Wai Mīharo — Wonderful Water

Approach: Independent

Focus: Explain buoyancy and flotation in three situations.

Resources: None

Questions/instructions:

Look at the pictures then answer the questions.

Tirohia ngā pikitia, kātahi ka whakautu i ngā pātai.

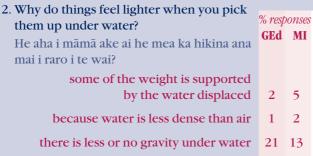
1. Imagine that you have a ball of plasticine. You put it in water and it sinks. Then you shape it into a boat. Now it floats. Why did the ball of plasticine sink but the boat float?

Tēnā me pohewa noa he <u>poi kerepēhi</u> [ball of plasticine] tāu. Ka kuhuna e koe ki rōto i te wai, ka totohu. Kia hangaia e koe hei waka, kātahi ka mānu. He aha te poi kerepēhi i totohu ai, i mānu kē ai ko te waka?



	% responses	
boat shape displaces enough water	GEd	MI
to hold weight of plasticine	0	0
more spread out so it floats/		
water holds it up there	4	5
because there is air inside it.	29	11







3. Someone holds the ball at the bottom. Why does it jump out of the water when they let it go? Ka pupuritia e tētahi te poi ki raro. Kia tukua, nā te aha i peke ake ai te poi?	% resp	
Under the water:		
ball weighs less than the water displaced	1	0
air in the ball makes it rise	43	36
Above the water:		
ball moves upward because of inertia	0	0
ball is going fast when it reaches the surface	3	0

Commentary:

This was a difficult task beyond the reach of most year 8 students. There was not a statistically significant difference between GEd (General Education) and MI (Māori Immersion) students.