

THE THIRD WAVE PROJECT

STUDY 4: WHAT I FIND IMPORTANT (IN MATHS LEARNING)

STUDENT QUESTIONNAIRE

Dear student,

- There are no right or wrong answers to the questions in this international survey. Since everyone is different, it is important that your responses reflect your personal views.
- Your responses will be kept confidential.
- If you have any question anytime, please raise your hand and someone will attend to you.
- Please respond to all items.
- Thank you for your time!

Section A

For each of the items below, tick a box to tell us how **important** it is to you when you learn mathematics.

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
1. Investigations					
2. Problem-solving					
3. Small-group discussions					
4. Using the calculator to calculate					
5. Explaining by the teacher					
6. Working step-by-step					
7. Whole-class discussions					
8. Learning the proofs					
9. Mathematics debates					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
10. Relating mathematics to other subjects in school					
11. Appreciating the beauty of maths					
12. Connecting maths to real life					
13. Practising how to use maths formulae					
14. Memorising facts (eg Area of a					
rectangle = length X breadth)					
15. Looking for different ways to find the answer					
16. Looking for different possible answers					
17. Stories about mathematics					
18. Stories about recent developments in mathematics					
19. Explaining my solutions to the class					
20. Mathematics puzzles					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
21. Students posing maths problems					
22. Using the calculator to check the answer					
23. Learning maths with the computer					
24. Learning maths with the internet					
25. Mathematics games					
26. Relationships between maths concepts					
27. Being lucky at getting the correct answer					
28. Knowing the times tables					
29. Making up my own maths questions					
30. Alternative solutions					
31. Verifying theorems / hypotheses					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
32. Using mathematical words (eg angle)					
33. Writing the solutions step-by-step					
34. Outdoor mathematics activities					
35. Teacher asking us questions					
36. Practising with lots of questions					
37. Doing a lot of mathematics work					
38. Given a formula to use					
39. Looking out for maths in real life					
40. Explaining where rules / formulae came from					
41. Teacher helping me individually					
42. Working out the maths by myself					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
43. Mathematics tests / examinations					
44. Feedback from my teacher					
45. Feedback from my friends					
46. Me asking questions					
47. Using diagrams to understand maths					
48. Using concrete materials to understand mathematics					
49. Examples to help me understand					
50. Getting the right answer					
51. Learning through mistakes					
52. Hands-on activities					
53. Teacher use of keywords (eg 'share' to signal					
division; contrasting 'solve' and 'simplify')					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
54. Understanding concepts / processes					
55. Shortcuts to solving a problem					
56. Knowing the steps of the solution					
57. Mathematics homework					
58. Knowing which formula to use					
59. Knowing the theoretical aspects of mathematics (eg					
proof, definitions of triangles)					
60. Mystery of maths (example:					
111 111 111x111 111 111=12 345 678 987 654 321)					
61. Stories about mathematicians					
62. Completing mathematics work					
63. Understanding why my solution is incorrect or correct					

	Absolutely important	Important	Neither important nor unimportant	Unimportant	Absolutely unimportant
64. Remembering the work we have done					
65. Comments (if any):					

Section B

For each pair of phrases below, mark on the line segment to indicate how more important one phrase is to you in your maths learning than the other phrase.

If you mark in the middle, it would mean that both phrases are equally important to you.

	Example (non-maths):	
	Watching a movie	 Shopping
60	6. <i>How</i> the answer to a problem is obtained	 <i>What</i> the answer to a problem is
6	7. Feeling <i>relaxed</i> or having <i>fun</i> when doing maths	 <i>Hardwork</i> is needed when doing maths
68	3. Leaving it to <i>ability</i> when doing maths	 Putting in <i>effort</i> when doing maths
69	9. Applying maths concepts to solve a problem	 Using a <i>rule / formula</i> to find the answer
70). <i>Truths</i> and <i>facts</i> which were discovered	 <i>Mathematical ideas</i> and <i>practices</i> we normally use in life
71	Someone <i>teaching</i> and <i>explaining</i> maths to me	 <i>Exploring</i> maths myself or with peers / friends / parents
72	2. <i>Remembering</i> maths ideas, concepts, rules or formulae	 <i>Creating</i> maths ideas, concepts, rules or formulae

73.	<i>Telling</i> me what a triangle is	 Letting me see <i>concrete</i> <i>examples</i> of triangles first, so that I understand the properties of triangles
74.	<i>Demonstrating</i> and <i>explaining</i> maths concepts to others (e.g. proofs)	 Keeping mathematics magical / mystical
75.	Using maths to <i>predict /</i> <i>explain</i> events, that is, to stay in control	 Using maths for <i>development / progress</i>
76. C	omments (if any):	

Section C

A friend asks you, 'I want to do well in maths at school. What three most important things do I need in order to do well?' What might you say?

77. Most important:

78. Second most important:

79. Third most important:

80. I have chosen the three words above because:

Section D

Please tell us something about yourself.

81. I am currently studying in this country:

82. My school is located in this city/town/suburb/village:

83. My school is a (please select one)

□ government school

 \Box non-government school

84. My school is

 \Box co-educational (boys and girls)

 \Box girls only

 \Box boys only

85. In my class, maths is taught in language.

86. At home, I speak mainly language.

87. I am most like (please select one):

African	🗖 indigenous Australian	□ Chinese
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	German	Greek	🖵 Indian	Italian				
	□ Korean	Malay	Dertuguese	□ Swedish				
	🖵 Thai	Turkish	□ Other					
88. I was	born in this country	/:						
89. If you were born overseas, which year did you come to your current country?								
90. My age is (select one):								
		□9	1 0	1 1				
		12	□ 13	1 4				
		1 5	1 6	1 7				
91. My gra	ade level at school is	5:						
92. Gende	er (please select):	□ female	□ male					
93. I do w	ell in mathematics	at school.						
		□ Strongly agre	ee					
		□ Agree						
		Disagree						
	□ Strongly disagree							
		□ Not sure						
		- End of question	ınaire -					