

Level:	Examples of Questions:
Knowledge Emerging	<ul style="list-style-type: none"> What is a <u>structure</u>? What are the different types of bridges you may use? What is the purpose of a bridge? What is each piece of a frame structure called? When was Golden Gate Bridge constructed? Who designed the Empire-State Building? Where is the tallest tower in the world situated?
Comprehension Developing	<ul style="list-style-type: none"> Explain what the term Triangulation means. Identify a <u>structures</u> that a good example of a cantilever. Describe how 2 ways to strengthen a frame structure. Describe how a <u>key stone</u> works within a structure. Identify <u>two</u> the <u>two forces</u> that act on a shelf when it bends? Describe what a static force is?
Analysis Embedded	<ul style="list-style-type: none"> Why do you think most buildings combine different materials? What evidence is there to suggest a pyramid is a stable shape? Why do you think the tall tower did/didn't work? Why do you think it is important for structures to be able to withstand geological movements? Why do larger buildings have foundations?
Synthesis Embedded	<ul style="list-style-type: none"> How would change the design of your tall tower to make it stronger and more stable? What effects would more time for making have had on you final tower? How would you change a basic beam bridge design to make it more aesthetically pleasing? What would you improve your bridge design to make it stronger? How would you change the design of the empire state building to make it appear more modern or futuristic?
Evaluation Embedded	<ul style="list-style-type: none"> What is your opinion of the structures project? How effective was your design for the tallest tower? How well do you think you worked in a group and why? Did your group function well as a unit? How well have you worked during this project? How accurate were your measurements?
Application	<ul style="list-style-type: none"> Use of workshop machinery to make an accurate square frame which will be cross-braced. Analyse existing structures. Use modelling to develop and evaluate design ideas. Work in a group to design and make a tall stable strong tower using newspaper. Work in <u>group</u> to design and make a strong bridge using wood off-cuts and lolly sticks. 3 week homework project about bridges.