### Year 4/5 Rubric Concept Map Assessment
#### Biological Science, Science Understanding, Australian Curriculum
#### Teacher Version

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>D</th>
<th>C</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Concepts:</strong></td>
<td>Limited number of concepts selected relating to topic</td>
<td>Concept map demonstrates some of the key ideas content. Eg only one habitat or type of animal described</td>
<td>Most concepts relating to topic were selected</td>
<td>Arrangement of concepts demonstrates an understanding of structure and function</td>
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<tr>
<td></td>
<td>Arrangement of concepts illustrates limited understanding of conceptual relationships</td>
<td>Headings such as diet, habitat and features included but may also include irrelevant facts</td>
<td>Cause and effect relationships evident from selection of concepts</td>
<td>Evidence that student has considered what could happen to survival of animal if key aspect changes or is missing</td>
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<tr>
<td></td>
<td></td>
<td>Arrangement of concepts demonstrates some of the key ideas content. Eg only one habitat or type of animal described</td>
<td></td>
<td>Relationships include more abstract and multi faceted Eg links survival to reproduction rates, basics of evolution</td>
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<tr>
<td><strong>Hierarchical Structure</strong></td>
<td>No sense of hierarchical structure</td>
<td>Concepts are displayed in a linear sequence with headings but no structure</td>
<td>Some structure used with appropriate headings for most groups</td>
<td>Headings are appropriate and move from big ideas to specific points</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Clear hierarchy evident</td>
</tr>
<tr>
<td><strong>Linkages</strong></td>
<td>No relationships between concepts evident, more like a brainstorm of words</td>
<td>Some basic relationships indicated by connected lines</td>
<td>Relationships indicated with a connecting line and labelled with linking words</td>
<td>Linking words show variety and reflect an understanding of relationships between concepts</td>
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<tr>
<td></td>
<td>irrelevant linking or comments words</td>
<td>linking words are simple and repetitive</td>
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<tr>
<td><strong>Cross Links</strong></td>
<td>Cross links not evident or appear random</td>
<td>Limited cross links are used</td>
<td>Cross links used to reflect simple straightforward connections</td>
<td>Cross links demonstrate in depth understanding and interrelationships of ideas</td>
</tr>
<tr>
<td><strong>Depth of Coverage</strong></td>
<td>Limited content included</td>
<td>Superficial coverage of key ideas with little extension of ideas</td>
<td>Main ideas included and relationships described</td>
<td>Content shows depth of understanding, cause and effect relationships and application of additional concepts</td>
</tr>
</tbody>
</table>
## Performance Indicators

### Key understandings of science

- Life cycles of turtles includes all stages from egg to adult
- Relationships such as feeding, predation and competition described
- Roles in ecosystem such as producer, consumer, decomposer in relation to turtles
- Adaptations of turtles that help with their survival such as carapace
- Factors that impact on survival of turtles

### Structure of concept map

- Words are all over page in no pattern
- Connecting lines but no words between ideas
- Limited content included

### Developing

- Limited number of concepts selected relating to turtles
- Arrangement of concepts illustrates limited understanding of conceptual relationships

### Satisfactory

- Concept map demonstrates some of the key ideas content. E.g. life cycles
- Headings such as diet, habitat, life cycles and features included but no detail
- May include irrelevant facts not specifically linked to turtles
- Arrangement of concepts demonstrates simple understanding of how the ideas relate to each other. For eg feeding relationships and role as consumer

### Good

- Most concepts relating to turtles are covered (see section in grey)
- Cause and effect relationships evident from selection of concepts. For eg illustrates how turtle is part of an ecosystem
- Each major heading is unpacked further with more specific detail eg diet is described for turtles

### Excellent

- Arrangement of concepts demonstrates an understanding of structure and function. For eg detail about how carapace reduces predation
- Evidence that student has considered what could happen to survival of turtle if key survival aspect such as habitat or diet changes or is missing
- Relationships include more abstract and multi faceted. E.g. links survival to reproduction rates, biodiversity, balance of nature in ecosystems

### Words

- Words appear in a line, organised or sequenced but no headings
- Some links but words used are mostly the same and are repetitive
- Not many cross links between ideas shown

### Some structure used with appropriate headings for most groups

- Relationships indicated with a connecting line and labelled with linking words
- Main ideas included and relationships described
- Cross links used to reflect simple straightforward connections

### Headings are appropriate and move from big ideas to specific points

- Clear hierarchy evident
- Linking words show variety and reflect an understanding of relationships between concepts
- Content shows depth of understanding, cause and effect relationships and application of additional concepts