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| **opportunity for growth** | **performance meets standard of learning (Grade 8)** | **advanced** |
|  | Big Ideas and Content at a glance   * Life processes are performed at cellular level * The behaviour of matter: KMT and atomic theory * Energy transferred as both a particle and a wave * Theory of plate tectonics: geological processes * characteristics of life * cell theory and types of cells * photosynthesis and cellular respiration * relationship of micro-organisms with living things:   + basic functions of immune system   + vaccination and antibiotics   + impacts of epidemics and pandemics on humans * kinetic molecular theory (KMT) * atomic theory and models * protons, neutrons, and quarks * electrons and leptons * types/effects of electromagnetic radiation * light: properties, behaviours, ways of sensing * plate tectonic movement * major geological events of local significance * First Peoples - local geological formations & events * layers of Earth |  |
| Learning: Takes Time and Patience, Experiential, Embedded in Story, . . . | | |
|  | Questioning and predicting   * Demonstrate a sustained intellectual curiosity * Make observations * Identify a question to answer or a problem to solve through scientific inquiry * Formulate alternative “If…then…” hypotheses * Make predictions about findings of their inquiry |  |
|  | Planning and conducting   * Collaboratively plan range of investigation types * Measure and control variables through fair tests * Observe/measure/record qualitative/quant. data * Appropriate SI units and simple unit conversions * Follow safety and ethical guidelines |  |
|  | Processing and analyzing data and information   * Experience and interpret the local environment * Apply First Peoples perspectives & knowledge, other ways of knowing, and local knowledge * Represent relationships in data various ways * Seek patterns and connections in data * Identify relationships and draw conclusions |  |
|  | Evaluating   * Reflect on methods (incl. controls & data quality) * Identify sources of error: suggest improvements * Awareness of assumptions and bias * Understanding and appreciation of evidence * Evaluate claims in secondary sources * Consider social/ethical/environ. implications |  |
|  | Applying and innovating   * Contribute to care for self, others, community * Co-operatively design projects * Transfer and apply learning to new situations * Generate and introduce new or refined ideas |  |
|  | Communicating   * Communicate ideas, findings, and solutions * Express & reflect on experiences & perspectives |  |