



Harnessing
Digital Tools to
Foster Creativity
and Innovation
in the Classroom

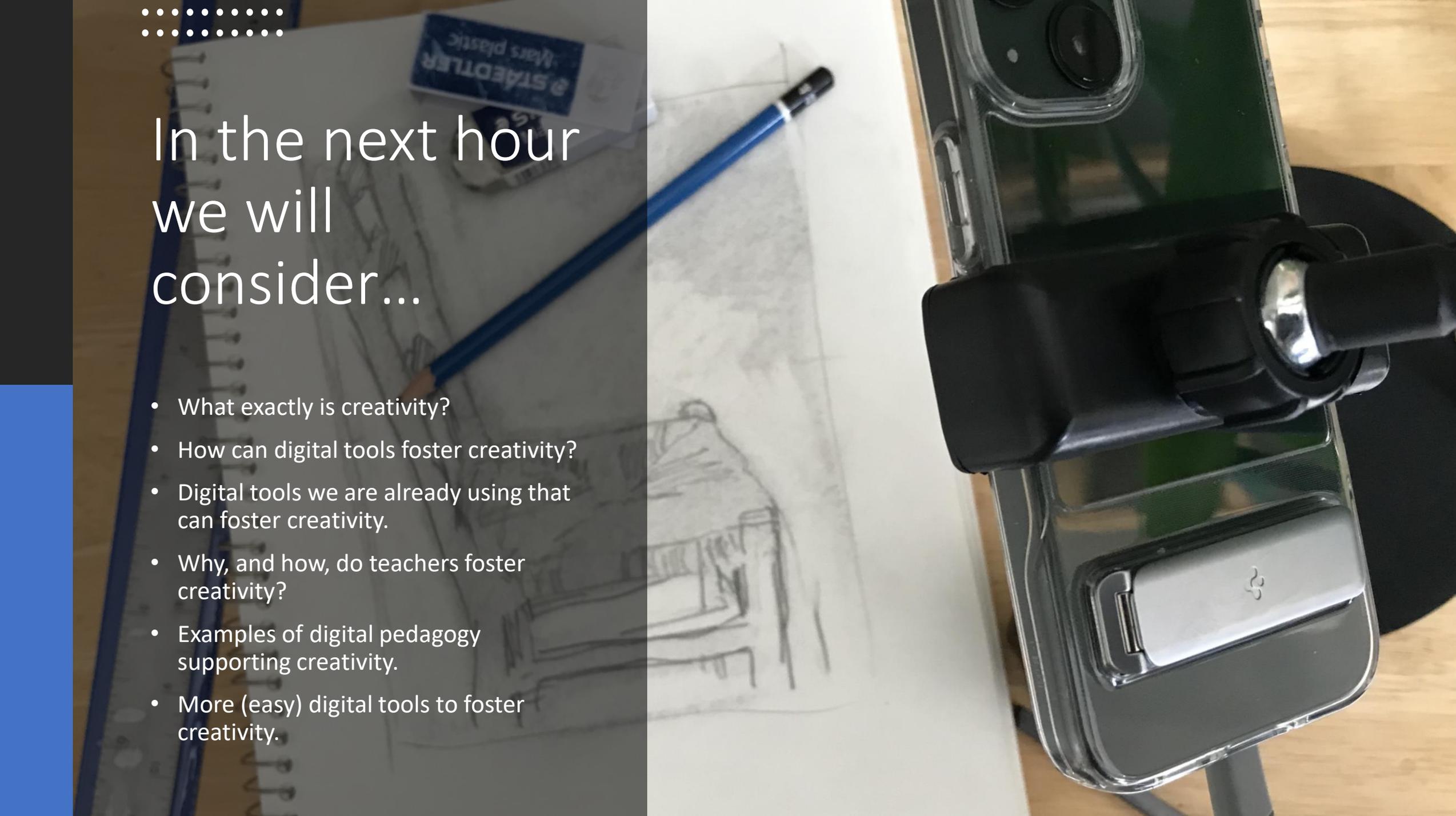
Performa Pedagogical Day

June 1, 2022



Sharon Coyle

- 27 years teaching English and Humanities at Cégep de Sept-Îles, 10 years teaching at the elementary level
- Fine Arts, York University; Education, University of Prince Edward Island; Master's in College Teaching with Performa MTP, Université de Sherbrooke
- Digital Pedagogy Experience: 10 years of Virtual Team Teaching; VTT Handbook CCDMD; 15 years of bimodal teaching of English courses that included online Cégep de Thetford students with in-class Sept-Îles students; using digital tools for teaching and learning since 1986
- Teaching two MTP courses: Pedagogy of Digital Learning and The Digital Classroom



In the next hour
we will
consider...

- What exactly is creativity?
- How can digital tools foster creativity?
- Digital tools we are already using that can foster creativity.
- Why, and how, do teachers foster creativity?
- Examples of digital pedagogy supporting creativity.
- More (easy) digital tools to foster creativity.

Reframing Creativity



How Creative Are You?

Instructions

For each statement, click the button in the column that best describes you. Please answer questions as you actually are (rather than how you think you should be), and don't worry if some questions seem to score in the 'wrong direction'. When you are finished, please click the 'Calculate My Total' button at the bottom of the test.

16 Statements to Answer	Not at All	Rarely	Sometimes	Often	Very Often
1 Creative people should specialize in coming up with lots of ideas. Other people should then implement these.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 If I have a problem, I allow myself to back off active problem solving, and I create some mental distance between myself and the issue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3 When I'm coming up with ideas, I find myself using phrases like "we can't" or "we don't."	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 I'm busy. As soon as I have a good idea, I move forward with implementation.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 I gather information from a wide variety of sources to stay current with what's happening in my field of work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6 I see problems, complaints, and bottlenecks as opportunities rather than as issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
7 When solving a problem, I try to rethink my current understanding of an issue to develop a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

- Follow the link and try the quiz (5 minutes), 16 questions, mark out of 80. Explanation below your result.



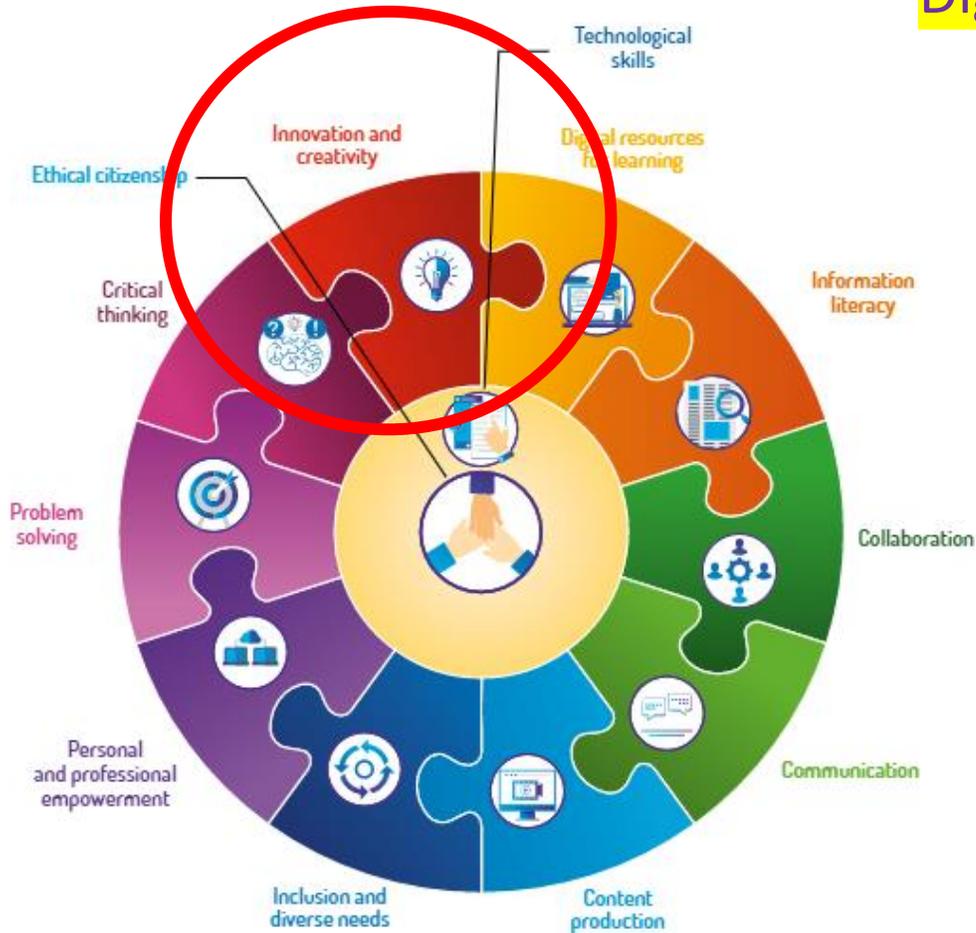
- <https://www.mindtools.com/pages/article/creativity-quiz.htm> (free, no sign up)
- You do not need to log in! Close the window with your score to read about your result.
- Take your results with a grain of salt, this is just a way to get us thinking about what creativity is!

We Need a Bigger
Definition of
Creativity



WE NEED A BIGGER DEFINITION OF
CREATIVITY

VISUAL REPRESENTATION OF THE FRAMEWORK



Digital Technology can support creativity.

Quebec's
Digital Competency Framework
includes
Innovation and Creativity
as an element of the dimension
“DEVELOPING CRITICAL
THINKING WITH REGARD
TO THE USE OF
DIGITAL TECHNOLOGY.”



12 ADOPTING AN INNOVATIVE AND CREATIVE APPROACH TO THE USE OF DIGITAL TECHNOLOGY

ELEMENTS:

- Developing the ability to make innovative use of digital technology for creative projects in an artistic, personal or professional context
- Using or developing innovative⁶ approaches to improve or create objects, projects or processes
- Taking advantage of technological opportunities to develop and express one's creativity and nurture that of others
- Demonstrating receptivity to innovation by others

CONCRETE EXAMPLES:

IN A LEARNING CONTEXT

- **The learner** shares new web-inspired creations online.

IN A TEACHING CONTEXT

- **The teacher or non-teaching professional** uses virtual reality to simulate a historical milestone, helping learners develop historical empathy.

What digital tools do you already use in your teaching?

(Use the annotation toolbar to add tools. Use the checkmark stamp to show your use of tools already listed.)

- Lea
- Moodle
 - Quizzes
 - Forums
 - HP5
- Teams
- Zoom
- Kahoot
- PowerPoint
- Blogs
- Drawing apps
- -
- -
- -
- -



How can these digital tools foster creativity?

What digital tools do your students use for your classes?

(Use the annotation toolbar to add tools. Use the checkmark stamp to show your use of tools already listed.)

- Lea
- Moodle
 - Quizzes
 - Forums
 - HP5
- Teams
- Zoom
- Kahoot
- PowerPoint
- Blogs
- Drawing apps
- Word
- Excel
- -
- -



How can these digital tools foster creativity?

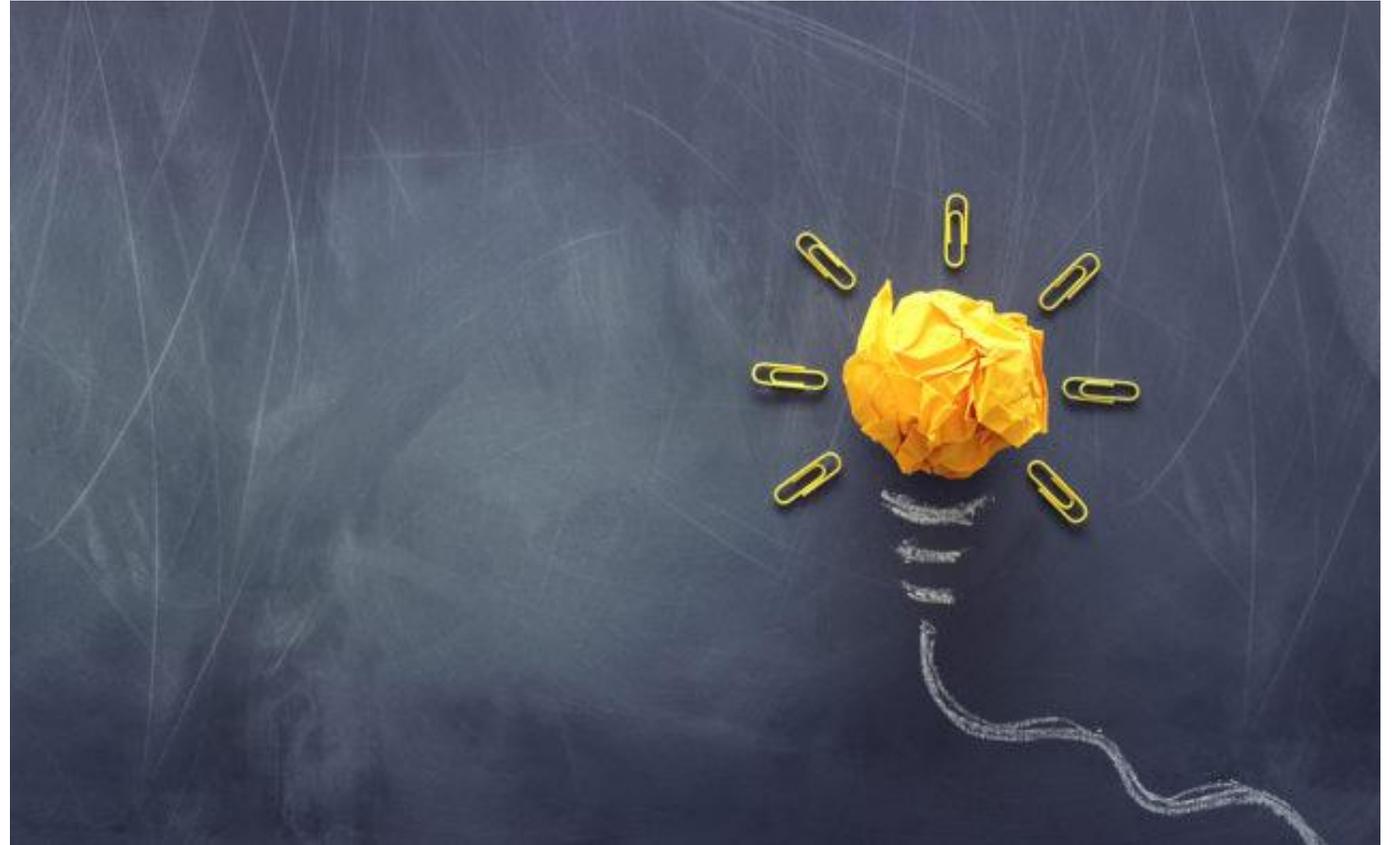
Creativity is a phenomenon whereby something new and valuable is formed.

- "creativity involves the production of novel, useful products" (Mumford)
- Torrance saw an individual's creative ability... as "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies: testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results."



innovation
is the
implementation
of creative
ideas,

Amabile and Pratt (2016)



<https://theodi.org/wp-content/uploads/2020/04/innovation-640x396.jpg>

THE 4-C MODEL OF CREATIVITY



MINI-C

INTERPERATIVE
CREATIVITY



LITTLE-C

EVERYDAY
CREATIVITY



PRO-C

EXPERT
CREATIVITY



BIG-C

EMINENT
CREATIVITY

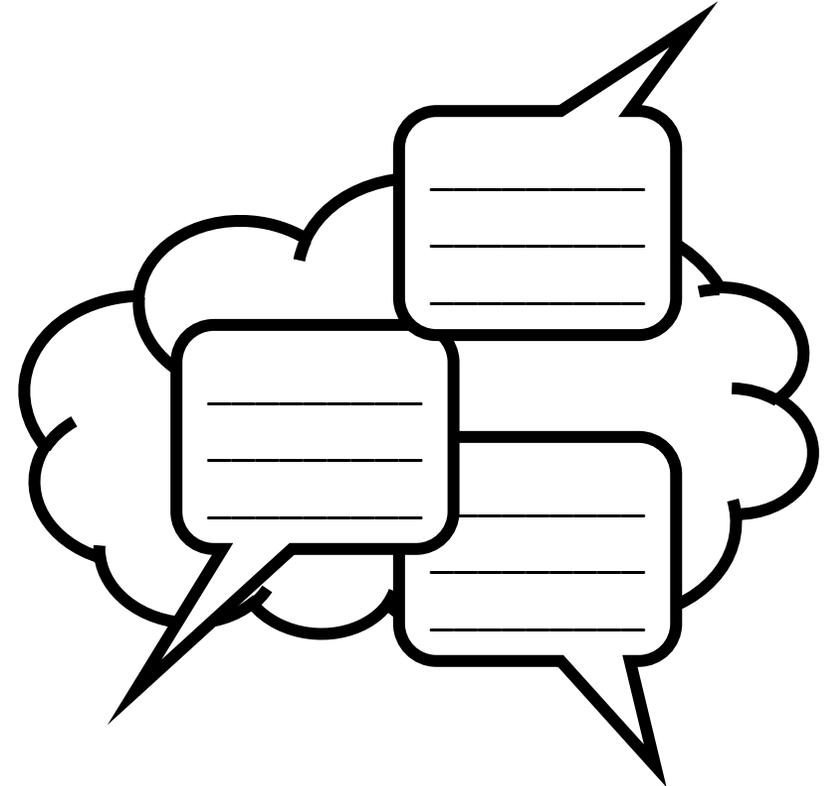
- *mini-c* ("transformative learning" involving "personally meaningful interpretations of experiences, actions, and insights"),
- *little-c* (everyday problem solving and creative expression),
- *Pro-C* (exhibited by people who are professionally or vocationally creative though not necessarily eminent) and
- *Big-C* (creativity considered great in the given field).

(Kaufman and Beghetto)

To Foster Creativity Teachers Can...

Create opportunities for **Incubation**

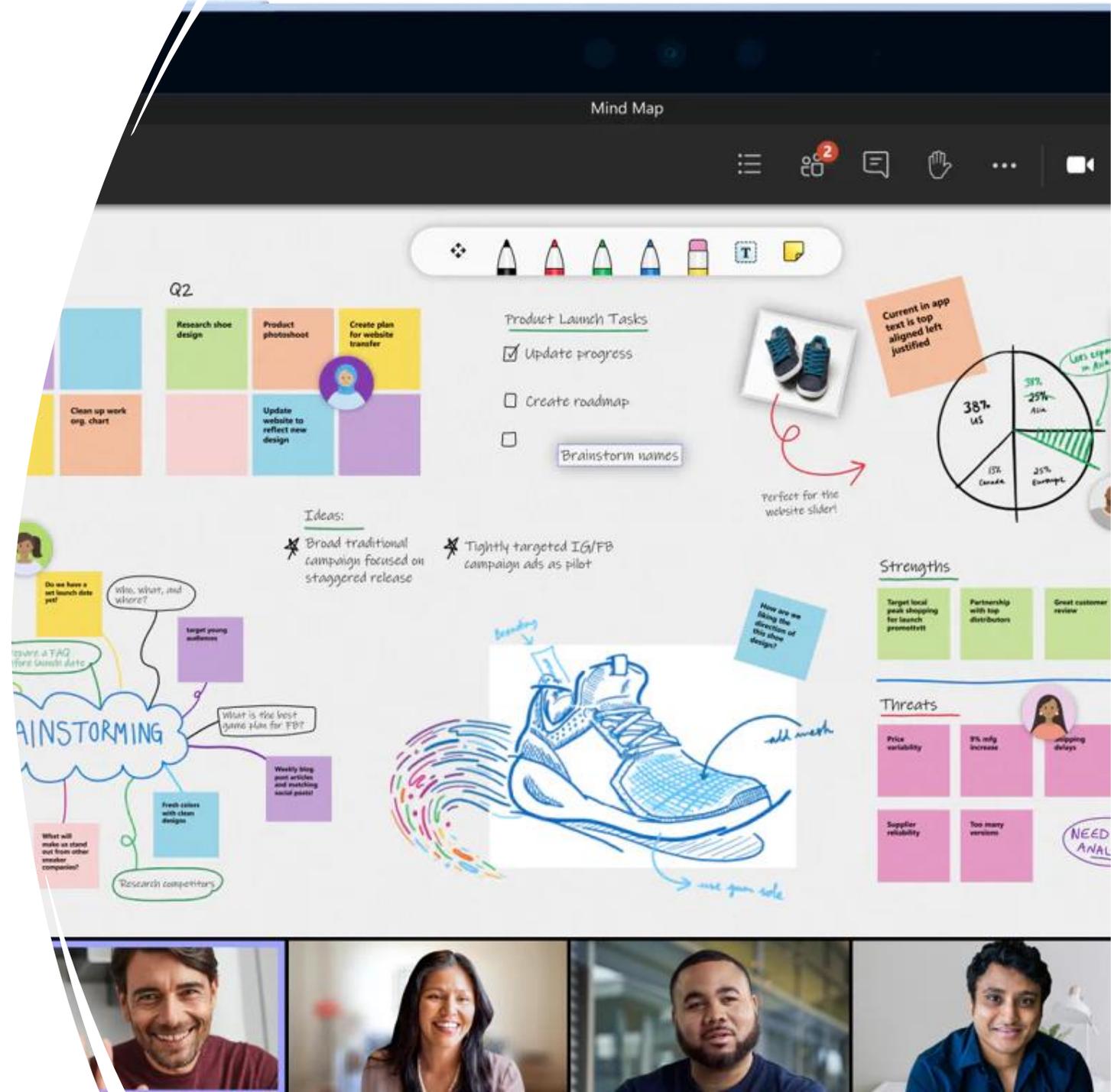
- **Incubation** is a temporary break from creative problem solving that can result in insight.
- Forums are a Digital Tool that support incubation
- (As opposed to timed exams that do not!)



To Foster Creativity Teachers Can...

Design activities that require Divergent Thinking

- Divergent thinking involves creative generation of multiple answers to a set problem.
- Digital Whiteboards and concept mapping tools support divergent thinking, individually or in small or large groups
- Use the whiteboard in Teams or [Zoom](#), or provide a URL link to a prepared Google Jamboard.





To Foster Creativity Teachers Can... help students learn about Team Processes

Provide experience and feedback on team communication norms such as...

- respecting others' expertise,
- **paying attention to others' ideas,**
- expecting information sharing,
- tolerating disagreements,
- negotiating,
- **remaining open to others' ideas,**
- learning from others, and **building on each other's ideas**

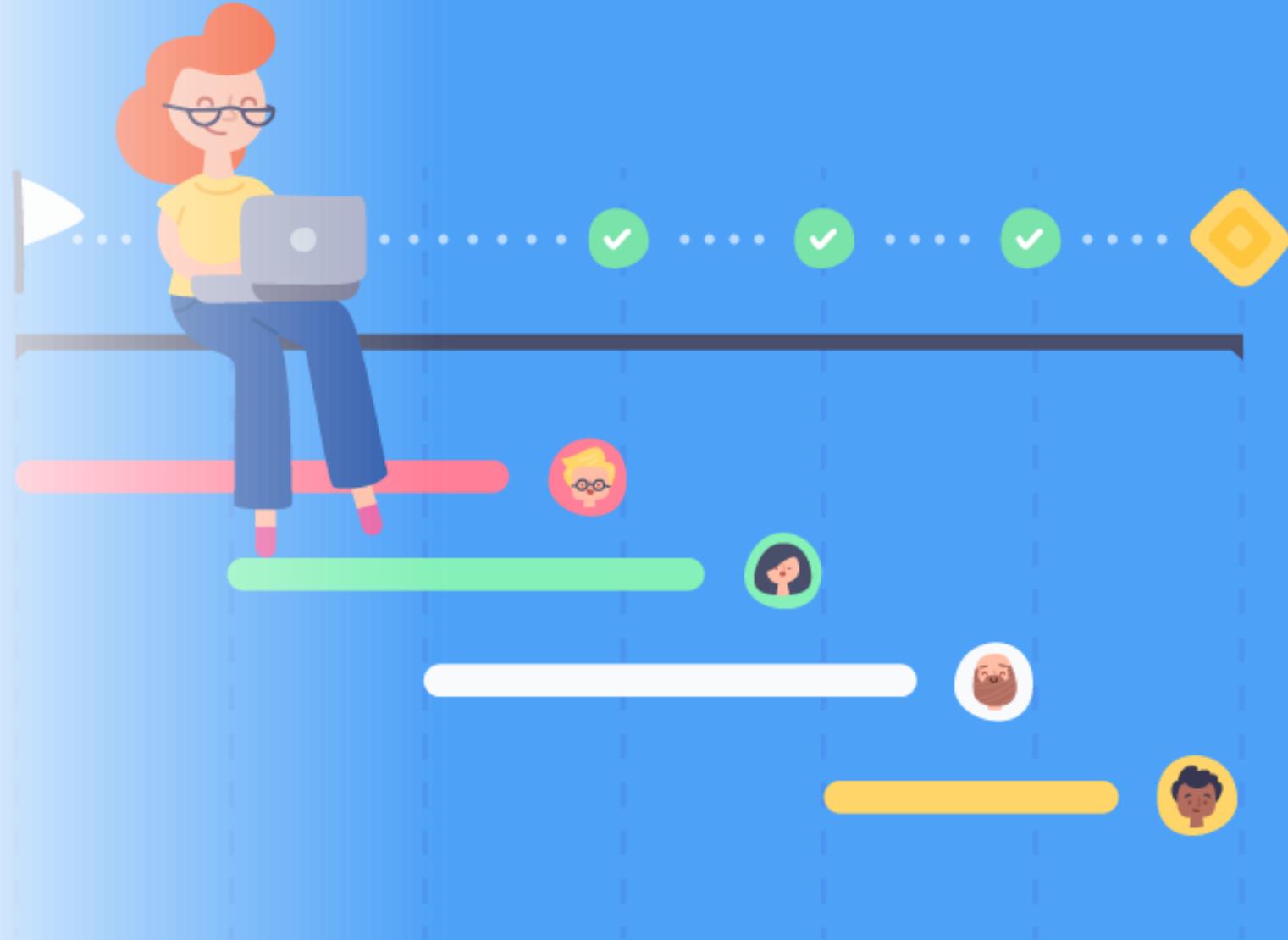
We ask students to use virtual breakout rooms and work together in Teams. Do we develop helpful skills to support them?

To Foster Creativity Teachers Can... help students learn about **Team Processes**

Increase team creativity by facilitating the social processes involved with brainstorming and problem solving. Through these processes, team members are able to...

- access their collective pool of knowledge,
- reach shared understandings,
- identify new ways of understanding problems or tasks,
- and make new connections between ideas.

Engaging in these social processes also promotes positive team affect, which facilitates collective creativity.





Research on How Teachers Foster Creativity...

1. Establish purpose and intention
2. Build basic skills
3. Encourage acquisitions of domain-specific knowledge
4. Stimulate and reward curiosity and exploration
5. Build motivation, especially internal motivation
6. Encourage confidence and a willingness to take risks
7. Focus on mastery and self-competition
8. Promote supportable beliefs about creativity
9. Provide opportunities for choice and discovery
10. Develop self-management (metacognitive skills)
11. Teach techniques and strategies for facilitating creative performance
12. Provide balance

(Nickerson)

To Foster Creativity, Research Suggests...

- Promote **intrinsic motivation** and **problem solving**.
- Students are more creative when a task is valued for its own sake.
- Identify what motivates your students and structure teaching around it.
- Provide students with a **choice of activities**, this increases intrinsic motivation and therefore creativity.



Before we consider what digital tools we can add to foster creativity, we need to **design our course activities and assessments in ways that support creativity.**



ADAPT CONTENT TO STUDENTS' INTERESTS



BUILD ACTIVITIES AND ASSESSMENTS THAT INSPIRE INTRINSIC MOTIVATION



PROVIDE CHOICE (IN CONTENT AND FORMAT) OF ASSESSMENTS



MAKE SPACE FOR INCUBATION OF IDEAS



OFFER OPPORTUNITY FOR DIVERGENT THINKING



FIND WAYS FOR YOUR STUDENTS TO IMPLEMENT THEIR INNOVATIVE IDEAS



TEACH TEAM PROCESS TO FACILITATE COLLECTIVE CREATIVITY

Whiteboard Brainstorming Activity

[Zoom](#)

Example, Projects (Product, Presentation, Written Reflection)...

Choice of format,
students created
a variety of products,
often using widely varied
digital tools, including
audio books, short videos,
PowerPoints, etc.

Presenting their projects to the greater
college community improved intrinsic
motivation; there was a purpose to their
efforts.

It also gave them an opportunity to
implement their creative innovations.

Project 1: The Other Story

Due October 9, 2020 10:00 PM

Instructions

Topics based on Colonization, Residential Schools, Intergenerational trauma, Systemic Racism, Reconciliation, or the Novel, *The Absolutely True Diary of a Part-Time Indian* by Sherman Alexie.

Worth 20% of Term

You can do this individually or in a group, but the written part needs to be individual, in other words, if there are three people in your group you can make one product, but each of you needs to hand in your own individually written reflection.

Objectives:

- explore ideas that help us look at things from a different perspective
- recognize the impacts of colonisation, the residential school system and reconciliation
- situate the ideas explored within their historical context
- organize the main components of the idea you choose into coherent patterns
- produce a synthesis of your idea

Three Steps:

1. **Product (can be done in a group):** make or do something, product examples: comic strip, dialogue, painting, sculpture, poetry, video, photo essay, short story, installation, performance, creation, skit, concept map, experiment, research, etc.
2. **Presentation (can be done in a group):** You will present your information and project in the entry hall of the cegep on Monday, September 28 from 3 p.m. to 5 p.m. (Our regular class time). The objective is to raise awareness of the consequences of colonialism and the residential school system on our society and to work towards reconciliation. Explain what you did to the class, share what you learned. The presentation of your product does not need to be formal; you can just talk about what you did, how and why you did it and what you learned from the process, showcase your product and answer questions about it. There will be someone from the cegep who will make a video recording of a short explanation of all the projects and we will share this video on social media.
3. **Written reflection (must be done individually):**
 1. Submit an individual written analysis reflecting on your project. Explain what you did, how you did it, what happened when you presented it, and reflect on what you learned about your topic by creating and presenting this project.
 2. Outline the importance of the main components of your project.
 3. Describe the organization of the main components of your topic.
 4. Describe historical and social influences on your topic as you see them in your project.
 5. Use the appropriate terminology connected with your topic.
 6. Your written reflection on your product should be about 600 words long and you should revise and edit your written work to make it clear and well written.

Choice of content

Choice,
individual or group

Harness the
power of social
media and digital
technology to
capture and
portray the event

One of the projects, two students created an audio book, both in French and English, and made QR codes for the recordings available in their PowerPoint Presentation so people visiting the Entry Hall could use their phones to listen.

The image shows a screenshot of a PowerPoint presentation. On the left is a vertical navigation pane with slide thumbnails numbered 4 to 10. Slide 4 is the current slide, titled "Audiobook". The main content area has a black background with the word "Audiobook" in white at the top center. Below it, the words "French" and "English" are centered above two identical QR codes. Each QR code has a small box in the center containing the text "SCAN ME".

4 The Truth and Reconciliation Commission
OVER THE PAST 7 YEARS:
Reviewed 4,700 statements from witnesses
Produced 1,355 hours of testimony
4-volume report

5 A part of 12 slides

6 Kill the Indian in the Child

7 Audiobook
French English

8 Informational Links

9 PowerPoint Bibliography

10 Audiobook bibliography

Audiobook

French

English

SCAN ME

SCAN ME

Orange Shirt Day Presentations



Almost 3000 views
in French and
English on
Social Media



Desire Lines

(Steve Thorne, UNICollaboration Virtual Exchange Conference, Krakow Poland, 2018)

Offer students the possibility of **choosing their preferred digital tools.**

Example, Infographics...

SLOW- LEISURE: THE IMPORTANCE OF BEING AT REST

5 LEISURE ACTIVITIES TO SLOW DOWN



KNITTING

Knitting allows us to slow down and straighten our thoughts. It slows down the process of making a piece of clothing, making it more valuable.



GARDENING

Gardening also helps to straighten our thoughts and slow us down, but there is also a natural and social aspect of this activity.



READING

This activity helps us to reflect and it can make us forget all of our worries. It brings us into a whole new universe and transports us into a calming state.



ART

Art helps people to slow down. It shows people that, between fast and slow, there is a balance that exists. It can calm you down and make you feel in control.



MUSIC

It is the oldest form of leisure. Music is stimulating, moving and exciting. It is also appealing and relaxing and it can be used to think and develop new ideas.

MEDICINE: DOCTORS AND PATIENCE



HEALER. TEENTH CENTURY

native medicine (CAM) is a broad medical philosophies ranging from Indian Ayurveda to Arabic herbalism

Creative alternative: Ask students to make an infographic instead of writing and essay.

Infographic (Poster) for "Slow"

Due April 13, 2021 8:00 AM

Instructions
 Infographic on A Chapter from *In Praise of Slowness*, by Carl Honoré
 Chapter Poster Presentation Exercise
 English for Programs: Non-Fiction
 10% of Term

Learning Objectives:

- Explicate a text
- Use technology to make a visual representation of information
- Oral presentation of material to a group
- Lead a discussion about your chapter

Read your chapter, write a précis on it and make an infographic representation of

Steps to Take:

1. Watch the TED Talk by Carl Honoré discussing the ideas in his book, *Slow*.
2. Choose (on Moodle) then read your chapter (link to pdf version of book in your chapter).
3. Work with your partner to make an infographic that clearly highlights the
4. Present your chapter and lead a discussion about it with the class.

Learning To Slow Down

Mind & Body

BY: Naomi Sefsik & Julie Racette





Meditation

It is a mental exercise that trains attention of awareness.

- It lowers blood pressure and generates more of the slower alpha and teta waves in the brain.
- Harmony and spiritual enlightenment.
- Helps to focus all your attention on one point.
- Breathing control.



Yoga

It seeks to sustaine a persons "chi" which can be emperored by stress, anxiety, illness and overwork.

- Can acquire more self awarness.
- Concentration and patience.
- Heavenly sensation.



SuperSlow

Working out/Weightlifting at a slow pace.

- The slowness eliminates momentum forcing the muscles to work to complete exhaustions, which encourages them to rebuild more quickly and makes the bones stronger and denser.
- Good way to slim down, because it boosts the body's metabolism.
- Minimizes the risk of injury.

Example, Podcasts...



2-4 Minute Podcast on Blink		10 points possible
Explains the example(s) and/or information from your chosen chapter (40%)		Weight 40%
Excellent 3 points Very clear and interesting	Good 2 points Clear explanation	Fair 1 point unclear
Explains what your chapter shows us about snap decisions (40%)		Weight 40%
Excellent 3 points In depth analysis of connections	Good 2 points Connects to ideas about intuition and decision making	Fair 1 point Few connections
Uses effective audio presentation: pacing, clear voices (10%)		Weight 10%
Excellent 3 points Catches your attention	Good 2 points Easy to understand	Fair 1 point Difficult to understand
Includes sound effects and a sound track (for example, music at the beginning and end) (10%)		Weight 10%
Excellent 3 points Music and sounds add to the listening experience	Good 2 points Some music and sound included	Fair 1 point Very little sound decoration added

Example, Movies...



Movie on a Memoire 10% of term

Due March 11, 2021 8:00 AM

Instructions

Make a one to two minute video using images, music, text, transitions, and pacing to communicate an idea from the memoire you read (either *Glass Castle* or *Long Way Gone*).

Task: Plan, design, write and produce a video on a specific topic related to the chosen memoire

Learning Objectives for this Task: Examine ways to address and structure a given topic, choose an appropriate tone and level of diction, develop correct sentences, develop clear and coherent paragraphs, use program-related communication strategies including media and technology, use appropriate revision strategies, revise the form and content

View films with peers and discuss.

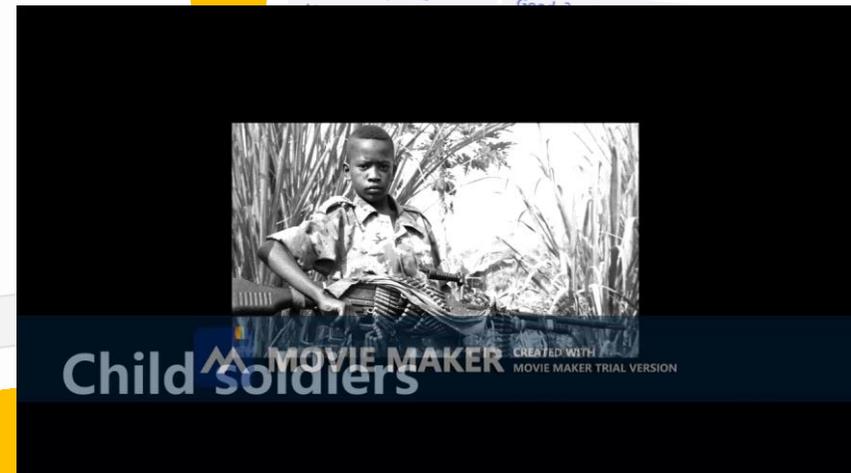
Student work
None

Points
20 points possible

Rubric

 Movie on Memoire

Movie on Memoire				20 points possible
Clearly presented idea				Weight 16.66%
Excellent 4 points No criteria	Good 3 points No criteria	Fair 2 points No criteria	Poor 1 point No criteria	
language (correct use of specialized vocabulary, attention to correct grammar, spelling and syntax)				Weight 16.66%
Excellent 4 points No criteria	Good 3 points No criteria	Fair 2 points No criteria	Poor 1 point No criteria	
clear evidence of revision and editing				Weight 16.66%
Excellent 4 points No criteria	Good 3 points No criteria	Fair 2 points No criteria	Poor 1 point No criteria	
adequate quantity, quality and variety of images				Weight 16.66%
Excellent 4 points No criteria	Good 3 points No criteria	Fair 2 points No criteria	Poor 1 point No criteria	
format: animation, timing				Weight 16.66%
Excellent 4 points No criteria	Good 3 points No criteria	Fair 2 points No criteria	Poor 1 point No criteria	
Gestalt: the "thingness" of the thing –does it all work together to make an integrated, effective package?				Weight 16.66%
Excellent 4 points	Good 3 points	Fair 2 points	Poor 1 point	
No criteria	No criteria	No criteria	No criteria	



When we set up the right conditions creativity thrives!





DIGITAL CREATIVITY

Breakout Rooms

- In groups of five, share an example of a creative activity that you have tried in your classroom. Did you use digital tools as part of it? What digital tools might be added to enrich the students' learning?
- Choose one of the examples and a spokesperson to share it when we return to the larger group (a very short one-minute recap).

Workshop Evaluation

Digital Creativity

Please take a few minutes to fill out the evaluation.

<https://forms.office.com/r/OUViXBRCNe>

The link is also in the chat.



Acknowledgements

This workshop was developed for Performa at the *Université de Sherbrooke* with a grant from the *Ministère de l'Éducation et de l'Enseignement Supérieur*.

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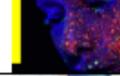
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Image URL Addresses

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