## **Marbles in Water**

Approach: One to one	<i>Level</i> : Year 4 and year 8					
<i>Focus:</i> Account for the rise in water level in a container when an object or objects are added,						
in terms of water being displaced.						

Resources: 100ml jug, water, 1 small marble, water, 2 large marbles.

Questions/instructions:% response% response% response% responseIn this activity you are going to do an experiment with some water in a jug and some marbles.1416181818Give student equipment. Pour 80mls of water into the jug. You can see that it has 80mls of water in it.5. If you were to put one more large marble into the jug what would happen to the water?1315Show student 80ml level mark.83956. What about the little marble? What do you think will happen when you put it into the water?1315Now put one large marble into the water. Watch what happens to the water.83956. What about the little marble? What do you not score of not score of not score of same amount of water in the jug compared with before? same amount of water in the jug compared with before?83843. Is there more, less or the same amount of water in the jug compared with before? same amount of water in the jug compared with before?85833. Is there more, less or the same amount of water in the jug compared with before? same amount of water in the jug compared with before?85843. Is there more, less or the same amount of water in the jug compared with before? same amount of water in the jug compared with before?85853. Is there more, less or the same amount of water in the jug compared with before? same amount of water in the jug compared with before?85864. If the public same amount of water in the jug compared with before? same amount of same amount of same amount of same amount of same am		0/			0/	
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Commentary:

Both year 4 and year 8 students were generally able to predict the rises and falls in water level as marbles were added or removed. In question 3, year 8 students were much more aware that the amount of water did not change when marbles were added, but the results of question 8 suggest that year 4 students understood that removal of all objects would restore the original water level.