






Science and DT topic: Forces or Materials	Year 5 Age 9-10	Title: Paper planes
Enquiry Focus Plan enquiry, recognising and controlling variables		Concept context Ways in which forces can affect movement, including air resistance
Assessment Focus <ul style="list-style-type: none"> • Can children plan a fair test to investigate factors affecting paper plane flights? • Can children identify variables which they can control? 		
<p>Activity <i>Today we will be aeronautical engineers.</i> Explore making and flying paper planes. Discuss different features of the planes and how they could tell which flew 'best'? Clarify the need to investigate 1 thing at a time, to see if it has an effect – each group will change 1 feature (not the whole design). Identify different variables which could be changed (e.g. type/size of paper, number of folds, angle of flaps etc.) or measured (e.g. distance flown or flight time). Use post-it planning boards to plan a fair test.  Ask pupils to show you/explain to you how they will be keeping their test as fair as possible (this can be done at the beginning and during the investigation, enabling more children to explain/show you). Discuss how to carry out the investigation safely (e.g. throw in one direction, name planes). Carry out tests and discuss outcomes for different plane features.</p> <p>Adapting the activity Support: Provide a plane template and discuss what could be changed about that design. Extension: Which variables will be easier/harder to control? Other ideas: Compare different designs with a focus on repeated measures rather than variables.</p> <p>Questions to support discussion</p> <ul style="list-style-type: none"> • What is your question? • How will you investigate this? • How will you keep your test fair? • What will you change? • What will you measure? • What will you keep the same? • Can you explain why you have made these decisions? <div style="text-align: right; margin-top: 20px;">  </div>		
Assessment Indicators <p>Not yet met: Can say what is being changed. May need support to explain what must be kept the same.</p> <p>Meeting: Can plan a fair test identifying one thing to change, one thing to measure/observe and important factors to keep the same.</p> <p>Possible ways of going further: Identifies a range of factors to keep the same, together with noting which variables would be difficult to control.</p>		



Teacher box 4 – gather evidence in a range of ways. See TAPS pyramid for more examples.