



Year 8 Technology Assignment Task 1

Due Date: Monday 27th March, 2017.

Note - A result of your task being handed in late will be penalised by losing 10% of your mark per day late.

Outcomes covered:

4.1.1, 4.1.2, 4.1.3, 4.2.1, 4.2.2, 4.3.1, 4.3.2, 4.4.1, 4.5.1, 4.5.2, 4.6.1, 4.6.2

Overview

In class we have been looking at Bridge construction. As part of the overall theme of “Why don’t bridges collapse” you are to investigate and report on a famous bridge.

Task (50marks)

My Famous Bridge

Students are to choose a **famous bridge** from around the world and complete the following tasks below in an assignment:

- Page 1: Design a cover page to present your famous bridge with header and footer. Include a picture which is not bigger than one third of an A4 piece of paper either under daylight or nightlight conditions. (in class)
- Page 2: Contents page for organisation of your work to be submitted (homework)
- Page 3: Provide a Google map of the Famous bridge **location** showing a brief summary of GPS co-ordinates, the date it was opened, the type of bridge structure, the material it was built with and its mass, height and length. (in class)

- Page 4: Write about the **history** of the bridge and the features that has made it famous. Include illustrations and photos to support your history. Reference and source your pictures. (in class)
- Page 5-7: **Illustrate** construction methods and materials used to build the famous bridge with photos or drawings, then explain the construction methods and materials used in your own words under or beside illustrations. (in class and continue during homework sessions)
- Page 8: **Discuss** the proven design principles of Triangles, Arches, Cables, or reinforced concrete that were applied to the famous bridge to make it stronger to carry the load. (in class and continue during homework sessions)
- Page 9: **Sketch** the famous bridge from a landscape perspective (in class)
- Page 10: Include a bibliography (homework)

Presentation: students are expected to present their work as a word document. Colour and creativity is essential, however, it is the content that is most important. Careful attention to spelling, clear ideas and layout is required.

Some ideas:

- Sydney Harbour Bridge
- Golden Gate Bridge (San Francisco)
- Westgate Bridge (Tasmania)
- Le Ponte De Normandie
- Clifton Suspension Bridge

Due Date: Monday 27th March, 2017 (Week 9, Term 1)

Marking Scale and assessment criteria

Presentation

5 Marks

| Range | Students in this range: |
|---|---|
| Extensive (5 marks) | <ul style="list-style-type: none">- Demonstrate an extensive level of presentation including computer word processing and page set out.- Present their work in order and extensively completes all points.- Provide detailed and accurate information- Have correct spelling and grammar- Include bibliography. |
| Thorough (4 Marks) | <ul style="list-style-type: none">- Demonstrate a thorough level of presentation including computer word processing and page set out.- Present their work in order and thoroughly completes all points.- Provide clear and accurate information- Have correct spelling and grammar- Include bibliography. |
| Acceptable (3 Marks) | <ul style="list-style-type: none">- Show moderate presentation- Display inconsistent layout and completes majority of points- Provide correct information- Provide incomplete header and footer- Include bibliography |
| Satisfactory (2 Marks) | <ul style="list-style-type: none">- Attempt clear presentation- Inconsistent layout and completes some points- Provides some correct information- Attempts a bibliography |
| Elementary (0-1 Marks) | <ul style="list-style-type: none">- Demonstrates a minimal level of presentation- Provide no name on document- Poor layout- No bibliography |

Sketch and Picture**5 Marks**

| Range | Students in this range: |
|-----------------------------------|--|
| Extensive (5 Marks) | <ul style="list-style-type: none">- Present an outstanding quality sketch using neat lines and colour in a landscape- Presents outstanding and accurate scale perspective |
| Thorough (4 Marks) | <ul style="list-style-type: none">- Presents a high quality sketch using colour and neat lines in a landscape- Presents accurate scale perspective |
| Acceptable (3 Marks) | <ul style="list-style-type: none">- Presents an acceptable sketch using neat lines in a landscape- May have colour- Inconsistent scale perspective |
| Satisfactory (2 Marks) | <ul style="list-style-type: none">- Presents a satisfactory sketch which is inconsistent with scale and landforms |
| Elementary (0-1 Marks) | <ul style="list-style-type: none">- Poor attempt or no sketch of bridge |

Location and History of the Famous Bridge**10 Marks**

| Range | Students in this range: |
|-------------------------------------|---|
| Extensive (10 Marks) | <ul style="list-style-type: none">- Provide an extensive description of the location including the GPS co-ordinates and a google maps photo of the bridge.- Provides an extensive and relevant history of the famous bridge. |
| Thorough (8-9 Marks) | <ul style="list-style-type: none">- Provide a thorough description of the location including the GPS co-ordinates and a google maps photo of the bridge.- Provides a thorough history of the famous bridge. |
| Acceptable (6-7 Marks) | <ul style="list-style-type: none">- Provide an acceptable description of location and history of the famous bridge |
| Satisfactory (4-5 Marks) | <ul style="list-style-type: none">- Provides a satisfactory description of location and history of the famous bridge |
| Elementary (0-3 Marks) | <ul style="list-style-type: none">- Little or no information of location and history of the famous bridge |

Illustration & explanation of construction methods and materials. 15 Marks

| Range | Students in this range: |
|----------------------------|--|
| Extensive (15) | <ul style="list-style-type: none">- Demonstrate an extensive understanding of how the bridge was constructed and what materials were used.- Identifies the builder and engineer.- Provides sequential illustrations or photos of construction process. |
| Thorough (13-14) | <ul style="list-style-type: none">- Demonstrates a thorough understanding of how the bridge was constructed and what materials were used.- Identifies either the builder or engineer or both- Provides some sequential illustrations or photos of construction process |
| Acceptable (11-12) | <ul style="list-style-type: none">- Provide a brief and acceptable explanation of the construction methods and what materials were used.- Identifies either the builder or engineer- Provides some illustrations or photos of construction process |
| Satisfactory (9-10) | <ul style="list-style-type: none">- Provide a brief and satisfactory explanation of the construction methods and use of materials.- Provides illustrations and photos |
| Elementary (0-8) | <ul style="list-style-type: none">- Basic understanding and explanation of the bridges construction details. |

Discussion of Proven Design Principles**15 Marks**

| Range | Students in this range: |
|---------------------------|--|
| Extensive (15) | <ul style="list-style-type: none">- Discuss clearly the structural features of the famous bridge in detail and with accurate reference to proven design principles used in bridge construction.- Identifies clearly and accurately points on the bridge that are under compression, have tension and resist torsion forces. |
| Thorough (13-14) | <ul style="list-style-type: none">- Discuss clearly the structural features of the famous bridge in detail and give some reference to proven design principles used in bridge construction.- Identifies points on the bridge that are under compression, have tension and resist torsion forces. |
| Acceptable (11-12) | <ul style="list-style-type: none">- Discuss the structural features of the famous bridge with some accurate reference to proven design principles used in bridge construction.- Identifies points on the bridge that are under compression, have tension and resist torsion forces |

| | |
|--------------------------------|---|
| Satisfactory (9-10) | <ul style="list-style-type: none">- Discuss structure of the bridge with some reference to design principles- Identifies points on the bridge that are under compression, have tension and resist torsion forces |
| Elementary (0-8) | <ul style="list-style-type: none">- Little or no discussion of the Famous Bridge structural features |

Comment:

/50