**Teaching and Learning Program for the Elements**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **T:\Office\Graham Moore\jpeg sentral logo.jpg** | **Teaching and Learning Program** | | | | | | | | | | | | | | |
| **Title/Type of Unit: Chemistry and Matter**  **Program Risk Level: High** | | | | | | | | | | **Duration: 10 weeks**  **By:** | | | | |
| **Syllabus Outcomes**  **Stage** | *A student:*  SC5-3VA demonstrates confidence in making reasoned. Evidence based decisions about the current and future use and influence of science and technology, including ethical considerations  SC5-8WS applies scientific understanding and critical thinking skills to suggest possible solutions to identified problems  SC5-16CW explains how models, theories and laws about matter have been refined as new scientific evidence becomes available  SC5-17CW discusses the importance of chemical reactions in the production of a range of substances, and the influence of society on the development of new materials | | | | | | | | | | | | | | |
| **Connectedness**  **Why does this learning matter?** | **Students learn to:**   * Respect the use of chemicals * Use science equipment appropriately * Identify problems and solve them using basic scientific knowledge | | | | | | | **Students learn about:**   * How different chemicals mix with others * The dangers around mixing certain chemicals * How chemicals influence society | | | | | | | |
| **Background and Key Ideas** | Key ideas  Students extend their knowledge in science through practical experiments  Follow up through worksheets and ICT | | | | | | | | | | | | | | |
| **Literacy Continuum** | Reading Texts | Comprehension | | Vocabulary Knowledge | | Aspects of Writing | | | Aspects of Speaking | | | Phonics | Phonemic Awareness | | Concepts About Print |
| Students extend their vocabulary based around new scientific words  Stage 4: Cluster 8  Stage 5: Cluster 10 | | | | | | | | | | | | | | |
| **Numeracy Continuum** | Counting Sequences | | Counting as Problem Solving | | Pattern and Number Structure | | Place Value | | | Multiplication and Division | | | | Fraction Units | Length, Area and Volume |
| Numeracy concepts are not the emphasis of this program although measurement in regards to volume could be considered | | | | | | | | | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quality Teaching** | | | | |
| **Intellectual Quality** | | **Quality Learning Environment** | **Significance** | |
| * IQ1 Deep Knowledge * IQ2 Deep Understanding * IQ3 Problematic Knowledge * IQ4 Higher-order Thinking * IQ5 Metalanguage * IQ6 Substantive Communication | | * QLE1 Explicit Quality Criteria * QE2 Engagement * QE3 High Expectations * QE4 Social Support * QE5 Students’ Self-regulation * QE6 Student Direction | * S1 Background Knowledge * S2 Cultural Knowledge * S3 Knowledge Integration * S4 Inclusively * S5 Connectedness * S6 Narrative | |
| **Teaching and Learning Lesson Overview** | | | | |
| **The Elements of Learning & Achievement**      F:\Mock ups\Square elements\Numeracy.jpg | Week 1  What are Chemical elements P2  Practical  Oil Fire Demo and H2O balloon  Week 2  What makes particles move P1  Practical  Bi-Carb soda and chemical rockets  Worksheet: [Pgs,1-2](file:///\\Detnsw.win\5583\Faculty\Teacher\2016%20Programs\Term%202\Stage%205\Science\Worksheets.pdf)  Week 3  Chemical Reactions  Making Oobleck  Worksheet: [Oobleck](file:///\\Detnsw.win\5583\Faculty\Teacher\2016%20Programs\Term%202\Stage%205\Science\Oobleck.pdf)  Week 4  What is soundwaves and & how do we measure them  Rubens tube  Week 5  Chemical Reactions  Making Slime  Throughout the program work through the booklet about [chemical reactions](file:///\\Detnsw.win\5583\Faculty\Teacher\2016%20Programs\Term%202\Stage%205\Science\Worksheets.pdf) | | | **Aboriginal 8 Ways of Learning**  *The following ways of learning are incorporated throughout the program through pedagogical practices*  4_symbol.jpg  Symbols & Images  7_deconstruct.jpg  Deconstruct/ Reconstruct    Land Links    Story Sharing    Non-Verbal |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Special Needs Adjustments** | | | | **School to Work** | | |
| Smaller classes, higher supervision  Pair students appropriately | | | |  | | |
| **Assessments** | | | | | | |
| Ongoing throughout unit | | | | | | |
| Roles and Responsibilities | | | | | | |
| Teacher | | SLSO | | | Student | |
| Behaviour management  Encourage engagement  Work through booklet | | Encourage engagement  Assist with equipment | | | Engage in experiments  Be respectful to Prairiewood staff  Use safety equipment appropriately | |
| **Risk Assessment – Dorchester ETU only** | | | | | | |
| **Resources** | **Safety Strategies** | | **Identified Hazards** | | | **Control Strategies** |
|  |  | |  | | |  |

|  |  |
| --- | --- |
| **Teacher Evaluation**  **Comments / Variations** | |
|  | |
| **Date Commenced**: | **Date Finished**: |
| **Teachers Signature**: | **Assistant Principals Signature**: |