**Core Competencies**

**Coding Quest** enriches student learning by adding coding to story and game creation in order to reflect changing technology and learning skills necessary for the future workforce. This includes Core Competencies like critical thinking, creativity, Personal Responsibility, collaboration, and communication. We recognize the need to prepare students for a variety of career paths by equipping them with skills that are globally recognized and universally applicable. Global Competencies are transferable skills students can apply cross circularly and in their own day to day activities, as both local and global citizens.

Our lessons have been created with Global Competencies as a core framework. Each module, and the lesson plans within them, tie into multiple core competencies as students work through the various steps of Coding Quest. Teachers can easily see which Core Competencies are in each lesson by checking the top of each lesson plan. Below, you will find a chart outlining what global competencies are in each lesson, a summary of each global competency, and student descriptors for specific examples.



**Core Competency / Lesson Chart**

This chart outlines which core competencies are incorporated into each lesson.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Critical Thinking &**  **Problem Solving** | **Creative Thinking** | **Personal Responsibility** | **Collaboration** | **Communication** | **Social Awareness** |
| **Introduction to Coding Quest & Scratch 3.0** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** |
| **Building a Storyline & Creating Action** | ***X*** |  | ***X*** | ***X*** | ***X*** | ***X*** |
| **Game Planning** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** |
| **Game Coding & Instructions** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** |
| **Virtual Showcase** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** |

**Core Competencies Overview**

The following are summaries of the Core Competencies as they relate to ADST instruction and how each is achieved.

|  |  |  |
| --- | --- | --- |
| Critical Thinking and Problem Solving | Creative Thinking | Personal Responsibility/Self-Directed Learning |
| People who think critically and reflectively are analytical and investigative, willing to question and challenge their own thoughts, ideas, and assumptions and challenge those of others. They reflect on the information they receive through observation, experience, and other forms of communication to solve problems, design products, understand events, and address issues. A critical thinker uses their ideas, experiences, and reflections to set goals, make judgments, and refine their thinking | Innovation, creativity, and entrepreneurship involve the ability to turn ideas into action to meet the needs of a community. The capacity to enhance concepts, ideas, or products to contribute new-to-the-world solutions to complex economic, social, and environmental problems involves leadership, taking risks, independent/unconventional thinking and experimenting with new strategies, techniques, or perspectives, through inquiry research. Entrepreneurial mindsets and skills involve a focus on building and scaling an idea sustainably. | People who are personally aware and responsible demonstrate self-respect, persevere in difficult situations, and exercise responsibility. They understand that there are consequences for their decisions and actions. A personally aware and responsible individual takes steps to ensure their well-being, sets goals and monitors progress, regulates emotions and manages stress, and recognizes and advocates for their own rights. Self-reflection and thinking about thinking (metacognition) promote lifelong learning, adaptive capacity, well-being, and transfer of learning in an ever-changing world. |
| Collaboration | Communication | Social Awareness/Positive Personal and Cultural Identity |
| Collaboration involves the interplay of the cognitive (including thinking and reasoning), interpersonal, and intrapersonal competencies necessary to participate effectively and ethically in teams.  Ever-increasing versatility and depth of skill are applied across diverse situations, roles, groups, and perspectives in order to co-construct knowledge, meaning, and content, and learn from, and with others in physical and virtual environments. | Communicating encompasses the set of abilities that people use to impart and exchange information, experiences, and ideas; to explore the world around them; and to understand and effectively use communication forms, strategies, and technologies. Communicating provides a bridge between peoples’ learning, their personal and social identity, and the world in which they interact.  People who communicate effectively use their skills and strategies intentionally to ensure understanding their audience. They communicate in an increasing variety of contexts, for a variety of purposes, and often with multiple audiences. | Social Awareness involves understanding diverse worldviews and perspectives in order to address political, ecological, social, and economic issues that are crucial to living in a contemporary, connected, interdependent, and sustainable world. It also includes the acquisition of knowledge, motivation, dispositions, and skills required for an ethos of engaged citizenship, with an appreciation for the diversity of people, perspectives, and the ability to envision and work toward a better and more sustainable future for all. |

**Core Competencies Learning Descriptors**

Use the following Learning Descriptors to check that your students are meeting the overall expectations for each Core Competency. These are slightly modified from the British Columbia Ministry of Education Standards to specifically include examples related to ADST instruction.

|  |  |  |
| --- | --- | --- |
| Critical and Reflective Thinking | Creative Thinking | Personal Responsibility/Self-Directed Learning |
| Students will solve meaningful, real-life, complex problems while they design and manage the various steps in their robot coding projects.  Students will engage in an inquiry process to solve problems as well as acquire, process, interpret, synthesize, and critically analyze information. They will make informed decisions and ensure what they’ve learned is expressed in their coding.  Students will see patterns, make connections, and transfer what they have learned from one situation to another, including in real world applications.  Students will construct, relate, and apply knowledge to all domains of life such as school, home, work, friends, and community. | Students formulate and express insightful questions and opinions to generate ideas for their own robot coding.  Students contribute solutions to complex economic, social, and environmental problems or to meet a need in a community in a number of ways including; enhancing concepts, ideas, or products through a creative process, taking risks in their thinking and creating, discovering through inquiry research, and by hypothesizing and experimenting with new strategies or techniques.  Students demonstrate leadership, initiative, imagination, creativity, spontaneity, and ingenuity in various forms during the coding course’s 3 lessons. | Students learn the process of learning (metacognition) (e.g., independence, goal-setting, motivation) and believe in their ability to learn and grow (growth mindset).  Students self-regulate in order to reflect on their thinking, experience, values, and critical feedback to enhance their learning and create a high quality final product. They also monitor the progress of their own learning through a Root Coding Booklet.  Students cultivate emotional intelligence to understand themselves and others while working in teams. They take the past into account to understand the present and approach the future.  Students develop personal, educational, and career goals and persevere to overcome challenges to reach goals. They adapt to change and show resilience to adversity.  Students manage various aspects of their life: physical, emotional (relationships, self-awareness), spiritual, and mental well-being |
| Collaboration | Communication | Social Awareness/Positive Personal and Cultural Identity |
| Students participate in teams by establishing positive and respectful relationships, developing trust and acting cooperatively and with integrity.  Students learn from and contribute to the learning of others by co-constructing knowledge, meaning, and content.  Students assume various roles on the team that mirror a real life process for block coding, respect a diversity of perspectives, and address disagreements and manage conflict in a sensitive and constructive manner.  Students network with each other and use an array of technological strategies appropriately to work with others. | Students communicate effectively in different contexts in oral, written and block code form through a variety of media.  Students communicate using the appropriate digital tools and create a positive digital footprint on the Root Coding app. Students ask effective questions to acquire knowledge, listen to, understand and ensure all points of view are heard, voice their own opinions, and advocate for ideas.  Students gain knowledge about a variety of languages and understand the cultural importance of language. | Students understand the political, ecological, economic, and social forces, their interconnectedness, and how they affect individuals, societies, and countries.  Students take actions and responsible decisions that support quality of life for all, now and in the future.  Students understand Indigenous histories, knowledge, contributions and inherent rights in Canada, learn from and with diverse people, develop cross-cultural understanding, and understand the forces that affect individuals, societies, and nations.  Students engage in local, national, and global initiatives and teach a positive difference through their coding plans.  Students contribute to society and to the culture of local, national, global, and virtual communities in a responsible, inclusive, accountable, sustainable, and ethical manner.  Students as citizens participate in networks in a safe and socially responsible manner. |

\*template provided by the Learning Partnership: <https://www.thelearningpartnership.ca/>

\*Framework is based on the British Columbia Ministry of Education’s guidelines. You can find the original here <https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/competencies/sub-competencies-and-profiles.pdf>

Modifications to align this document to BC’s Core Competencies done by Lesley Johnson

