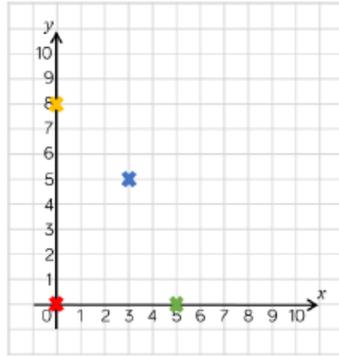
Which clue matches which coordinate?

Clue 1 — My x coordinate is half of my y coordinate.

Clue 2 — My y coordinate is less than my x coordinate.

Clue 3 — Both my coordinates are prime numbers.

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Tues	<u>L.O. 11x table</u> <u>L.O. fluency</u> 317 x 11 = 740 ÷ 11 = 500-178 = 4089+1998 =	TMM <u>L.O.</u>	<u>L.O. To plot coordinates.</u> <u>Must:</u> <u>Should:</u> <u>Could:</u>	Teach children to develop their understanding of coordinates by plotting given points on a 2 D grid. Teachers should be aware that children need to accurately plot points on the grid lines (not between them). Teach chn to read, write and use pairs of coordinates. What are the coordinates of? Where would (__, __) be? Can you show _____ on the grid?	Chn plot points on a grid. Chn create a square from 2 points on a grid. Chn plot 4 points on a grid and identify the shape created. What shapes can be created from a single point by adding 3 more? Maths No Problem 4B p159-160 Worksheet 3	Grid Quadrant Coordinates Plot Points Quadrilaterals	Do we plot our point on the line, or next to the line? How could we use a ruler to help plot points? In which order do we read and plot the coordinates? Does it matter which way we plot the numbers on the axis?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Draw the shapes at the correct points on the grid.
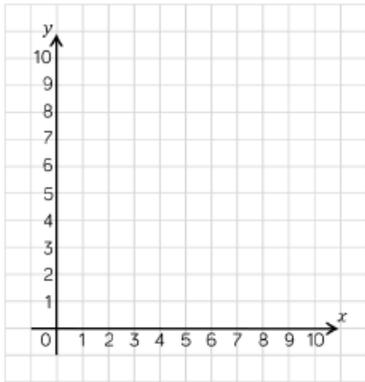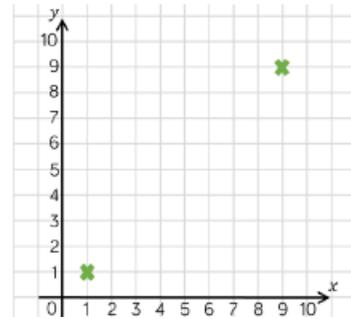

● (7, 8)   ▲ (4, 6)

■ (9, 1)   ⬠ (10, 0)

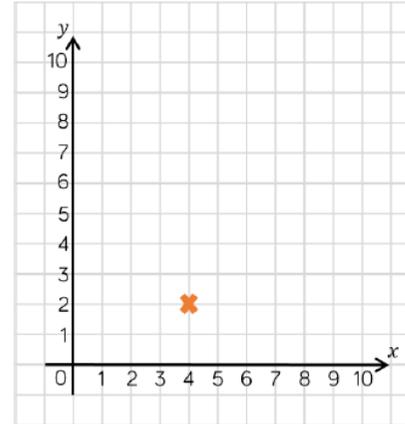Plot two more points to create a square.

Plot these points on a grid.

(2, 4)   (4, 2)   (5, 8)   (7, 6)

What shape has been created?

What shapes could be made by plotting three more points?

When you are plotting a point on a grid it does not matter whether you go up or across first as long as you do one number on each axis.

Amir

Do you agree with Amir?
Convince me.

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Wed	<u>**L.O. 11x table**</u> <u>**L.O. fluency**</u> 5292+3674= 908-699= 511x 11= 376÷11=	**TMM** <u>**L.O. To explain errors**</u>	<u>**L.O. To Move shapes on a grid.**</u> **Must:** translate a point **Should:** translate a shape **Could:** play the translation game accurately.	Teach children to move shapes and points on a coordinate grid following specific directions using language such as: left/right and up/down. Teachers might want to use a small 'object' (e.g. a small cube) to demonstrate the idea of moving a point on a grid. Teach chn to apply their understanding of coordinates when translating by starting with the left/right translation followed by up/down.	Chn follow translations recording the coordinates pre and post move. Chn translate a rectangle, recording the coordinates of all 4 pints Chn play the game based on battleships.	Up Down Left Right Move Coordinates Translation Points	Can you describe the translation? Can you describe the translation in reverse? Why do we go left and right first when describing translations?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Translate A 6 right and 3 down.
Record the coordinates before (__ , __)
and after (__ , __)
Translate B and C 4 left and 3 up.
Record the coordinates before (__ , __)
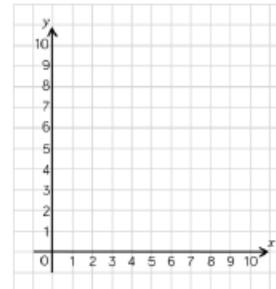and after (__ , __)
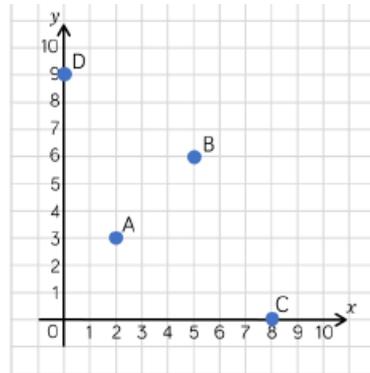
Translate the rectangle 2 left and 3 up.
Write down the coordinates of each
vertex of the rectangle before and after
the translation.
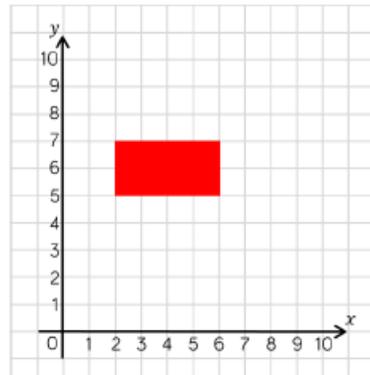
Here is a game to play in pairs:

Each player needs:

 1 small cube

One barrier (e.g. a
mini whiteboard)

The first player places a cube on their
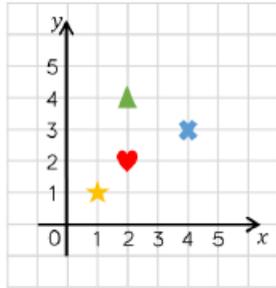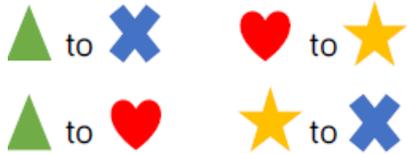grid. They describe the original position
and perform a translation.

The second player listens to the
instructions and performs the same
translation.

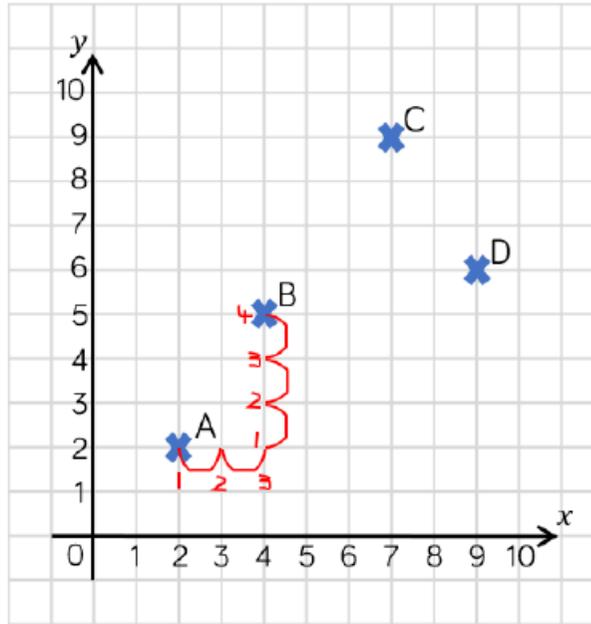They check to see if they have placed
their cube at the same coordinate.

Swap roles and repeat several times.

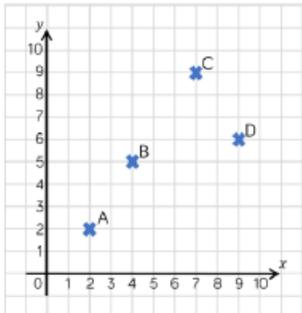| Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	**Activity**	**Objectives**	**Teaching**	**Activities**	**Key Vocabulary**	**Activity**	
Thurs	<u>L.O.</u> <u>**11x table**</u> <u>**L.O. fluency**</u> 369 x 11 = 379 ÷ 11 = 850-234 = 5149+1998 =	TMM <u>**L.O. To work out the values of each shape.**</u>	<u>**L.O. To describe a translation**</u> **Must:** describe translations accurately **Should:** be able to describe the inverse to return to original position **Could:** Solve problems of translation	Teach children to describe the movement of shapes and points on a coordinate grid using specific language such as: left/right and up/down. Sentence stems might be useful. They start with the left/right translation followed by up/down. Teachers should check that children understand the idea of 'corresponding vertices' when describing translation of shapes (e.g. vertex A on the object translates to vertex A on the image).	Chn describe translation of points on a grid. They then pick their own points and describe the translation. Investigate a translation and how to get back to the original place Maths No Problem 4B p 161-166 Worksheet 4 and 5	Up Down Left Right Move Coordinates Translation Points	Can you describe the translation? Can you describe the translation in reverse?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Describe the translation from:

▲ to ✖   ♥ to ⭐

▲ to ♥   ⭐ to ✖

Describe the translation from:

A to B   B to C   C to D   D to A

Plot two new points and describe the translations from A to your new points.

Tommy has described the translation from A to B as 3 right and 4 up.

Can you explain his mistake?

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
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Fri	**L.O.** **Times table test** **L.O. fluency** 6027+1427= 880-194= 177x12= 650÷12=	TMM L.O.	**L.O.** **Must:** **Should:** **Could:**					**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**