

## Core Competencies

**‘Competencies’ and ‘learning outcomes’ are two related educational terms that may be defined as follows:**

**Competency:** A general statement that describes the desired knowledge, skills, and behaviours of a student completing a course. Competencies commonly define the applied skills and knowledge that enable people to successfully perform in professional, educational, and other life contexts.

**Learning outcome:** A very specific statement that describes exactly what a student will be able to do and written in a way so that it can be measured or assessed. It focuses on what the student is able to do at end of a course. Thus, learning outcomes are the basis for an assessment program that focuses on what a student can or should be able to do upon completion of a course.

### Core Competencies:

**Core Competencies** are sets of intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in deep learning. A primary product of deeper learning is the ability to know how, why, and when to use and transfer knowledge, including content knowledge, to answer questions and solve problems.

Students develop Core Competencies when they are engaged in study to meet the defined learning outcomes within a learning area. As such, they are an integral part of the curriculum. While they manifest themselves uniquely in each area of learning, the Core Competencies are often interconnected and are foundational to all learning.



The core competencies can be defined by three wide-ranging but overlapping groups of competencies that include:

- A. **Communication – interpersonal** (*involves expressing ideas and interpreting and responding to messages from others*)
- B. **Thinking - cognitive** (*involves reasoning and memory*)
- C. **Personal and Social – intrapersonal** (*involves the capacity to manage one's behaviour and emotions to achieve one's goals*)

<b>COMMUNICATION – interpersonal skills</b> 	<b>THINKING – cognitive</b> 	<b>PERSONAL &amp; SOCIAL – intrapersonal skills</b> 
<p>The <b>Communication Competency</b> encompasses the knowledge, skills, processes and outlooks we associate with interactions with others.</p> <p><b>THIS ENCOMPASSES:</b></p> <ul style="list-style-type: none"> <li>• Communicating</li> <li>• Collaborating</li> </ul>	<p>The <b>Thinking Competency</b> encompasses the knowledge, skills, and processes we associate with intellectual development.</p> <p><b>THIS ENCOMPASSES:</b></p> <ul style="list-style-type: none"> <li>• Creative Thinking</li> <li>• Critical and Reflective Thinking</li> </ul>	<p>The <b>Personal and Social Competency</b> is the set of abilities that relate to students' identity in the world, both as individuals and as members of their community and society.</p> <p><b>THIS ENCOMPASSES:</b></p> <ul style="list-style-type: none"> <li>• Personal Awareness/Responsibility</li> <li>• Social Awareness/Responsibility</li> </ul>

## A. COMMUNICATION – INTERPERSONAL

### DEFINITION

The **Communication Competency** encompasses the knowledge, skills, processes and outlooks we associate with interactions with others. Through their communication, students acquire, develop and transform ideas and information, and make connections with others to share their ideas, express their individuality, further their learning, and get things done.



The Communication Core Competency has two interrelated sub-competencies, which encompass: **(a) Communicating** and **(b) Collaborating**.

### a) COMMUNICATING

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.

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.

#### What does this involve?

- **Focusing on intent and purpose:** students communicate with intention and purpose.
- **Acquiring and presenting information:** students communicate by receiving and presenting information.
- **Connecting and engaging with others:** students engage in informal and structured conversations in which they listen, contribute, develop understanding, and learn to consider diverse perspectives.

#### What skills will be acquired?

- In contributing purposefully to discussions and conversations, the student will synthesize, deepen, and transform their own and others' thinking.
- The student will be an active and engaged listener – they will make connections and ask clarifying and thought-provoking questions and integrate new information.
- The student will be able to plan ways to make their message clear and engaging for a variety of audiences.
- The student will be able to acquire the information they need for specific tasks, critically analyze it, and integrate well-chosen information from a range of sources. They will be able to present the acquired information with clarity.

## **b) COLLABORATING**

Collaborating involves the skills, strategies, and dispositions that people use to work together to pursue common purposes and accomplish common goals.

### **What does this involve?**

- **Working collectively**

*Students combine their efforts with those of others to effectively accomplish learning and tasks. As members of a group, students appreciate interdependence and cooperation, commit to needed roles and responsibilities, and are conscientious about contributing. They also negotiate respectfully and follow through on plans, strategies, and actions as they share resources, time, and spaces for collaborative projects.*

- **Supporting group interactions**

*Students engage with others in ways that build and sustain trusting relationships and contribute to collective approaches. They value diverse perspectives and integrate the ideas of others with their own to tackle tasks, issues, and problems. Students seek to distribute leadership, listen actively, take turns in discussions, acknowledge contributions, and identify missing voices.*

- **Determining common purposes**

*Students develop shared understandings of information, issues, situations, and problems in pursuit of common purposes and goals. They revise plans according to mutual deliberations and strive for consensus. As co-members of a group, students see one another as valuable resources, commit to impact and collective success, and assess group results and processes.*

### **What skills will be acquired?**

- The student will contribute during group activities with peers and share roles and responsibilities to achieve shared goals.
- The student will be an active listener and speaker. They will share their ideas and try to connect them with others' ideas. They will ask thought-provoking questions, integrate new information and various perspectives from others, and think critically about whose voices are missing.
- The student will help resolve conflicts and challenges as they arise. They will recognize how their contributions and those of others complement each other.
- They will be able to give, receive, and act on constructive feedback in support of the common goals, and they will be able to evaluate and revise plans with other group members.

## B. THINKING – COGNITIVE

### DEFINITION

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 new understanding. Thinking Competence requires specific thinking skills as well as habits of mind and a critical awareness of (a) one's thinking and learning and b) oneself as a thinker and learner (metacognition).



The Thinking Core Competency has two interrelated sub-competencies, which encompass: **(a) Creative Thinking** and **(b) Critical and Reflective Thinking**

#### a) CREATIVE THINKING

**Creative Thinking** involves the generation of ideas and concepts that are novel and innovative in the context in which they are generated, reflection on their value to the individual or others, and the development of chosen ideas and concepts from thought to reality.

#### What does this involve?

- **Creating and innovating**

*Students get creative ideas that are novel and have value. An idea may be new to a particular context or absolutely new. The idea or product may have value in a variety of ways and contexts – it may solve a problem, provoke reflection, or provide a new perspective that influences the way people think or act.*

- **Generating and incubating**

*Students may generate creative ideas through engagement with other's ideas, or consideration of a problem, and/or because of their interests and passions.*

- **Evaluating and developing**

*Students reflect on their creative ideas in order to decide which ones to develop. If they decide to develop an idea, they work individually and/or collaboratively to refine it and work to realize it. This may require accessing the knowledge of those who have gone before, building the necessary skills, sustaining perseverance, using failure productively over time, and reflecting on process and results. It may also require the generation of additional creative ideas to come up with solutions to problems along the way.*

#### What skills will be acquired?

- The student will have new ideas or build on or combine other people's ideas to create new things within the constraints of a problem or materials.
- The student will have new ideas in areas in which they have an interest and build their skills to make them work.
- The student can think "outside the box" to get innovative ideas and persevere to develop them.
- The student will look for new perspectives, new problems, or new approaches.
- They will use their experiences with various steps and attempts to direct their future work.

## **b) CRITICAL AND REFLECTIVE THINKING**

**Critical and Reflective Thinking** encompasses a set of abilities that students use to examine their own thinking and that of others. This involves making judgments based on reasoning, where students consider options, analyze options using specific criteria, and draw conclusions.

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.

### **What does this involve?**

- **Analyzing and critiquing**

*Students will learn to analyze and make judgments about the validity of proposed models, accuracy of scientific explanations, interpretation of data, the experimental approach taken, scientific context, and discussion of results.*

- **Questioning and investigating**

*Students learn to engage in inquiry when they identify and investigate questions or challenges. They develop and refine questions; create and carry out plans; gather, interpret, and synthesize information and evidence; and reflect to draw reasoned conclusions.*

- **Designing and developing**

*Students think critically to develop ideas. Their ideas may lead to the designing of experiments or scientific approaches. They work with clear purpose and consider the scientific context of their work. They explore possibilities, develop and reflect on processes, monitor progress, and adjust procedures in light of criteria and feedback.*

- **Reflecting and assessing**

*Students apply critical, metacognitive, and reflective thinking in given situations, and relate this thinking to other experiences, using this process to identify ways to improve or adapt their approach to learning. They reflect on and assess their experiences, thinking, learning processes, work, and progress in relation to their purposes. Students give, receive, and act on feedback and set goals individually and collaboratively. They determine the extent to which they have met their goals and can set new ones.*

### **What skills will be acquired?**

- The student will be able to ask questions, make predictions, consider options, identify problems, gather information and evidence, and make appropriate judgements.
- Students will be able to determine their own framework and criteria for tasks that involve critical thinking.
- Students will be able to develop or adapt criteria, check information, assess their thinking, and develop reasoned conclusions, make judgments, and ask new questions.
- Students will be able to assess their own efforts and experiences and identify new goals. They will be able to give, receive, and act on constructive feedback.
- Students will be able to synthesise coherent arguments within a defined time frame for assessment and/or dissemination
- Students will be able to tell or show others something about their thinking and how their ideas contribute to a broader scientific context.

## C. PERSONAL AND SOCIAL - INTRAPERSONAL

### DEFINITION

The **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 what students need to thrive as individuals, to understand and care about themselves and others, and to find and achieve their purposes in the world.



The Personal and Social Core Competency has two interrelated sub-competencies, which encompasses: **(a) Personal Awareness and Responsibility** and **(b) Social Awareness and Responsibility**

### a) PERSONAL AWARENESS AND RESPONSIBILITY

**Personal Awareness and Responsibility** involves understanding the connections between personal and social behaviour and well-being; it encourages people to make constructive and ethical decisions and act on them.

#### What does this involve?

- **Self-advocating**

*Students who are personally aware value themselves, their ideas, and their accomplishments. They are able to express their needs and seek help when needed, find purpose and motivation, act on decisions, and advocate for themselves.*

- **Self-regulating**

*Students who are personally aware and responsible take ownership of their choices and actions. They set goals, monitor progress, persevere in difficult situations, and understand how their actions affect themselves and others.*

#### What skills will be acquired?

- Students recognize and can explain their role in learning activities and explorations and can give evidence of their learning.
- Students can work toward a goal or solving a problem.
- Students can manage their time and prioritise tasks appropriately
- Students will develop time management skills to work efficiently within a specified time window.
- Students can work within an allocated time frame and complete tasks using defined criteria.
- Students can set realistic goals, use strategies to accomplish them, and persevere with challenging tasks. They will take responsibility for their learning.

**b) PERSONAL AWARENESS AND RESPONSIBILITY**

Social Awareness and Responsibility involves the awareness, understanding, and appreciation of connections among people, and focuses on interacting with others in respectful ways.

**What does this involve?**

- **Building relationships**

*Students build and maintain diverse and positive relationships within their cohort and members of their laboratories. They are aware and respectful of others' needs and they adjust their words and actions as required.*

- **Resolving problems**

*Students identify and develop an appreciation for different perspectives on issues. They show empathy, disagree respectfully, and create space for others to use their voices. They generate, use, and evaluate strategies to resolve problems.*

- **Valuing diversity**

*Students value diversity and interact ethically with others. They are inclusive in their language and behaviour and recognize that everyone has something to contribute. Their approach to inclusive relationships exemplifies commitment to developing positive communities.*

**What skills will be acquired?**

- Students will build and sustain positive relationships with diverse people and work cooperatively.
- Students will demonstrate respectful and inclusive behaviour in a variety of settings, and they will recognize that everyone has something to offer. They will use respectful and inclusive language and behaviour.
- Students will be able to clarify problems or issues, generate multiple strategies, weigh consequences, compromise to meet the needs of others, and evaluate actions.