

Topic: Planet Earth/Biological Systems	Primary 7 Age 10-11	Activity title: Bird beaks
Scientific skills focus Plan: Formulates questions and predictions, with assistance, based on observations and information.		Curriculum link I can relate physical and behavioural characteristics to survival or extinction. SCN 2-01a
Assessment focus <ul style="list-style-type: none"> • Can children formulate predictions for modelling bird beaks? • Can children use their observations to make further predictions? 		
<p>Activity <i>Today we are evolutionary biologists.</i></p> <p>Introduce a picture of Darwin's Finches, noting the difference in beak shapes. We will use a modelling activity to see how beak shape could link to survival: Provide 3 or 4 items for 'beaks' e.g. chopsticks, teaspoon, tweezers, pegs, clips, tongs etc. Provide 3 or 4 items for 'food' e.g. pennies, marbles, match sticks, different sized dried pasta or beans, small cubes, pompoms/cotton wool, lego, paper fasteners, wool 'worms' etc. Discuss predictions about which 'beaks' will be able to pick up which kinds of 'food'. In groups of 3 or 4, ask the children to each use a beak to see how many items of different food they can pick up in a set time (e.g. 20 or 30 seconds). Record results and compare to predictions. Discuss implications: which 'beak' would survive the longest (or long enough to reproduce) or be the most flexible in what they ate. What would happen if one of the food sources ran out (e.g. plants got disease or temperature change etc)? Consider the effect of only those with 5 items or more in the time being able to reproduce – who would not survive, who would have the most offspring?</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Adapting the teaching</p> <p>Support: Provide a pre-printed table to record predictions and 'feeding' results.</p> <p>Extension: Add further rounds of 'feeding' with a new food source or new competitor.</p> <p>Other ideas: Research other variations e.g. beaks of wading birds.</p> </div> <div> </div> </div> <div style="display: flex; justify-content: space-between;"> <div> <p>Questions to support discussion</p> <ul style="list-style-type: none"> • Which 'beak' do you think will be able to pick up this food? • Which bird beak do you predict will pick up the most/least of each type of food? • Which bird beak do you predict will pick up the most/least food overall? • What do your results show? • What does this mean would happen to the birds in the future? </div> <div> </div> </div>		
<p>Benchmark indicators</p> <p>Working towards: Pupils say which 'beak' will pick up the most or least but do not reflect on this when collecting results or relate this to implications for survival.</p> <p>Achieved: Pupils make predictions about the survival of the 'birds' based on the amount of 'food' picked up by each beak.</p> <p>Possible ways to go further: Pupils consider other environmental impacts for the 'birds', other characteristics/adaptations or behavioural solutions (e.g. migrating).</p>		

Pupil box 3 - assess own ideas. See TAPS pyramid for more examples.