**Middle School Technology (MSTE) DRAFT curriculum outcomes**

**Rubrics – Grade 6, 7, and 8**

**The following *Topics of Study* are common for grades 6, 7 and 8**

Topic 1 – Required Middle School Technology (MSTE) Skills (Overview of skills to be used throughout the course)

Topic 2 – Communication/Multimedia

Topic 3 – Construction/Manufacturing

Topic 4 – Energy (sustainable)

Topic 5 – Coding/ICT

Topic 6 – Enterprise

Topic 7 – Transportation

**GCO 1 – Technological Operations and Concepts**

**SCOs**

1-1. Students will use technological systems.

1-2. Students will be able to use tools and technology applications safely.

1-3. Students will research and generate ideas, design, create and develop products.

1-4. Students will communicate information and ideas using a variety of multimedia.

**GCO 2 – Critical Thinking and Problem Solving**

**SCOs**

2-1. Students will investigate science problems using technology.

2-2. Students will examine data to draw conclusions and recommend solutions to improve performance.

2-3. Students will work in teams to solve problems.

2-4. Students will understand and demonstrate the relationship between science and technology.

**GCO 3 – Citizenship**

**SCOs**

3-1. Students will become aware of human, cultural, and societal issues related to technology.

3-2. Students will practice safe, legal, and ethical use of technology.

3.3. Students will explore the educational and career pathways that exist in technology.

3.4. Students will practise scientific skills to develop scientific literacy.

3-4. Students will interact, collaborate, and publish using technology.

3.5. Students will understand the concept of, and demonstrate appropriate decision making with regards to, “Digital Footprint”.

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|  | 4 - Exceeding  | 3 - Meeting | 2 - Approaching | 1 – Working Below |
| **GCO 1. Technological Operations and Concepts** |
| 1.1   | Students will use technological systems. |
|  | Consistently and independently demonstrates effective use of technological systems. | Usually determines effective and appropriate uses of technology systems.  | Sometimes and with help grasps concepts and marginally achieves success when learning systems. | Rarely engages in assigned activities, and is unsuccessful when using systems. |
| 1.2 | Students will be able to use tools and technology applications safely. |
|  | Always uses the specified procedures and tools to perform tasks safely. | Usually demonstrates the ability to use appropriate tools and procedures safely. | Occasionally uses appropriate tools and applications safely. | Not able to select appropriate tools and demonstrate safe behaviours. |
| 1.3 | Students will research and generate ideas, design, create, and develop products. |
|  | Skillfully generates ideas that lead to the development of a sophisticated project or product. | Generates ideas that lead to development of a project or product. | Generates incomplete ideas that may lead to partial development of a project or product. | Rarely exhibits idea generation skills or the development of a project or product.  |
| 1.4 | Students will communicate information and ideas using a variety of multimedia. |
|  | Precisely and persuasively communicates information and ideas using a variety of multimedia. | Communicates information and ideas using a variety of multimedia. | Communicates limited information and ideas using a variety of multimedia. | Unable to communicate ideas and information with multimedia, or does so with extreme difficulty. |

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|  | 4 - Exceeding  | 3 - Meeting | 2 - Approaching | 1 – Working Below |
| **GCO 2. Critical Thinking and Problem Solving** |
| 2.1 | Students will investigate science problems using technology. |
|  | Consistently integrates scientific knowledge into technological solutions. | Routinely integrates scientific knowledge into technological solutions. | Sometimes integrates scientific knowledge into technological solutions. | Unable to integrate scientific knowledge into technological solutions. |
| 2.2 | Students will examine data to draw conclusions and recommend solutions to improve performance. |
|  | Always examines data to draw conclusions and recommends solutions to improve performance. | Often examines data to draw conclusions and recommends solutions to improve performance. | With some help, examines data to draw conclusions and recommends solutions to improve performance. | Hardly ever able to examine data to draw conclusions and recommend solutions to improve performance. |
| 2.3 | Students will work in teams to solve problems. |
|  | Works in teams with success to solve problems in all situations. | In most cases, works well in teams to solve problems. | In some situations, works moderately well in teams to solve problems. | Not able to work with peers to solve problems. |
| 2.4 | Students will understand and demonstrate the relationship between science and technology. |
|  | Insightfully demonstrates an understanding of the relationship between science and technology. | Demonstrates an understanding of the relationship between science and technology. | Demonstrates a limited understanding of the relationship between science and technology. | Does not appear to understand the relationship between science and technology. |

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|  | 4 - Exceeding  | 3 - Meeting | 2 - Approaching | 1 – Working Below |
| **GCO 3.  Citizenship** |
| 3.1 | Students will become aware of human, cultural, and societal issues related to technology. |
|  | Demonstrates a strong understanding of the impact of technology to address human, cultural, and societal issues. | Demonstrates an understanding of the impact of technology to address human, cultural, and societal issues. | Demonstrates some understanding of the impact of technology to address human, cultural, and societal issues. | Does not demonstrate an understanding of the impact of technology to address human, cultural, and societal issues. |
| 3.2 | Students will practice safe, legal, and ethical use of technology. |
|  | Always practices safe, legal, and ethical use of technology. | Routinely practices safe, legal, and ethical use of technology. | Practices safe, legal, and ethical use of technology when prompted. | Shows disregard for the safe, legal, and ethical use of technology. |
| 3.3 | Students will explore the educational and career pathways that exist in technology. |
|  | Creatively explores career pathways in technology in deep and meaningful ways. | Investigates and explores educational and career pathways in technology. | Sometimes explores the educational and career pathways in technology. | Seldom examines the educational and career pathways in technology or does so in very limited ways. |
| 3.4 | Students will interact, collaborate, and publish using technology. |
|  | Skilfully interacts, collaborates, and publishes exemplary content using technology. | Easily interacts, collaborates and publishes using technology. | With support, interacts, collaborates, and publishes using technology. | Not able to use technology to interact, collaborate, and publish.  |
| 3.5 | Students will understand the concept of, and demonstrate appropriate decision making with regards to, “Digital Footprint”.   |
|  | Always demonstrates appropriate decision making processes with regard to “Digital Footprint”.  | Consistently demonstrates appropriate decision making processes with regard to “Digital Footprint”.  | Rarely demonstrates appropriate decision making processes with regard to “Digital Footprint”. | Does not demonstrate appropriate decision making processes with regard to “Digital Footprint”.  |