



26 June 2018

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**Honorable David Eggen  
Alberta Minister of Education**

**Re: Our Feedback on the Draft K-4 Curriculum**

Dear Minister Eggen –

Hope June is treating you well, and you have been able to enjoy some outdoor time with your family in this fine summer weather!

First, my thanks for the invitation proffered to us by your staff to attend a full day workshop on the K-4 curriculum in Edmonton last month. I commend you and them on a fine consultative process and some equally fine content in the new draft curriculum! We were able to bring half a dozen talented staff and colleagues skilled in environmental, energy, and outdoor education. I append our detailed comments, and will highlight just three here:

**There should be more energy education in the new curriculum.** Teaching students about energy is an essential, appropriate, and necessary response to climate, one that can readily be embraced by all teachers.

**There should be more education around conservation in the new curriculum.** The ethic of conservation is a critically important value that students should be encouraged to embrace at an early age, be it conservation of natural resources, or energy.

**There should be more emphasis on taking students outside.** Our society needs citizenry who are connected to nature and who care about this planet—research tells us that taking students outside, particularly at an early age, is by far and away the best way of achieving this. The procedural outcomes in the new curriculum should support student learning in an outdoor setting – for example, repeated visits to a corner of the schoolyard, to observe nature through the changing seasons.

Please feel free to contact me with any further questions.

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**K to 4 Curriculum Review**  
**Comments from Alberta Council for Environmental Education - including**  
**comments from other environmental educators present at**  
**Alberta Education's Curriculum Validation session for non-profits, May 25<sup>th</sup>, 2018**

**What we like:**

- We like the direction of the framework and the essential understandings provide the opportunity for teachers to deepen students' environmental literacy.
- We especially like the following essential understandings
  - "Exploring dynamic interconnections in the world and universe strengthen our understanding of relationships" as it is cross-curricular with connections in all the subject areas.
  - "Investigating the changing Earth and its connections to the universe develops our understandings of Earth's ability to support and sustain life."
- The language of the learning outcomes, conceptual and procedural knowledge helps ensure that teachers will do much more hands-on, experiential learning – this provides opportunities for teachers to teach about the environment by being in their natural environment and not just in the classroom.
- There are wonderful opportunities for creating connections and for stewardship of land and water.
- That you made the connection to gardening, growing and gathering as part of healthy nutrition choices in the wellness essential understanding – "Investigating change can inform decision-making..."

**What we think could be improved:**

- **Missing:** Energy is really missing. It looks like this will develop later in "Investigating the interactions of the physical world..." But other than an understanding of the sun as a source of energy there is really no other reference for K to Grade 4 students to understand that energy is such an important aspect of our daily lives/quality of life, that we have choices over the sources of energy we use, and that there are impacts to these choices. The world is moving towards a low-carbon future, and this section should reflect this for K-4. We are in the midst of an energy transition and students need to be familiar with all energy sources and be prepared for their energy future that will use a blend of energy sources with much more wind and solar. They also need to learn how energy conservation can reduce greenhouse gas emissions and save money. Climate change requires this of us as a species - and energy conservation is a very positive and proactive thing that students can do that helps, and that gives them hope for the future. See below for suggestions for conservation. A guiding question could be – How do we adapt and prosper in a low-carbon world? We understand that energy is less tangible and a harder concept for the early years but the basic understanding of energy in our daily lives and that we can take actions to conserve energy can be done (e.g. transportation to school could be one area and ties with Gr.

3 travel in community requires safe behaviours – walking is healthier, safer and conserves energy).

- **Missing:** We believe it is essential for students to be oriented to conservation and be given a chance to practice conservation and “flex the muscle” when it comes to conservation of resources such as paper, energy, etc. This concept and theme fits perfectly under the Active Citizenship essential understanding. We view this as an essential feature of education, as these students will increasingly perceive and be affected by environmental challenges and issues in Alberta. We view it as essential that this conservation value be instilled in students – and kindergarten to grade 4 children are at the ideal level to make these actions a lifelong habit. There is ample precedence for this, as it is in the existing curriculum [Recycling, etc.]. When a student is oriented to the importance of conservation, and given a chance to practice the conservation in a real way, they are left with the knowledge that they can make a difference, which gives them hope for the future, and an increased sense of agency in their lives.
- “Investigating the changing Earth and its connections to the universe develops our understandings of Earth’s ability to support and sustain life.” – this has the opportunity to cover concepts of sustainability and we hope that helping Alberta create a sustainable future will be a thread through this essential understanding.
- Overall there seems to be some very subject specific essential understandings. It would be nice to see more essential understandings that could be cross-curricular while still addressing some of the subject specific content. It still seemed like a lot of content and not great connections across the content. In some places, the guiding question was a big jump to the essential understanding as the guiding question got very specific (almost like we need to teach this at this grade and we’ll make it fit here).
- Children connect best to concepts when the learning is contextual and 'where they live.' There were some specific connections to local and place but it would be great to see more words in this curriculum that ground students in this way: 'in their local area,' 'in their community,' 'in Alberta.' There is an increase in the opportunities for teachers to do environmental learning in nature but it still allows for students to learn about plants, animals, rocks, soils in the classroom without ever going outside to experience these. By adding words, “observe plants and animals in an outdoor environment” would remove this ambiguity. We know you don’t want to say ‘how’ to teach but this is an integral part of learning about plants and animals.
- We like the use of “observing” and we encourage you to add language about returning to the same place for observations. If students are constantly brought to new locations it does not allow for in-depth observations for noticing changes (e.g. seasonal changes, man-made changes, etc.).
- Use of anthropocentric bias in many conceptual knowledge bullets (e.g. Gr 4 – people hold differing views on the use and management of land and natural resources – suggestion “...differing views regarding land and natural resources”. In Grade 3 water unit, water is an essential resource for all living species - this critical point should be mentioned.

- Stressing that we are part of our environment and are a living thing and that we rely on air, water and land for our basic needs should be strengthened. They are definitely in the learning outcomes, conceptual and procedural knowledge but the connection of our dependence on these for our survival is weak. (e.g. Gr.1 – people are connected to nature through air, food and water – we are part of nature and rely on air, food and water to meet our basic needs).
- Wellness essential understanding “Investigating change can inform decision-making...” the first learning outcome references the factors of sleep, rest, nutrition and physical activity as part of healthy body and brain development. Another factor should be included and that is spending time in nature as it does contribute to healthy living, reducing stress etc. (based on research). This is the same for the “Active living contributes to a healthy quality of life for self...” Daily physical activity and time in nature – both have health benefits.
- Science essential understanding, “Investigating the changing Earth and its connections...” Grade 3 – Compare water sources on Earth’s surface – you could delete the word ‘surface’ as you reference ground water and this is not on the surface. Gr. 1 – weather influences our activities – we’re concerned that this language will continue to lead to sedentary lifestyles – it is too cold or wet to go outside – weather influences the type of activities and we need to dress appropriately for different types of weather.
- “Exploring dynamic interconnections....” - Quality of life is shaped by factors such as economic, social, cultural and political factors – our environment is also a factor (droughts, floods, etc.). Needs and wants – maybe this develops in later grades but need to emphasize that our needs and wants differ around the world; our basic needs – food, water and air are essential so adding environment to ‘people, places and things address needs’.
- Essential Understanding – “Investigating the interactions of the physical world facilitates understandings that can be a basis for discovery and innovation.” This seems to be about the built physical world. Either removing physical or add natural would then allow the exploration of the natural world – learning from the natural world when it comes to structures is also important and allows biomimicry to be brought in for the later grades e.g. how do trees withstand forces and how can that understanding be used to help us build structures that can also withstand forces?