Here’s how the SLS: Student Leadership in Sustainability materials developed by Be The Change Earth Alliance (BTCEA) support some of the Big Ideas and Learning Standards of this course.

Under each Curricular Competency we have indicated the SLS COMPONENTS that foster the development of that specific competency.

Under the Ministry’s Content column we have indicated the SLS CONTENT, in either the teachers’ lesson materials or the students’ Action Packs that addresses the Ministry’s learning standards.

**CORE COMPETENCIES**

**COMMUNICATION** The communication competency encompasses the set of abilities that students use to impart and exchange information, experiences and ideas, to explore the world around them, and to understand and effectively engage in the use of digital media.

**THINKING** The thinking competency encompasses the knowledge, skills and processes we associate with intellectual development. It is through their competency as thinkers that students take subject-specific concepts and content and transform them into a new understanding. Thinking competence includes specific thinking skills as well as habits of mind, and meta-cognitive awareness.

**PERSONAL & SOCIAL** Personal and social competency is the set of abilities that relate to students’ identity in the world, both as individuals and as members of their community and society. Personal and social competency encompasses the abilities students need to thrive as individuals, to understand and care about themselves and others, and to find and achieve their purposes in the world.

**SLS COMPONENTS** The entire inquiry based SLS program is designed to foster these competencies. These specific learning goals are outlined in each Action Pack. You can assess how well these goals have been met by having students complete their Self Evaluation found in the Teacher’s Kit for each Value Modules. Each specific component of SLS engages with one or more core competency.

**BIG IDEAS**

Science informs our decisions and impacts our daily lives

Science helps explain how natural changes and human choices affect global systems

**Learning Standards**

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<tr>
<th>Curricular Competencies</th>
<th>Content</th>
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<td><strong>Students are expected to be able to do the following:</strong></td>
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<tr>
<td>Questioning and predicting</td>
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<tr>
<td>- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest</td>
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**SLS COMPONENTS** Each Action Pack supports students as they undertake a thorough investigation of global sustainability issues. They are designed to support student learning as opposed

**Students are expected to know the following:**

**Personal/Home Science**

- health science:
  - nutrition and lifestyle
  - non-Western health practices, including First Peoples health and healing practices

**SLS CONTENT**
Correlating SLS: STUDENT LEADERSHIP IN SUSTAINABILITY materials to BC MINISTRY OF EDUCATION SCIENCE FOR CITIZENS 11 Curriculum BTCEA Draft

Planning and Conducting

- Collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)

**SLS COMPONENTS**
The ‘Global Research’ and ‘Local Activity’ components of each action pack prompt students to systematically investigate the Action Pack topic. The last part of the ‘Local Activity’ component invites students to compare their activity results with those of their action circle peers and to draw conclusions from the differences and similarities.

- Assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods and those of others

**SLS COMPONENTS**
The ‘Critical Thinking’ component of each action pack prompts students to consider how their actions and the actions of others impact stakeholders involved with the topic of the Action Pack.

AND/OR

SLS Action Packs highlight the relevance, complexity and motivation of the real world to learning and encourage students to consider a broad range of issues when approaching solutions.

Processing and analyzing data and information

- Experience and interpret the local environment

**SLS COMPONENTS**
The ‘Local Activity’ component of each action pack guides students in collecting local knowledge, often with prompts to enter the field and develop a plan for local action.

All of the Value Health action packs focus on how our nutrition and lifestyle choices impact our health, communities, and environment. The following Action Packs facilitate exploration into how lifestyle practices impact individual, community and global health:

- C1 ‘Transportation’
- E5 ‘Local Economy’
- F1 ‘Health’
- F2 ‘Conscious Consumption’

**Local/Workplace Science**

- waste recycling and disposal:
  - industrial and workplace
  - recycling processes
  - transfer stations and landfills
  - impacts of personal choices

**SLS CONTENT**
The following action packs draw from themes concerning waste and the recycling process to address the impacts of personal choices and the prevailing attitude of “disposable culture”:

- B1 ‘Pre-cycling’
- B2 ‘Costly Trends’
- B3 ‘Disposables’
- B4 ‘Recycling’
- B5 ‘All packaged up’
- B7 ‘Organic Waste’
- F2 ‘Conscious Consumption’

**Global Science**

- agriculture practices and processes:
  - chemicals used in agriculture
  - environmental impacts
  - impacts of personal choices

**SLS CONTENT**
**SLS CONTENT**
Action Pack D5 ‘Nature Nurture’ encourages students to engage with their natural environment, and to reflect on the many processes that they observe.

- Apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information

**SLS COMPONENTS**
Each Action Pack includes Aboriginal Wisdom quotes which teach students about the perspectives of various indigenous groups and expose them to different ways of knowing.

- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence

**SLS COMPONENTS**
Scientific concepts can be applied to the conclusions made in the ‘Critical Thinking’ component of each Action Pack.

**SLS CONTENT**
The 3 ‘Myth vs. Science’ worksheets in the Climate Systems adaptation module are exercises for students to apply scientific concepts paired with evidence to refute false claims frequently made in the contemporary climate change debate

- Analyze cause-and-effect relationships

**SLS COMPONENTS**
The ‘Costs and Benefits’ section of the ‘Critical Thinking’ component of each action pack is an exercise of identifying the causal relationships that characterize the issue central to the student’s action pack topic.

**Evaluating**

- Evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions
- Describe specific ways to improve their investigation methods and the quality of the data
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources
- Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources

**SLS COMPONENTS**
The following Action Packs concern the agriculture industry and its far reaching implications for both social and environmental health:
- A2 ‘GMOs’
- A3 ‘Organics’
- A4 ‘Fresh and Local’
- A5 ‘The Story of Meat’
- F1 ‘Health’

- energy generation and needs:
  - production
  - economics
  - environmental impacts

**SLS CONTENT**
The following Action Packs support an educational inquiry into energy generation, the environmental implications of the industry:
- C3 ‘Bright Energy’
- C5 ‘Being Chill and Heating Up’
- C8 ‘Oil’
- F3 ‘Conservation’

- sustainability of resources:
  - impacts of personal choices
  - First Peoples worldview and sustainability

**SLS COMPONENTS**
The ‘Action Survey,’ ‘Local Activity’ and ‘My Actions’ components of each Action Pack are opportunities for students to evaluate the impact of their personal choices on the sustainability of resources. Every SLS lesson plan and each student Action Pack has an Aboriginal Wisdom quote relating to a specific sustainability issue.
The ‘So What?’ section of the ‘Local Activity’ component of each action pack prompts students to compare their activity results with their group members and to generate explanations for the similarities and differences. In-class lesson activities, such as the ‘Thermometer’ activity, provide a space for students to recognize how their perspective on the module topic differs from that of their peers. The ‘Current Events Questions’ found in the ‘Further Exploration’ of each Action Pack provides information for students to analyze any source in the Library of Links or relevant current events article for bias and completeness of information given.

- Connect scientific explorations to careers in science

**SLS COMPONENTS**
The ‘Further Explorations’ supplemental materials in each Action Pack includes a ‘Related Careers’ sheet outlining various professions, educational options, volunteer and work experience ideas, as well as career resources relating to the Action Pack. Also included is a ‘Related Careers Questions’ sheet that facilitates student career exploration.

- Consider social, ethical, and environmental implications of the findings from their own and others’ investigations
- Assess risks in the context of personal safety and social responsibility

**SLS COMPONENTS**
The ‘Critical Thinking’ component of every Action Pack prompts students to identify stakeholders in the issues central to the Action Pack topic, to reflect on how certain actions and changes in this context impact each of these stakeholders, and to identify one’s own responsibility to these stakeholders.

- Critically analyze the validity of information in primary and secondary sources and evaluate the approaches used to solve problems

**SLS COMPONENTS**
The ‘Costs & Benefits’ section of each Action Pack asks students to apply their new knowledge from a more systemic perspective and think critically about the various stakeholders involved in addressing the issues at stake in the Action Pack topic.

**Applying and innovating**
- Contribute to care for self, others, community, and world through individual or collaborative approaches
- Co-operatively design projects with local and/or global connections and applications
• Contribute to finding solutions to problems at a local and/or global level through inquiry
• Implement multiple strategies to solve problems in real-life, applied, and conceptual situations

**SLS COMPONENTS**
SLS applies an inquiry-based approach to guide students in collaborating on their Action Pack topic and applying their classroom learning and research in personal and local contexts. The ‘Action Survey’ which is completed at the outset of the Action Pack is an opportunity for students to set goals for action. The ‘Global Research’ component of the Action Pack prompts students to draw connections between the local and global dimensions of the Action Pack Topic. The ‘Local Activity’ component of the Action Pack is the opportunity for students to independently and collaboratively develop and implement strategies for action in their personal lives and in their communities.

**SLS CONTENT**
The Value Innovation module is a tool for student-directed learning through a feasibility study approach for collaborative real world projects.

**Communicating**
• Communicate scientific ideas, information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations

**SLS COMPONENTS**
The final Action pack assignment is to give a group presentation that conveys the activities and conclusions drawn from the Action Pack activities and that suggests ways classmates can take action.

• Express and reflect on a variety of experiences, perspectives, and worldviews through place

**SLS COMPONENTS**
When students form groups to work on Action Packs, every group creates ‘Circle Agreement’ to help students engage in a framework for open and respectful listening to diverse points of view. Opportunities to express diverse perspectives exist in the ‘Thermometer Activity,’ in a prompt at the end the ‘Local Activity’ component of the Action Pack where students compare their results within their group, and in the final presentation. Opportunities to reflect on the impact of variety of worldviews and perspectives through place are the ‘Critical Thinking’ component of the Action Pack
and the ‘Current Events Questions’ supplemental activity in ‘Further Exploration’.

Please note: The instructions on where to find each SLS resource are for online navigation when signed in as a teacher. If you have printed out an SLS binder the resources are in either the Teacher’s Kit or Action Pack sections. Quite a few elements that are more fluid can only be found online.

**Be The Change Earth Alliance** is a BC based Canadian charity founded in 2005 on the belief that global issues are intrinsically tied to our own values and actions. BTCEA co-creates curriculum with a consortium of teachers that equip and motivate Canadian youth to develop critical thinking and creative communication skills, build global awareness and proactively engage in positive solutions for a sustainable future.

**SLS: Student Leadership in Sustainability** has been developed in a 5 year iterative process of research and classroom testing to create teacher friendly lesson plans and student materials with age-appropriate language, actions, research links, and current pedagogical approaches to build civic leadership and engagement in making sustainable lifestyle choices. For each of the last 3 years SLS has been used by 4000+ students. School wide access to SLS is available through a Healthy Schools Network grant.

Contact BTCEA at 604-269-9874 or admin@betechangeearthalliance.org for more info.