

Topic & specification ref: 3.2.4 Perceptual processes Lesson 3 Binocular Depth Cues			
Lesson aim: To stimulate students' problem solving by engagement with perceptual processes			
Material to be learned:			
Concepts	Facts	Skills/habits	Metacognitive
Depth cue Binocular depth cue Eye convergence Retinal disparity	Processes of using binocular depth cues to perceive the environment	Problem solving Observation Planning, revising; collaborating	Reflection on learning habits during the lesson
Assessment strategies		Details as appropriate	
Question and answer	Throughout. Assertive. AfL. Scaffolding.		
Self assessment	Reflective exercise		
Peer assessment			
Individual learner review			
Group presentation	Demonstration of method for assessing convergence distances		
Observation of skill			
Assignment/homework	Writing task – explaining how BDCs are processed		
Summative test			
Teaching and learning techniques (tick as applicable):			
Whole class teaching	<input checked="" type="checkbox"/>	Presentations	<input checked="" type="checkbox"/>
Coaching and instruction	<input type="checkbox"/>	Discussion	<input checked="" type="checkbox"/>
Working in small groups	<input checked="" type="checkbox"/>	Practical exercises	<input checked="" type="checkbox"/>
Individual project work	<input type="checkbox"/>	Practical demonstrations	<input type="checkbox"/>
Role-playing exercises	<input type="checkbox"/>	Copying notes	<input type="checkbox"/>
Case study	<input type="checkbox"/>	Comprehension questions	<input type="checkbox"/>
Inclusion:			
SEN	<input type="checkbox"/>		
G&T	<input type="checkbox"/>		
Other	<input type="checkbox"/>		
Health & safety: see departmental risk assessment			
Lesson sequence:			
Timing:	Content:		
0-5	Orientation question – how good are you at judging distance? Get self assessments and then take a volunteer to estimate distances of three objects; use tape measure to check, feedback on accuracy. Introduce session aims .		
5-10	Presentation: depth cues. Eye convergence.		
10-30	Introduction: I looked for this info, but couldn't find it in any of my books. Activity: working in groups, use the available equipment to work out the maximum range at which convergence information is useful. Allow 10 mins; circulate, hint & coach during task. At end, take results from each group. Discuss: each group's approach – get feedback from others. Question: whose result are we going to trust? Discuss possibilities.		
30-50	Demonstration: anaglyph image. Activity: pairs of students take anaglyph picture pairs on digital cameras; give to teacher for composition using anaglyph software. Then, work out how an anaglyph works & what they show us about depth perception. Allow 10 mins. At end, discuss ideas. Presentation: retinal disparity; stereopsis.		
50-60	Reflection: how were they as learners? Questions on slide. Allow a minute to consider then get feedback from individuals. Set homework.		
Resources:			
Cognitive 3 slides Card, string, rulers/tape measures etc for problem 1 3d glasses – pair each Digital cameras Anaglyph software e.g. from http://www.stereoeye.jp/software/index_e.html (freeware)			