Physics > Big idea PMA: Matter > Topic PMA2: Floating and sinking

Key concept (age 11-14)
PMA2.2: Pressure in fluids

Progression toolkit: Pressure in fluids

Learning focus	Pressure increases with depth in a fluid, so the force exerted by a fluid is larger on the lower surface of an immersed object than on the upper surface. This results in an upward force on the object.				
As students' conceptual understanding progresses they can:	CONCEPTUAL PROGRESSION →				
	Describe the movement of particles in fluids on either side of a boundary. **P**	Explain phenomena that are caused by differences in fluid pressure, on either side of a boundary.	Explain why pressure in a fluid increases with depth.	Explain why pressure at a particular depth is the same throughout a fluid.	Explain how pressure pushes on an object submerged in a fluid.
Diagnostic questions	Inflation	Magic glass	Underwater beach ball Squeezing water	Deep water Underwater cave	Underwater basketball
Response activities		Pressure can	Diving deep		

Key:

P Prior understanding from earlier stages of learning

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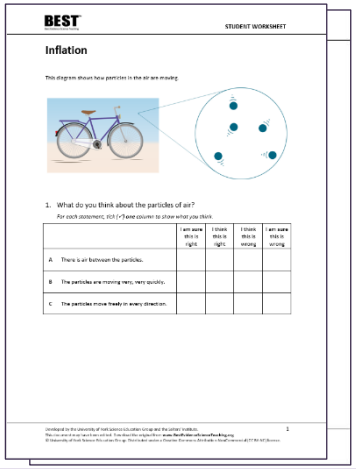
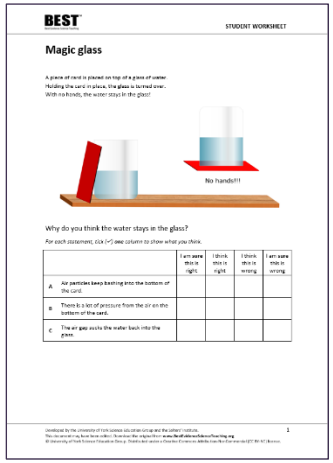
Inflation



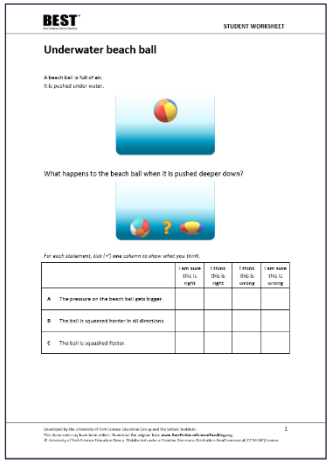
Confidence grid and simple multiple choice

Magic glass



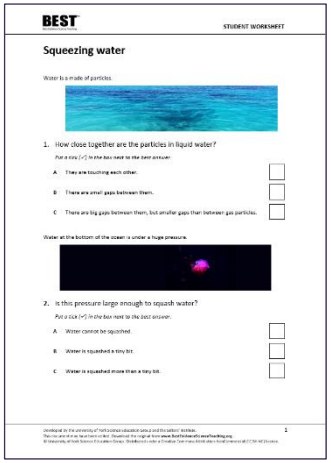
Confidence grid

Underwater beach ball



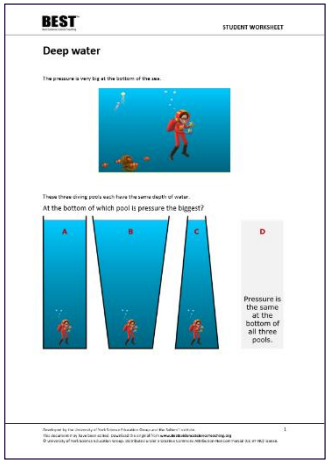
Confidence grid

Squeezing water



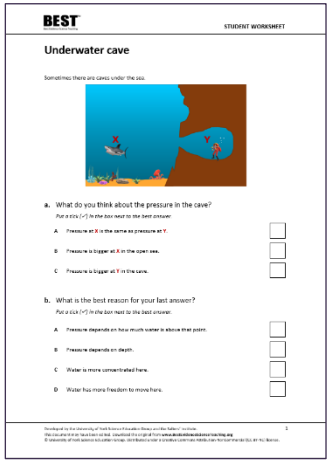
Simple multiple choice

Deep water



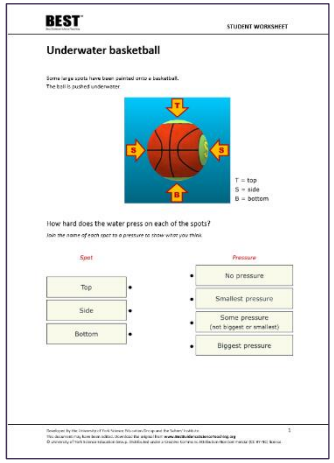
Simple multiple choice

Underwater cave



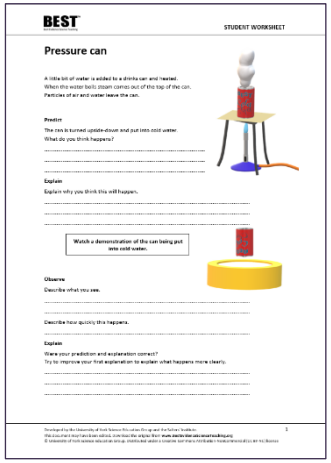
Two-tier multiple choice

Underwater basketball



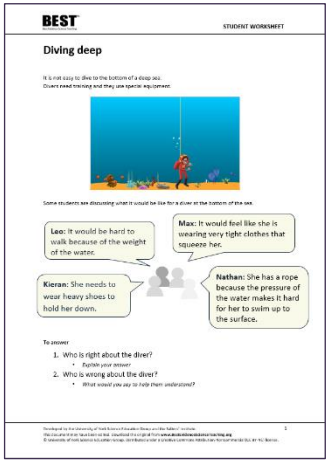
Linking ideas

Pressure can



Predict, explain; observe, explain (PEOE)

Diving deep



Talking heads

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