

**Ormiston Victory Academy** 

Teacher	Subject	Class	No	Male	Female	Support Teacher / Assistant and responsibilities within class		
	Maths							
Date:	Time:		Room:					

Focus of the Lesson:	Previous Learning
Consolidation of relationship between number machines, algebra, graphs, words, input/output tables and sequences.	Investigation into number machine, algebra, graphs, words, input/output tables and sequence that they found to all describe the same relationship.

Learning Objective(s):	Tiered Learning Outcomes		
Understand that a straight line graph is	ιt	5+	Be able to complete an input out table by deriving number machine from given linear algebra.
a visual representation of an algebraic relationship / number machine /	les / ssmer	6 or C	Be able to draw a straight line graph from input out table, after deriving number machine from given linear algebra.
input/out table	Grad Asse	7 or B	Be able to sketch straight line graphs using y=mx+c where m represents gradient and c represents the y axis intercept.

Key Questions	Keys Words/Vocabulary				
What number machines does the algebra represent?	y=mx+c, number machine, algebra, straight line graph, input/output table, coordinate, sequence, relationship, gradient, y intercept, linear				
How could we draw a graph to represent this algebra / number machine / relationship?					

Students with Special Educational Needs	SEN Details	Learning needs met by

Boys' learning needs met by
Directed task that can be approached several ways.

Students on the Gifted and Talented Register	Learning needs met by

Assessment Opportunities								
Teacher assessment	Υ	Homework		Questions & answers		Performance		
Group assessment		Written class work Visual presentation						
Self assessment	Υ	Practical work		Oral presentation				
Peer assessment		Physical activity		Text/Exam				

Cross Curricular Links					Health Specialism	Science Specialism
Citizenship		Literacy				
Numeracy	Y	ICT				

Homework



Time	9	<b>Learning Activities</b> (including differentiation and support staff tasks)	What assessment will take place (how will you/pupils know that the lesson outcomes have been achieved?)			
Engage		Tell pupils to draw set of axes as per last slide in Relationships2.ppt. Whilst they do this (or before), write on the board – somewhere where it can stay all lesson – the 5 (or 6) equations as per last slide in Relationships2.ppt.	<ul> <li>Relationships2.ppt</li> <li>Copies of all but last slide of Relationship2.ppt for all students</li> <li>Graph paper</li> <li>Rulers</li> <li>Pencils</li> <li>Assess graphs drawn ok. Check axes numbered properly around the origin in particular.</li> </ul>			
Challenge & Apply Explore		<ul> <li>Ask pupils to suggest what the number machines could be for each of the equations.</li> <li>Tell pupils that they are to complete an input/output table for each of the equations, using the number machines.</li> <li>Allow pupils time to do the first one and then tell them to use the input/output table to plot coordinates, and then to join with straight line all way across page.</li> <li>Assess all is ok and then allow time to repeat for all other equations. Encourage pupils to use different coloured pencil for each graph.</li> <li>As pupils work encourage them to look for other similarities (and/or differences) between the algebra, number machines, graphs</li> <li>Gradients of graphs, parallel lines, positive gradient vs negative gradient, gradient of ½</li> <li>M value in equations &amp; number machines vs gradient of graph</li> <li>Where crossing y axis vs y value when x=0 from input/output</li> <li>Equations / number machines with same c values</li> <li>Many more ideas</li> </ul>	Assess responses, assess ease with which responses are made. Assess with regard to negative answers in particular. Assess first attempts before progressing to others. Assess / check and amend any non straight line graphs. Assess suggestions given by students re issues here			
Review		Round up, draw out and share all conclusions. Write up y=mx+c with annotations for m & c and tell pupils to copy.	Assess all responses and overall contentment with ideas put forward.			
Res	ource	S S				
See	RHS.					