This term’s work will be broken up into two areas of study

**Internal Systems**
Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (ACSSU175)

**Ecosystems**
Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)

**Vocabulary**
Below is a list of science words and phrases that students should know: the meaning of; and be able to spell; by the end of term:

- oxygen
- nutrients
- water
- waste
- respiratory
- circulatory
- system
- predator
- prey
- disease
- parasite
- competitor
- population
- seasonal
- habitat
- species
- energy
- ecosystem
- food web
- food pyramid
- sustainability
- bushfires
- flooding
- drought

**Grammar**
There is an expectation that students will make every effort to correctly use capitals, full stops, commas, semi colons, apostrophes, question marks and exclamation marks.

**Assessment**
Four modified assessments will be used throughout the term to identify the students understanding in the course and be used to determine a grade. Student achievement in the non-ATAR course will be reported using grades C to E. Students who believe they are capable of achieving a higher grade are welcome to sit the ATAR tests at no risk to their non-ATAR achievement. Examples of the standards that earn an A-E grade in Years 1-10 are available at: www.curriculumsupport.det.wa.edu.au.

<table>
<thead>
<tr>
<th>Term 1 Assessment</th>
<th>Grade</th>
<th>Description</th>
<th>The student demonstrates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Body Investigation</td>
<td>A</td>
<td>Excellent</td>
<td>excellent achievement of what is expected for this year level.</td>
</tr>
<tr>
<td>Body Systems Test</td>
<td>B</td>
<td>High</td>
<td>high achievement of what is expected for this year level.</td>
</tr>
<tr>
<td>Energy/Ecosystem Test</td>
<td>C</td>
<td>Satisfactory</td>
<td>satisfactory achievement of what is expected for this year level.</td>
</tr>
<tr>
<td>Human Impact Poster</td>
<td>D</td>
<td>Limited</td>
<td>limited achievement of what is expected for this year level.</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Very Low</td>
<td>very low achievement of what is expected for this year level.</td>
</tr>
</tbody>
</table>

**Table:**

<table>
<thead>
<tr>
<th>Table 1 Assessment</th>
<th>Grade</th>
<th>Description</th>
<th>The student demonstrates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Body Investigation</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Systems Test</td>
<td>30%</td>
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</tr>
<tr>
<td>Energy/Ecosystem Test</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Human Impact Poster</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
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</tbody>
</table>
**Term 1 – Year 9 Non-ATAR – Biological Sciences**

<table>
<thead>
<tr>
<th>Week</th>
<th>Content</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1    | Describing how the requirements for life are provided through the coordinated function of body systems  
- Skeletal/muscular system |                                     |
| 2    | - Skeletal/muscular system                                             |                                     |
| 3    | - Circulatory System                                                   |                                     |
| 4    | - Circulatory System & Respiratory System                              |                                     |
| 5    | - Respiratory System                                                   | **Human Body Investigation 20%**    |
| 6    | - Body Systems Overview                                                | **Body Systems Test 30%**           |
| 7    | Exploring interactions between organisms such as predator/prey, parasites, competitors, pollinators and disease  
- Food chains and Food webs |                                     |
| 8    | - Food chains and Food webs                                            | **Energy/Ecosystem Test 30%**       |
|      | Examining factors that affect population sizes such as seasonal changes, destruction of habitats, introduced species |                                     |
| 9    | - Introduced Species                                                   | **Human Impact Poster 20%**         |

The order of the content and the time in which they are covered are only a guide. Circumstances may result in changes during the year. The Science Department reserves the right to alter the order the objectives are taught and time over which they are taught.
Year 9 Non-ATAR – Biological Sciences

Internal Systems

Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (ACSSU175)

- describing how the requirements for life (for example oxygen, nutrients, water and removal of waste) are provided through the coordinated function of body systems such as the respiratory, circulatory and skeletal systems.
- explaining how body systems work together to maintain a functioning body using models, flow diagrams or simulations

Ecosystems

Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)

- exploring interactions between organisms such as predator/prey, parasites, competitors, pollinators and disease
- examining factors that affect population sizes such as seasonal changes, destruction of habitats, introduced species
- considering how energy flows into and out of an ecosystem via the pathways of food webs, and how it must be replaced to maintain the sustainability of the system

Nature and development of science

Scientific understanding, including models and theories, are contestable and are refined over time through a process of review by the scientific community (ACSHE157)

- investigating how models can be used to predict the changes in populations due to environmental changes,

Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries (ACSHE158)

- considering how the development of imaging technologies have improved our understanding of the functions and interactions of body systems

Use and influence of science

People can use scientific knowledge to evaluate whether they should accept claims, explanations or predictions (ACSHE160)

- describing how science is used in the media to explain a natural event or justify actions
- considering the impacts of human activity on an ecosystem from a range of different perspectives

The values and needs of contemporary society can influence the focus of scientific research (ACSHE228)

- investigating how scientific and technological advances have been applied to minimising pollution from industry
- investigating the work of Australian scientists

Science you should already know from last year, Year 8 Biological Sciences

Cells are the basic units of living things and have specialised structures and functions (ACSSU149) &

Multi-cellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce (ACSSU150)