**Assessment Ideas for Science**

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| **Type of Assessment** | **What It Assesses** | **What It Looks Like in**  **the Science Classroom** |
| **Observation Checklists**  (A list of desirable  behaviors that students  exhibit over time) | Dispositions  Behaviors  Ways of thinking, acting, and interacting  Progress or task completion | Student works well in  a cooperative learning group  Student shows respect  for living things and  science equipment  Student exhibits honesty,  persistence, thinking,  and motivation  Student shares ideas  and helps colleagues  Student shows progress  in completing tasks |
| **Interviews and Dialog**  (Formal or informal  conversations between  teacher and student  throughout the learning  process) | Understanding of directions  Use of appropriate procedures  Accuracy of observations  or data  New questions | Student is “on task”  Student gives clarification  of data or written work  Student demonstrates  concept understanding  Student asks new, relevant  questions for further inquiry |
| **Learning Log**  **or Notebooks**  (Written and pictorial  records of student work:  thinking and  processing, action  plans, research  information and  data, conclusion,  connections,  extensions, and  so forth) | Rationale and thinking  Written descriptions of background information, action plans, observations, procedures, data, graphs, conclusions,  summaries, and other components  of investigations  Visuals that show thinking and meaning  Meaning and links to prior knowledge | Students record inquiry  questions, problems,  and hypotheses  Students describe prior  knowledge and predictions  Students show action  plans and describe processes  used in investigations  Data tables, graphs, charts, and  graphic organizers  are completed and accurate  Pictures, diagrams,  and illustrations show  concept understanding  Conclusions and summaries are  accurate  Students identify links  to self, technology,  and prior knowledge  Students describe next steps and  show new questions |
| **Teacher-Made Tests**  (Force choice or open  response questions that  enable students  to show knowledge  or understanding of  important concepts and  skills) | Vocabulary and concept understanding  Relationships between concepts  Knowledge or understanding of skills | Students will show  understanding of concepts,  skills, and thinking through the  following:   * Forced choice and   open response questions   * Interpretations of graphs,   drawings, or visuals   * Data analysis * Concept applications * Written explanations of solutions to problems |
| **Products and Projects**  (A multidimensional  approach to learning  often involving the  design and building  of something new;  a novel or alternative  approach to learning  involving research or  problem solving) | Ability to access and use  new information purposefully  Ability to design or develop  a product that relates  to a key concept  Show creativity and ability  to make applications  Problem-solving skills | Students create brochures or posters  or other visuals requiring them to  access and use new information  Students write reports based on  research  Students create products such as  models, mobiles, or dioramas that  apply concepts  Students solve problems using  technological designs |
| **Performance Tasks**  (Paper-and-pencil  tasks and hands-on  activities that require  students to apply or  demonstrate learning) | Ability to apply learning  to new problem  Understanding of concepts  Use of process and  thinking skills  Logical reasoning | Students apply concepts and skills  through drawings and descriptions  to new problems  Students demonstrate  understanding of concepts and  skills in a variety of ways |
| **Portfolios**  (Collections of student  work over time; work  provides evidence  of levels of concept  understanding,  skills, dispositions, and  thinking) | Shows concept  understanding and skill  development  Work samples gathered over time show change  in thinking and ability  to solve problems | Notebook entries, lab reports, and  summaries show concept  understanding, development of  skills, and thinking and reasoning  Student is able to apply concepts  through inventions, projects, and  products  Work shows scientific thinking and  problem solving |
| **Criterion**  **Referenced Tests**  (Questions aligned with  instructional objectives/outcomes;  include multiple  questions  on a single concept) | Determine levels of  understanding of concepts  and skills related to the  school curriculum | Students show concept  understanding through teacher made  tests designed around taught  curriculum  Students score well on benchmark  tests based on curriculum |
| **Norm Referenced Tests**  (High stakes tests;  questions related  to provincial or national  goals and outcomes) | Curriculum based concepts  and principles  Thinking and process skills | Student scores on commercially  produced tests (Basic Skills;  Advanced Placement; International  Student scores on provincial tests |