

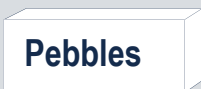
Pebbles Packet



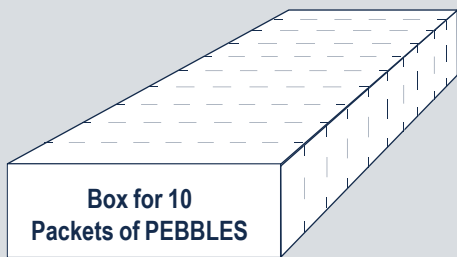
Approach: Station **Level:** Year 4 and year 8
Focus: Measuring and calculating length and volume.
Resources: Pebbles box, ruler, calculator.

Questions/instructions: % responses

1. Write the measurements of the <i>Pebbles</i> packet to show how long, high and wide it is.		y4	y8
Length:	141-149 (mm)	32	70
Width:	42-53(mm)	47	80
Depth:	17-23(mm)	27	63
Units given:	all 3	55	54
	1 or 2	18	26



2. Work out and write down the volume of the pebbles packet.		
Correct, given student's measurements:		
with correct units	•	12
without correct units	•	12
incorrect, but with correct units	•	5
all other responses	•	71



3. This box holds 10 packets of <i>Pebbles</i> . Write the measurements on the box to show how long, high and wide it would be.		
length = length above	•	24
width = width above	•	27
depth = 10 × depth above	•	31
Units given:	all 3	• 42
	1 or 2	• 24
4. Work out and write down the volume of this big box.		
10 × volume above	•	15
calculated correctly from student's measurements	•	8
correct, but method unclear	•	9

Commentary

Year 4 students were asked part 1 only. About 35 per cent more year 8 than year 4 students measured the box dimensions accurately though both years used appropriate units equally well. Only about 30 percent of year 8 students succeeded with volume calculations. The poor result for part 3 may suggest confusion for some students. Results may have been better if the first sentence read; "This box holds 10 of *these* packets of Pebbles."