

**Sample Course Outline:**  
**Grade 6, Unit 2 – Life Science (Classification of Organisms)**  
 (Mid-September to Mid-November) (2010/11)

This unit will investigate the science of Taxonomy and how it is useful in the field of Zoology and Botany

**Content:**

- Introduction to Classification
- Definition and History of Taxonomy
- The Five Kingdoms
- The 7 Levels of Classification and Nomenclature
- Survey of the invertebrate phyla
- Special focus on:
  - Insects
  - Arachnids
  - Crustaceans

<b>Planning for Assessment (Teaching Strategies/ Learning Experiences)</b>	<b>PLO Objectives Achieved (Science K-7, IRP 2005)</b>
<ul style="list-style-type: none"> <li>• Introduction of the concept of classification through lab on “why classify” (also allows for introduction of how do to a lab report)</li> <li>• Notes on Linneaus and his contributions as the founder of Taxonomy. Includes discussion on Greek and Latin Nomenclature system</li> <li>• Chart activity on the 5 Kingdoms where students gather data from given sources on each Kingdom and complete a visual representation of all 5 Kingdoms including pictures/examples of each.</li> <li>• Notes and Fun Activity on learning the Seven Levels of Classification (Kingdom – Species)</li> <li>• Introduction to creating concept maps as a tool to help collect data from the textbook on different invertebrate phyla</li> <li>• Creating their own insects to show understanding of what makes an insect/Arthropod fall into that classification</li> <li>• Comparison of Insect Metamorphosis (Complete and Incomplete) in chart for.</li> <li>• Charting Spider examples to compare different spiders and understand what</li> </ul>	<p><b><i>Under PROCESSES OF SCIENCE</i></b></p> <ul style="list-style-type: none"> <li>• manipulate and control a number of variables in an experiment</li> <li>• organize and interpret information in simple tables and graphs</li> </ul> <p><b><i>Under LIFE SCIENCE: DIVERSITY OF LIFE</i></b></p> <p>LS1 - demonstrate the appropriate use of tools to examine living things that cannot be seen with the naked eye</p> <p>LS2 - analyse how different organisms adapt to their environments</p> <p>LS3 - distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms: Plantae, Animalia, Monera, Protista, Fungi</p> <p><b><i>Under ENGLISH LANGUAGE ARTS</i></b></p> <p>A1 use speaking and listening to interact with others for the purposes of</p> <ul style="list-style-type: none"> <li>– contributing to group success</li> <li>– discussing and comparing ideas and opinions (e.g., debating)</li> <li>– improving and deepening comprehension</li> </ul> <p>A5 select and use <b>strategies</b> when expressing and presenting ideas, information, and feelings, including ...accessing prior knowledge, generating ideas ...organizing information ..</p> <p>A7 demonstrate enhanced vocabulary knowledge and usage</p> <p>A9 use speaking and listening to improve and extend thinking,</p>

<p>separates them</p> <ul style="list-style-type: none"> <li>• Crustacean Cartoon/ story in which students are asked to portray 4 key facts about 4 different Crustaceans in a story or cartoon format</li> <li>• Video on Crustaceans “Claws”</li> <li>• Video on Invertebrates</li> <li>• Coral reef activity where students are presented with facts on coral reef importance to the environment and threats to the existing reefs. Students will make a poster to “Save the Reef” using this information</li> <li>• Students will make a collection of local plants and will use resource books and dichotomous keys to classify the plants and group their collections. Time will be spent on basic plant anatomy by drawing a general diagram of each plant parts labeling and describing the diagram.</li> </ul>	<p>by questioning and speculating, acquiring new ideas, analysing and evaluating ideas...</p> <p>B2 read <b>fluently</b> and demonstrate comprehension of <b>grade-appropriate</b> information <b>texts</b>, with some specialized language, including non-fiction books, textbooks and other instructional materials...appropriate web sites, instructions and procedures</p> <p>B8 respond to selections they read or view, by expressing opinions and making judgments supported by explanations and evidence...</p> <p>C1 write a variety of clear, focussed <b>personal writing</b> for a range of purposes and audiences that demonstrates connections to personal experiences, ideas, and pinions, featuring ...</p> <p>C2 write a variety of effective <b>informational writing</b> for a range of purposes and audiences that communicates ideas to inform or persuade, featuring ...</p> <ul style="list-style-type: none"> <li>– clearly developed <b>ideas</b> by using focussed and useful supporting details, analysis, and explanations</li> <li>– a <b>voice</b> demonstrating an appreciation and interest in the topic</li> <li>– an <b>organization</b> with an inviting <b>lead</b> that clearly indicates the purpose, and flows smoothly with logically sequenced paragraphs or sections to a satisfying conclusion that summarizes the details</li> </ul> <p>C4 create meaningful visual representations for a variety of purposes and audiences that communicate personal response, information, and ideas relevant to the topic, featuring development of <b>ideas</b> by ... [providing] information ... [and] <b>organization</b> in which key ideas are evident</p> <p>C5 select and use <b>strategies</b> before writing and representing, including ... analysing examples of successful writing and representing in different <b>forms</b> and <b>genres</b> to identify key criteria, developing class generated criteria</p> <p><b>Under MATH</b></p> <p>B2 represent and describe patterns and relationships using graphs and tables [C, CN, ME, PS, R, V]</p>
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### Achievement Indicators Leading to Evaluation:

- Compare lab report exemplars with own (co-create rubrics for writing lab reports)
- Classification labs will be collected and evaluated on neatness, content, and proper lab format
- In groups, collect magazine / digital / internet images and classify according to 5 kingdoms (with emphasis on Canada), labeling internal and external features (*Assessment for Learning.*)
- 5 kingdoms charts will be collected and evaluated according to students completing each Kingdom with name, characteristics, and visual examples. Neatness will also be considered. (Global examples; then compare to Canada)
- Insect creations will be evaluated according to criteria set down and displayed

- Crustacean story will be collected and checked for creativity and content on 4 crustaceans
- Short open notes video quizzes will be given on each video. Students create short powerpoint – put in own words. (*Assessment for Learning.*)
- Coral reef posters will be graded based on color and effect of presentation
- Quizzes will be given on notes and information at 3 week intervals (*Assessment as Learning.*)
- A unit test will be given testing all content covered both in notes and creative activities (*Assessment of Learning*)
- Plant collections (labeled, categorized) will be evaluated and shared with the class.

**Resources:**

- Worksheets on 7 levels, Taxonomy, Insects, Spiders, and Coral Reefs
- Text - Chapter 1
- Internet sites
- Videos “Claws and “Invertebrates”
- 5 Kingdoms Datasheets
- Concept map info sheet
- Resources on regional plant species