

## TECHNOLOGY INTEGRATION MATRIX (TIM) - Teachers

		SUBSTITUTION/ EMBELLISHMENT	AUGMENTATION/ ENHANCEMENT	MODIFICATION/ INFUSION	REDEFINITION/ TRANSFORMATION
Key Aspects of a Learning Environment	0	1	2	3	4
<b>C – Creating and Innovating</b>	0 – Students complete tasks using a traditional means of communication, demonstrating imagination, spontaneity, and ingenuity in their creations.	1 - Students complete tasks with the recommended technology tool(s), demonstrating imagination, spontaneity, and ingenuity in their creations.	2 - Students complete tasks with various technology tools, demonstrating imagination, spontaneity, and ingenuity in their creations.	3 - Students complete tasks with effective and appropriate technology tools of their own choosing, demonstrating imagination, spontaneity, and ingenuity in their creations.	4 – Students select tasks, choose effective and appropriate technology tools, and demonstrate imagination, spontaneity, and ingenuity in their creations.
<b>Example 1</b> <i>Science</i>	Every student in the class conducts a laboratory experiment.	Students produce their laboratory reports with word-processing software (e.g., Word), and add images or drawings, if necessary.	Students use videos (e.g., YouTube) and other means of technology in their laboratory reports to demonstrate their understanding.	Students use a tool (e.g., Explain Everything, iMovie), together with the other members on their teams to develop visual reports to be presented to the class.	Students do a search, choose a chemical reaction to study with the help of the available probes, and develop their scientific method, their laboratory report, and a questionnaire for the Grade 8 students who will be attending their presentation
<b>Example 2</b> <i>Nutrition</i>	Students modify a traditional cookbook recipe to make it healthier.	Students use a tool suggested by the teacher (e.g., eaTracker.ca) to find, compare, and modify the healthy recipe to be made.	Students use various tools (e.g., websites, apps, recipe search engines) to find, compare, and modify the healthy recipe to be made.	Students do a search, with the aim of creating a healthy recipe, and use the appropriate tool, one that will enable them to provide nutritional information.	Students conduct a survey among the school's students using a tool (e.g., SurveyMonkey, Google Forms) to enquire about the students' favourite ingredients and dishes. Students then create a recipe based on their findings, and post it on the school website. Taking Internet users' comments and opinions into account, the students modify their recipe, if necessary. They also gather the addresses of the websites consulted (using Symbaloo, for example), so that everyone can access them.

<b>Example 3</b>  <b>Science – Astronomy</b>	Students do research on astronomy in the library and build cardboard maquettes.	Students do research on astronomy and present their findings with presentation software suggested by the teacher (e.g., PowerPoint).	Students do searches on astronomy, and discover and use web-based tools or interesting apps for their presentations.	Students do searches on astronomy, and use software that enables them to display satellites in 3D.	Students do a search, and decide to build a functional microsatellite with the help of on-line resources and a 3-D printer that enables them to create the components of the microsatellite.
<b>Example 4</b>  <b>Science – Electricity</b>	Students illustrate various circuits on paper.	Students build their circuits with the materials at their disposal (electrical wiring, light bulbs, etc.)	Students build their circuits with the materials at their disposal, and use a technology tool to check the various characteristics of the circuits, such as amperage and potential difference.	Students build various circuits with the help of web-based applications, check the characteristics of the circuits virtually, rebuild their circuits with the materials at their disposal, and confirm the characteristics of the latter circuits.	Students explore the characteristics of the circuits of various devices, and design a circuit that will get a simple device to run.
<b>Example 4</b>  <b>Science – The Mitochondrion</b>			Students complete a task with the help of various technology tools, demonstrating imagination, spontaneity, and ingenuity in their creations.		
<b>Example 5</b>  <b>English – Poetry</b>					Students each select a task, choose the technology tool(s) suited to the task, and demonstrate imagination, spontaneity, and ingenuity in their creations. Students post their projects on a Google+ Community page where they have written comments.
<b>Example 6</b>  <b>English– Fact Sheets</b>				Students each have to prepare a fact sheet introducing a sport that they have invented. They choose effective and appropriate technology tools with which to create their fact sheets.	
<b>Example 7</b>  <b>International Law</b>  <b>Becoming an Expert on the United Nations</b>				Students each complete a task with the help of effective and appropriate technology tools of his/her own choosing, demonstrating imagination, spontaneity, and ingenuity in their creations (e.g. creating an e-book on the United Nations with the help of iBooks Author).	

<p><b>Example 8</b></p> <p><b>ENG1D</b></p> <p><b>Planning and Producing a Trailer, Using Grade 2 and 3 Students as Actors</b></p>				<p>Students write a script and then produce a trailer with the help of effective and appropriate technology tools of their own choosing (e.g., Popplet for planning and iMovie for editing), demonstrating imagination, spontaneity, and ingenuity (e.g., collaborating with Grade2 and 3 students from feeder schools to create a video trailer)</p>	
<p><b>Example 9</b></p> <p><b>Creation of a Narrative Schema-Based StopMotion Animation</b></p>				<p>Students write a storyline/script based on a simple narrative schema, and include one or more protagonist(s) and antagonist(s). They then produce a stop-motion animation (frame-by-frame-animation) type of video.</p>	
<p><b>Example 10</b></p> <p><b>Passion Based Learning</b></p>					<p>Students choose topics that they are passionate about and on which they can have an impact at school, in the community, or on a global scale. They do searches or conduct their own investigations (surveys, interviews, etc.). They then present their findings via social media, YouTube or the TED organization. Throughout the process, students can choose to use the technology that they consider to be the most effective.</p>