Year 11
2019 Chemistry
Properties and Structure of Matter

Assessment Task 1
Term 1 Week 5
Due Date: ---Week 8
Marks: /68
Weighting: 35 %

Name: _____________________________________________

OUTCOMES:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH11-8</td>
<td>explores the properties and trends in the physical, structural and chemical aspects of matter</td>
<td>/8</td>
</tr>
<tr>
<td>CH11/12-2</td>
<td>designs and evaluates investigations in order to obtain primary and secondary data and information</td>
<td>/20</td>
</tr>
<tr>
<td>CH11/12-4</td>
<td>selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media</td>
<td>/20</td>
</tr>
<tr>
<td>CH11/12-7</td>
<td>communicates scientific understanding using suitable language and terminology for a specific audience or purpose</td>
<td>/20</td>
</tr>
</tbody>
</table>
TASK OUTLINE

Context
Students use knowledge obtained from the study of the periodic table to examine trends and patterns that exist between chemical elements and atoms in order to discover that fundamental particles, and their role in the structure of an atom, give all chemicals their properties.

Nature of the task
Your task is to research the major types of chemical structures and present a series of models, either physical or digital, to show the features of the major types, including:

- ionic networks
- covalent networks (including diamond and silicon dioxide)
- covalent molecular
- metallic structure

Your work must include:
- reference to factors affecting these structures, e.g. intermolecular bonding and polarity
- annotation or labelled each structure
- an analysis of the model and its suitability
- named examples of each chemical structure
- a reference list using approved referencing style
## Marking guidelines

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Developing 0-8</th>
<th>Sound 9-12</th>
<th>Accomplished 13-16</th>
<th>Highly Accomplished 17-20</th>
</tr>
</thead>
</table>
| CH11/12-2 designs and evaluates investigations in order to obtain primary and secondary data and information | ▪ method for collecting research data is sometimes appropriate  
▪ suggestion for research method is sometimes evidence based | ▪ method for collecting research data is appropriate  
▪ explanation for research method is mostly evidence based | ▪ method for collecting research data is appropriate and well designed  
▪ justification for research method is complete, mostly succinct and evidence based | ▪ method for collecting research data is appropriate, well designed, systematic and logical  
▪ justification for research method is complete, succinct, and evidence based |
| CH11/12-4 selects and processes appropriate qualitative and quantitative data and information using a range of appropriate media | ▪ selects data that is sometimes valid and reliable  
▪ uses collected data to construct models of some of the chemical structures | ▪ selects valid, and reliable data  
▪ uses collected data to construct valid and reliable models of the four chemical structures with one representations of each structure | ▪ selects relevant, valid, and reliable data  
▪ uses collected data to construct valid and reliable models of the four chemical structures with multiple representations of each structure | ▪ selects a variety of relevant, up to date, valid, and reliable data  
▪ uses collected data to construct valid and reliable models of the four chemical structures with multiple representations of each structure |
| CH11/12-7 communicates scientific understanding using suitable language and terminology for a specific audience or purpose | ▪ uses basic language with some scientific terminology and information  
▪ provides some annotations  
▪ provides a reference list attempting to use the appropriate reference style | ▪ uses language that is mostly clear and relevant with some accurate scientific terminology and information  
▪ provides clear annotations  
▪ provides a reference list using the appropriate referencing style including in text that may be limited and/or have minor errors | ▪ uses language that is mostly clear and precise with accurate and relevant scientific terminology and information  
▪ provides effective, clear and concise annotations  
▪ provides an accurate reference list using the appropriate referencing style including in text with some minor errors | ▪ consistently uses language that is clear and precise including accurate relevant scientific terminology and information  
▪ consistently provides effective, clear and concise annotations  
▪ provides an accurate reference list using the appropriate referencing style including in text |

Total Marks: /68
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Developing 0-2</th>
<th>Sound 3-4</th>
<th>Accomplished 5-6</th>
<th>Highly Accomplished 7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH11-8 explores the properties and trends in the physical, structural and chemical aspects of matter</td>
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<tr>
<td>▪ provides evidence of simple knowledge and understanding of the relevant scientific concepts, principles, theories or models</td>
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<tr>
<td>▪ mentions an aspect of the chosen models as a suitable representation for purpose</td>
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<tr>
<td>▪ provides evidence of knowledge and understanding of the relevant scientific concepts, principles, theories or models</td>
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<td></td>
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<tr>
<td>▪ discusses the chosen models as a suitable representation for purpose</td>
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<td></td>
<td></td>
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<tr>
<td>▪ provides evidence of thorough knowledge and understanding of the relevant scientific concepts, principles, theories or models</td>
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<tr>
<td>▪ analyses the chosen models as a suitable representation for purpose</td>
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<tr>
<td>▪ provides evidence of extensive and thorough knowledge and understanding of the relevant scientific concepts, principles, theories or models</td>
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<tr>
<td>▪ thoroughly analyses the chosen models as a suitable representation for purpose</td>
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Late Submission
Marks Awarded:

Teacher Feedback