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Archimedes' Principle Worksheet

Submerged Objects

1. Weight of clay in air	 g
2. Weight of clay submerged in water	 g
3. Difference in weight $(1 - 2)$	 - g
4. Volume of clay by water displacement	 mL
(Starting volume mL Ending volume mL)	

5. Assume the density of water is 1 g/mL. Explain the similarity between #3 and #4 above. (If your numbers are not similar, repeat steps 2–10 again.) The similarity of #3 and #4 represents Archimedes' Principle. Write the principle in your own words.

Floating Objects

6.	Water displaced by submerged clay	 mL
7.	Water displaced by floating clay boat	 mL
8.	Calculate the density of clay:	 g/mL
	Should the clay sink or float? Explain.	

9. Calculate the density of the clay boat:	g/mL
Should the boat sink or float? Explain.	

10. What amount of water should equal the volume of that displaced by the floating clay boat? (*Hint:* What does the water line on a floating object indicate?)

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