Summative 3: Elements of Good Design

Overall Expectation(s): 1. Analyse personal, social, economic, and environmental factors that need to be considered in designing and building structures and devices (7s20).

Elements of Good Design
- A good design takes into account the function of the structure.
- Good design considers the strength and stability needed by a structure.
- Symmetry is often used in good design.
- Ergonomic design of objects makes them easier to use.

How do you know if your structure has a good design? Ask yourself these questions when designing and building.
- Does my design link the structure to its function?
- Can my design withstand the forces that the structure will encounter?
- Is my design easy to build with the materials I want to use?
- Is my design ergonomic?
- Is my design aesthetically pleasing?
- Do I want my design to be symmetrical?

Choose a structure in the community you live in. Using the Elements of Good Design as a guide, consider the possible factors for each point of view that should have been considered when designing and building the structure to meet specific needs. For example, imagine a new shopping centre was being built in Richmond Hill.

Individuals (child, elderly person, parent, families)
- What questions/factors would an Individual think about regarding the location/materials used for building/ergonomics/safety of the new shopping centre?

Society (members of a community who live together for their mutual benefit)
- What questions/factors would a member of society think about regarding the location/materials used for building/ergonomics/safety of the new shopping centre?

Economy (companies that produce items, distributors (businesses) and consumers (shoppers) of goods & services)
- What questions/factors would a member of the economy think about regarding the location/materials used for building/ergonomics/safety of the new shopping centre?

Environment (environmentalist, ecologist, green people)
- What questions/factors would an environmentalist think about regarding the location/materials used for building/ergonomics/safety of the new shopping centre?

Assessment Criteria - Summative Evaluation

<table>
<thead>
<tr>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the importance for individuals, society, the economy, and the environment of factors that should be considered in designing and building structures and devices to meet specific needs (7s24)</td>
<td>Student demonstrates a high degree of understanding when analysing personal, social, economic, and environmental factors that need to be considered in designing and building structures and devices.</td>
<td>Student demonstrates considerable understanding when analysing personal, social, economic, and environmental factors that need to be considered in designing and building structures and devices.</td>
<td>Student demonstrates some understanding when analysing personal, social, economic, and environmental factors that need to be considered in designing and building structures and devices.</td>
</tr>
<tr>
<td></td>
<td>Individuals (People &amp; Families)</td>
<td>Society (Members of a community who live together for their mutual benefit)</td>
<td>Economy (system of production, distribution and consumption of goods &amp; services of an economy)</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>