

Scenario	Task / Problem	Student Analysis	Questions			
	1. The Muddy Trail: Hikers need clean water from a muddy stream containing floating leaves, twigs, and fine dirt.					
	• Is dirt insoluble?					
	• Which method works best first?					
	• What acts as the filter in the wild?					
	2. Pasta Night: Boiling spaghetti in a pot of water. You need to drain the water to serve dinner.					
	• Why is a colander considered a filter?					
	• Would a paper coffee filter work better or worse here? Why?					
	3. Gold Panning: A prospector scoops up river gravel and water in a shallow pan to find heavy gold nuggets at the bottom.					
	• Is this decantation or filtration?					
	• Why does gravity make this method work?					
	4. Pool Maintenance: A pool pump pulls pool water through a sand cartridge to catch hair, bugs, and dirt.					

• What is the residue?						
• What is the filtrate?						