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| **Grade 4 Science****Curricular Competencies (Do)**In science, the curricular competencies introduced in K are expanded in a developmental continuum focused on the doing of science. | **Big Ideas (UNDERSTAND)** |
| All living things sense and respond to their environment. | Matter has mass, takes up space, and can change phase. | Energy can be transformed. | The motion of Earth and the moon cause observable patterns that affect living and non-living systems. |
| **Content (KNOW)** |
| sensing and responding:- humans- other animals - plants | biomes as large regions with similar environmental features  | phases of matter  | the effect of temperature on particle movement  | energy has various forms *(10 forms)* | energy is conserved *(energy cannot be created but can be changed)* | devices that transform energy *(i.e. glow stick, flashlight)* | local changes caused by Earth’s axis, rotation, and orbit *(day, night, phases of the moon)* | the effects of the relative positions of the sun, moon, and Earth including local First Peoples perspectives |
|  |  | *Inquiry Question* | *Inquiry Question* | *Inquiry Question* | *Inquiry Question* |
| Questioning and predicting | Demonstrate curiosity about the natural world. |  |  |  |  |  |  |  |  |  |
| Observe objects and events in familiar contexts. |  |  |  |  |  |  |  |  |  |
| Identify questions about familiar objects and events that can be investigated scientifically. |  |  |  |  |  |  |  |  |  |
| Make predictions based on prior knowledge. |  |  |  |  |  |  |  |  |  |
| Planning and conducting | Suggest ways to plan and conduct an inquiry to find answers to their questions. |  |  |  |  |  |  |  |  |  |
| Consider ethical responsibilities when deciding how to conduct an experiment. |  |  |  |  |  |  |  |  |  |
| Safely use appropriate tools to make observations and measurements, using formal measurements and digital technology as appropriate. |  |  |  |  |  |  |  |  |  |
| Make observations about living and non-living things in the local environment. |  |  |  |  |  |  |  |  |  |
| Collect simple data. |  |  |  |  |  |  |  |  |  |
| Processing and analyzing data and information | Experience and interpret the local environment. |  |  |  |  |  |  |  |  |  |
| Sort and classify data and information using drawings or provided tables. |  |  |  |  |  |  |  |  |  |
| Use tables, simple bar graphs, or other formats to represent data and show simple patterns and trends. |  |  |  |  |  |  |  |  |  |
| Compare results with predictions, suggesting possible reasons for findings. |  |  |  |  |  |  |  |  |  |
| Evaluating | Make simple inferences based on their results and prior knowledge. |  |  |  |  |  |  |  |  |  |
| Reflect on whether an investigation was a fair test . |  |  |  |  |  |  |  |  |  |
| Demonstrate an understanding and appreciation of evidence. |  |  |  |  |  |  |  |  |  |
| Identify some simple environmental implications of their and others’ actions. |  |  |  |  |  |  |  |  |  |
| Applying andinnovating | Contribute to care for self, others, school, and neighbourhood through individual or collaborative approaches. |  |  |  |  |  |  |  |  |  |
| Co-operatively design projects. |  |  |  |  |  |  |  |  |  |
| Transfer and apply learning to new situations. |  |  |  |  |  |  |  |  |  |
| Generate and introduce new or refined ideas when problem solving. |  |  |  |  |  |  |  |  |  |
| Communicating | Represent and communicate ideas and findings in a variety of ways, such as diagrams and simple reports, using digital technologies as appropriate. |  |  |  |  |  |  |  |  |  |
| Express and reflect on personal or shared experiences of place. |  |  |  |  |  |  |  |  |  |