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| **Conditions**Period allowed for completion of the task: **Part A:** Two 57-minute lessons for research during Term 2 Week 10**Part B:** Two 57-minute lessons to create the response during Term 3 Week 1 | **Year 12 General Integrated Science** **Chemical Sciences****Task 8****Research and Extended response****Task weighting**10% of the school markfor this pair of units |

**Materials used in the manufacture of safety design features in vehicles (30 marks)**

Secondary safety design features of vehicles provide increased occupant protection. These features include seatbelts, airbags and crumple zones. The materials used in the construction of these three features must match the design and purpose of the feature.

**Part A – Research phase**

1. (a) Research and take notes on each of the following safety design features in

 vehicles; **seatbelts**, **airbags** and **crumple zones**.

Your research should include the following:

* a definition and description of the safety feature
* an explanation of how it works
* the type of materials from which it is constructed.
	+ list the properties of each material
	+ list the properties of the material that make it useful for its purpose.

 (4 marks)

You may include diagrams in your research.

1. Reference your research with a minimum of four references. Use a standard

 referencing format of your choice; for example, APA, MLA, Harvard or Chicago. See the College Diary for referencing styles. Hand this in as a separate

sheet attached to your note-taking sheet. (2 marks)

**Part B – Extended response**

You will produce a response based on the notes you have researched. This response is to be completed under test conditions, with no further research. You may use your own note-taking

sheet as a reference when creating your response. **Copies loaned to others will not be allowed**.

You may present your response in any format you like. Examples could include a poster, an oral presentation, a slide presentation or pod cast. You may use your notes and your response must be completed by the end of the **two** 57-minute sessions. (24 marks)