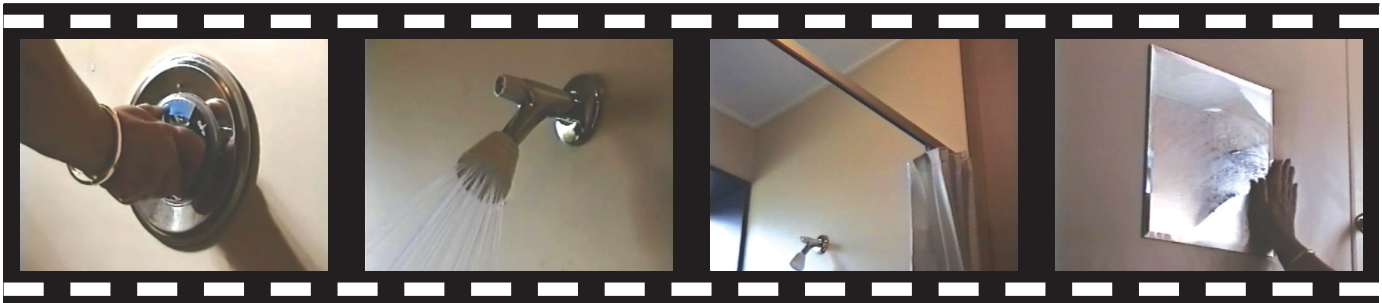


Approach: One to one  
 Focus: Condensation  
 Resources: Video recording on laptop computer

Year: 4 & 8



[No soundtrack; sound of shower only]

Questions / instructions:	% responses 2003 ('99)			% responses 2003 ('99)	
	year 4	year 8		year 4	year 8
<p><b>This activity uses the computer.</b></p> <p>We are going to watch a movie that shows somebody's problem. After they have had a shower they can't see in the mirror clearly. Let's watch the movie.</p> <p>Click the <b>Shower Time</b> button. The video will start.</p> <p>During the shower the mirror steamed up.</p> <p>1. Why did the mirror steam up during the shower?</p> <p><i>[Shower puts water vapour into the air. This travels through room to mirror. Condenses on mirror when it hits cooler surface.]</i></p> <p>full explanation – all 3 elements    1 (0)    4 (1)</p> <p>partial explanation – 2 elements    8 (5)    25 (24)</p> <p>vague explanation    43 (50)    46 (48)</p> <p>2. If the mirror was not wiped dry, it would clear by itself. What would happen to the water on the mirror?</p> <p>PROMPT: <i>Where would the water go?</i></p> <p>water evaporates back into air    20 (17)    47 (45)</p> <p>3. You've probably had the same thing happen to you. You have a shower or bath and then find the mirror all steamed up.</p> <p>What could you do to stop the mirror steaming up?</p> <p>4. Why would that work?</p> <p>Reduce moisture in air – <b>dehumidifier; open a door or window; extractor fan:</b></p> <p>at least one of these ideas, well explained    14 (13)    36 (31)</p> <p>one idea without explanation    10 (3)    13 (16)</p>			<p><b>Heating air so it will hold more moisture – heater, heat lamp:</b></p> <p>at least one of these ideas, well explained    1 (1)    3 (0)</p> <p>one idea without explanation    2 (3)    8 (4)</p> <p><b>Preventing moisture reaching mirror surface – barrier such as a towel on mirror:</b></p> <p>at least one of these ideas, well explained    29 (33)    23 (31)</p> <p>one idea without explanation    9 (13)    5 (9)</p> <p><b>Chemical solution to prevent water condensing on mirror:</b></p> <p>mentioned and explained    0 (0)    3 (0)</p> <p>mentioned without explanation    3 (1)    3 (3)</p> <p><b>Reducing moisture in air by having colder shower:</b></p> <p>mentioned and explained    3 (7)    6 (3)</p> <p>mentioned without explanation    5 (5)    3 (7)</p>		
			<b>Total score:</b>	6–13	0 (1)    9 (4)
				4–5	15 (19)    38 (39)
				2–3	49 (43)    38 (45)
				0–1	36 (37)    15 (12)

**Commentary:**

This widely observed phenomenon was not well explained. About 30 percent more year 8 than year 4 students scored 4 or above. There was very little change, at either year level, between 1999 and 2003.