

Planet	Surface Radius (K km)	Atmosphere Composition	Surface Composition	Inner Composition	Core Composition	Density (g/cm ³)	Float in water? (Y/N)
Mercury	2.44	None	Rock	Rock	Metallic iron	5.43	
Venus	6.1	Gas carbon dioxide	Rock	Rock	Metallic iron	5.24	
Earth	6.4	Gas nitrogen, oxygen	Rock (water)	Rock	Metallic iron	5.53	
Mars	3.4	Gas carbon dioxide	Rock (ice)	Rock	Metallic iron	3.93	
Jupiter	71.5	Gas hydrogen, helium	Gas – liquid hydrogen, helium	Metallic hydrogen	Rock, ice	1.33	
Saturn	60.3	Gas hydrogen, helium	Gas – liquid hydrogen, helium	Metallic hydrogen	Rock, ice	0.69	
Uranus	25.5	Gas hydrogen, helium	Gas – liquid hydrogen, methane	Ice water, methane, ammonia	Rock	1.32	
Neptune	24.7	Gas hydrogen, helium	Liquid hydrogen, helium, methane	Ice water, methane, ammonia	Rock	1.64	
Pluto	1.17	None	Rock, methane ice	Rock	??	2.00	

- 1) Group the planets by mass. Circle the heaviest planets and underline the lightest planets.
- 2) Predict which planet models will sink and which will float.
- 3) DUNK! Fill out the chart as you do the experiment. Which planets floated? Which sank? Why?
- 4) In your own words, describe the relationship between mass, size and density.