EDUC 301

RESEARCH SKILLS & RESOURCES AND TECHNOLOGY SANDBOX VISIT

Melissa Rivosecchi
Teaching & Research Librarian, Social Sciences

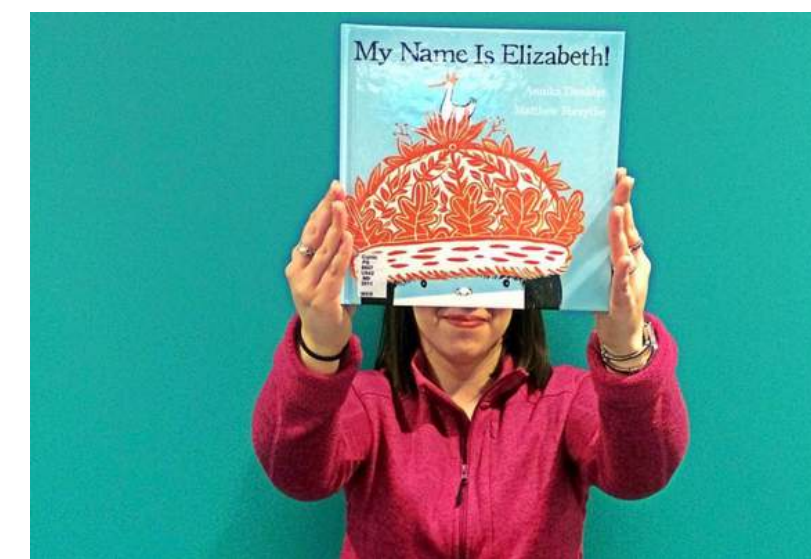February 4, 2025

Hi I'm Mel!

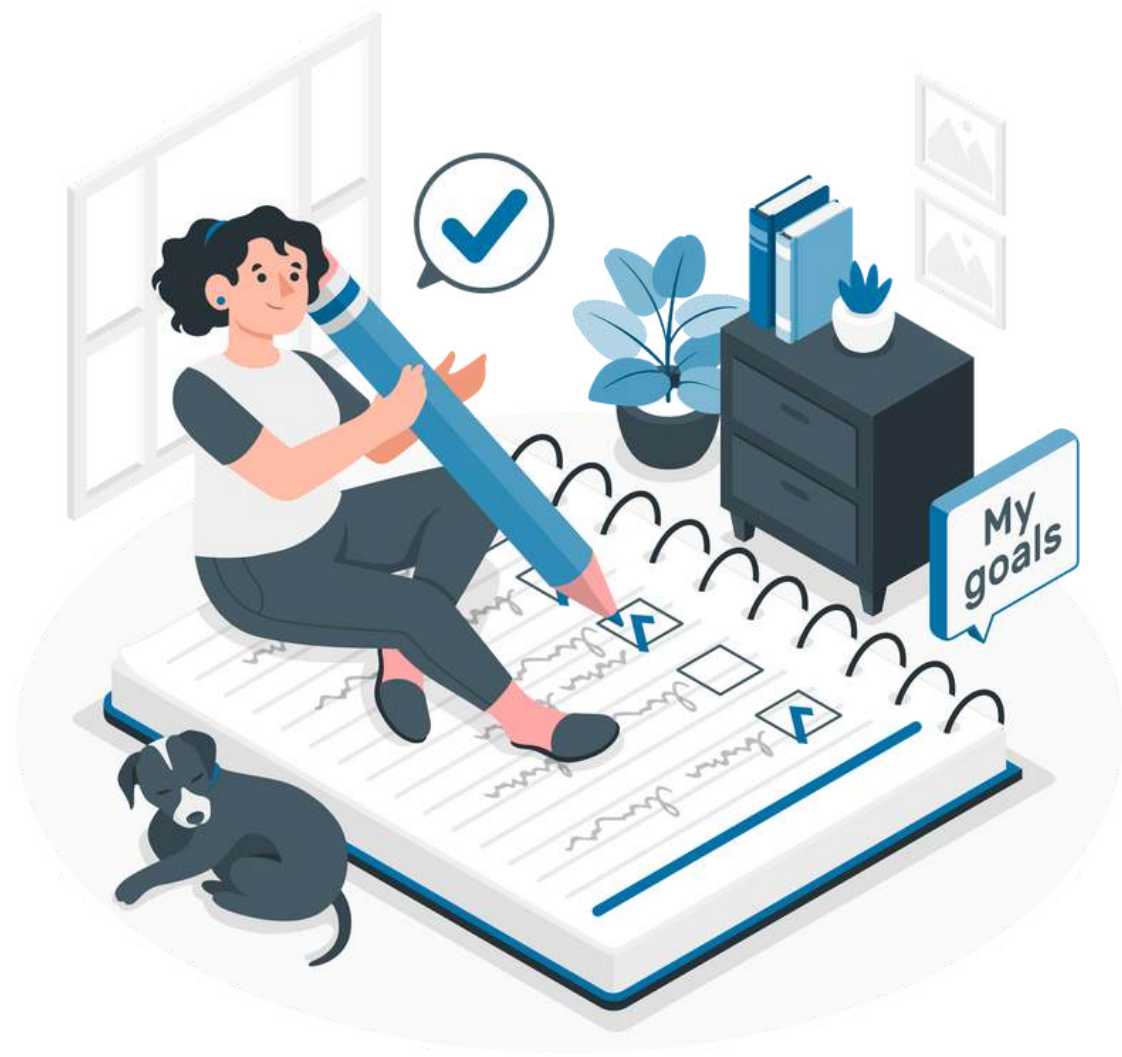Librarian for Education, Art Education, Psychology, and Creative Arts Therapies.

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I can help with:
- Accessing library resources
- Developing search strategies
- Finding resources
- APA/Citation management guidance

Objectives

TECHNOLOGY SANDBOX

- Visit the space
- Explore technology available
- Explore Tinkercad platform & teaching resources

DATABASES

- Create a search strategy; identify key concepts
- Select Education specific and interdisciplinary databases
- Search and find scholarly/peer-reviewed articles

SOFIA DISCOVERY TOOL

- Find books, articles, and other items
- Locate request button to request items through Concordia Library, Quebec university Libraries, and Interlibrary Loans
- Locate the "Request via ILL" button and "Chapter scan".

Technology
SANDBOX

711.00
TECHNOLOGY
SANDBOX
BAC À SABLE DES
TECHNOLOGIES

Opened in 2017 as part of the Webster Library Transformation, the Technology Sandbox is a community space where everyone can learn by doing, by making, by playing, and by sharing knowledge with each other.

WORKSHOPS

Visit our <u>library events page</u> to check out our Technology Sandbox workshops!

Intro to Linux

VR Bootcamp

Arduino 101

Sticker Party: Digital Die Cutting

Zine making

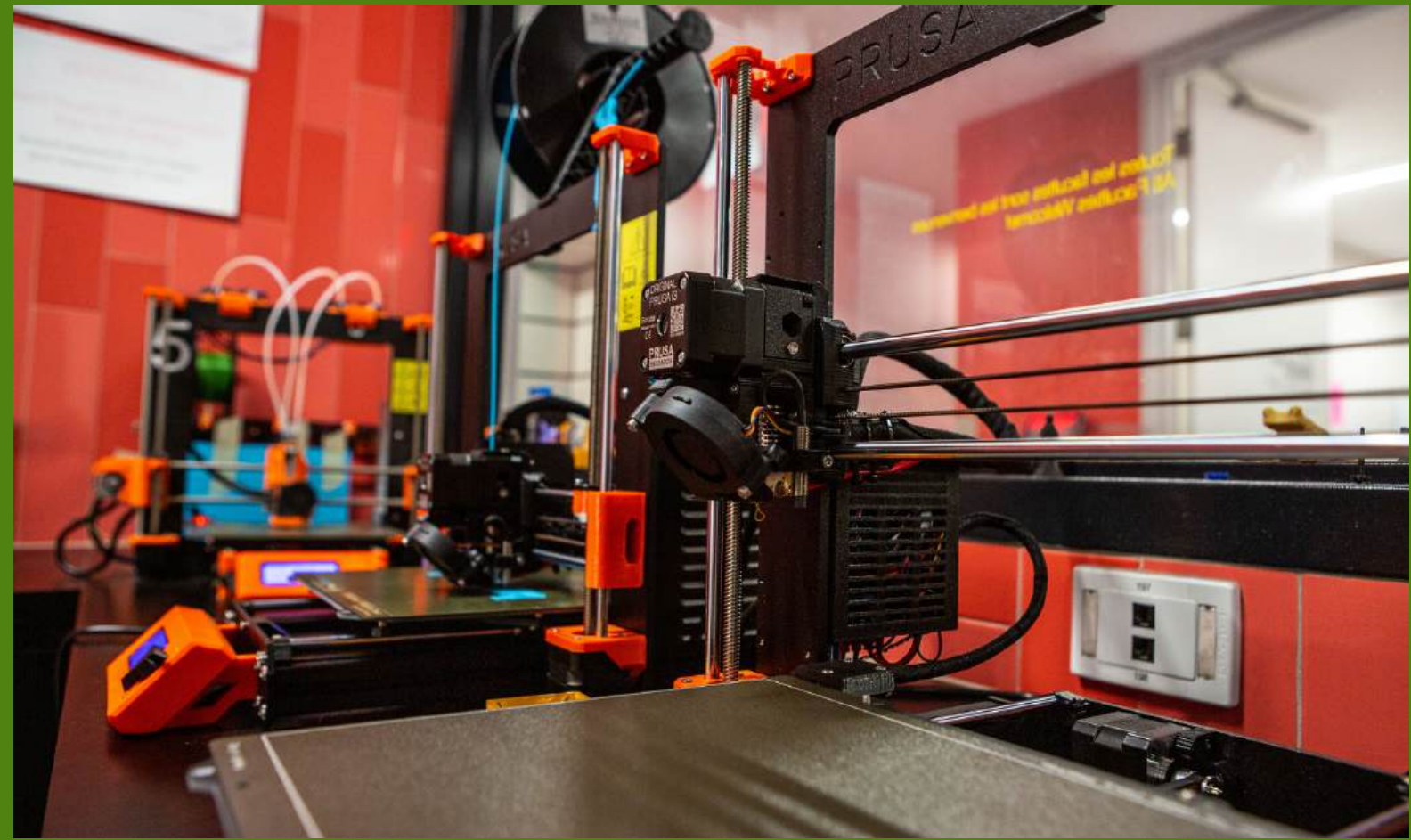3D Modeling 102: OpenSCAD

Design for 3D Printing

Notebook Making Basics

3d PRINTING

Guide to 3D printing

Photos by Lisa Graves

PRUSA 3D PRINTERS

Fibre ARTS

KNITTING/CROCHET KITS

SILVER REED

KNITTING MACHINE

Photos by Lisa Graves
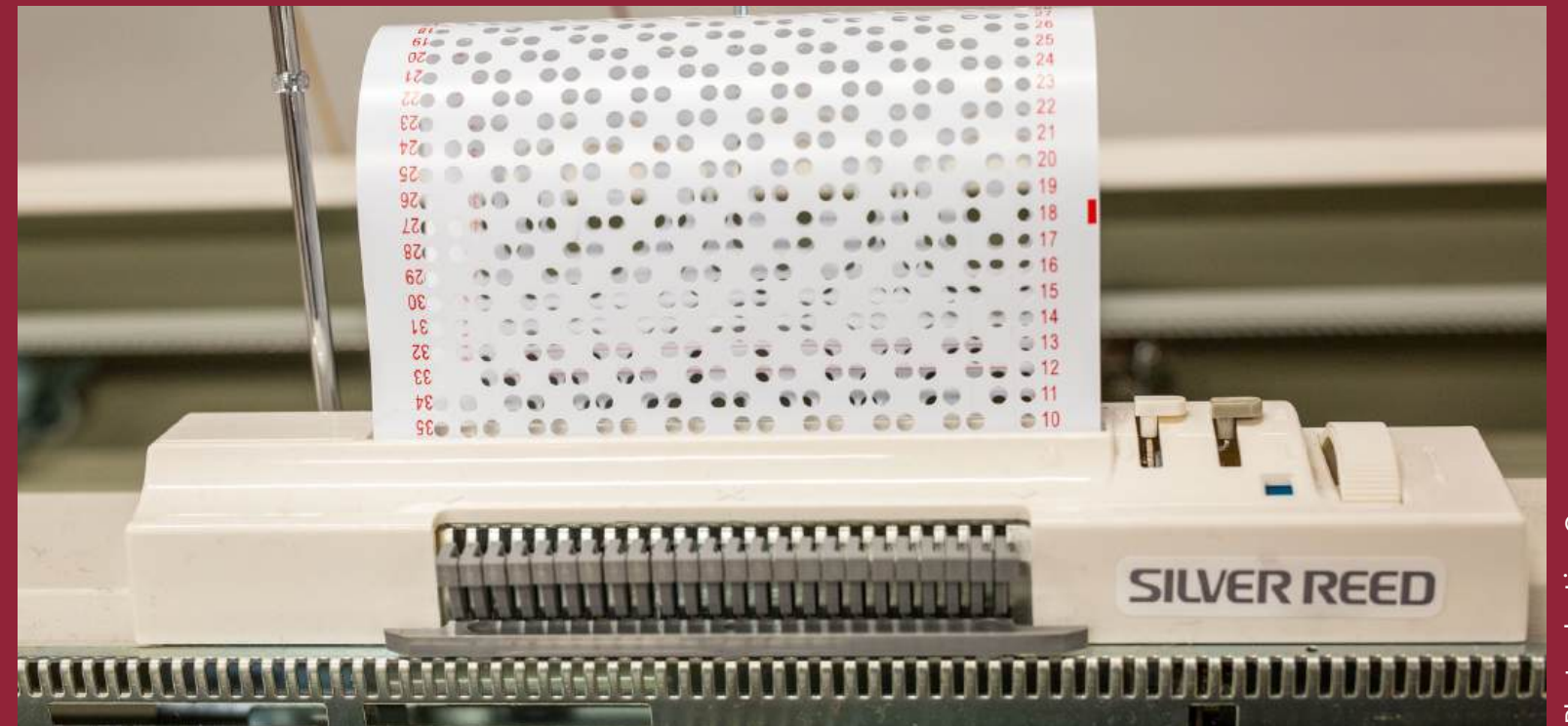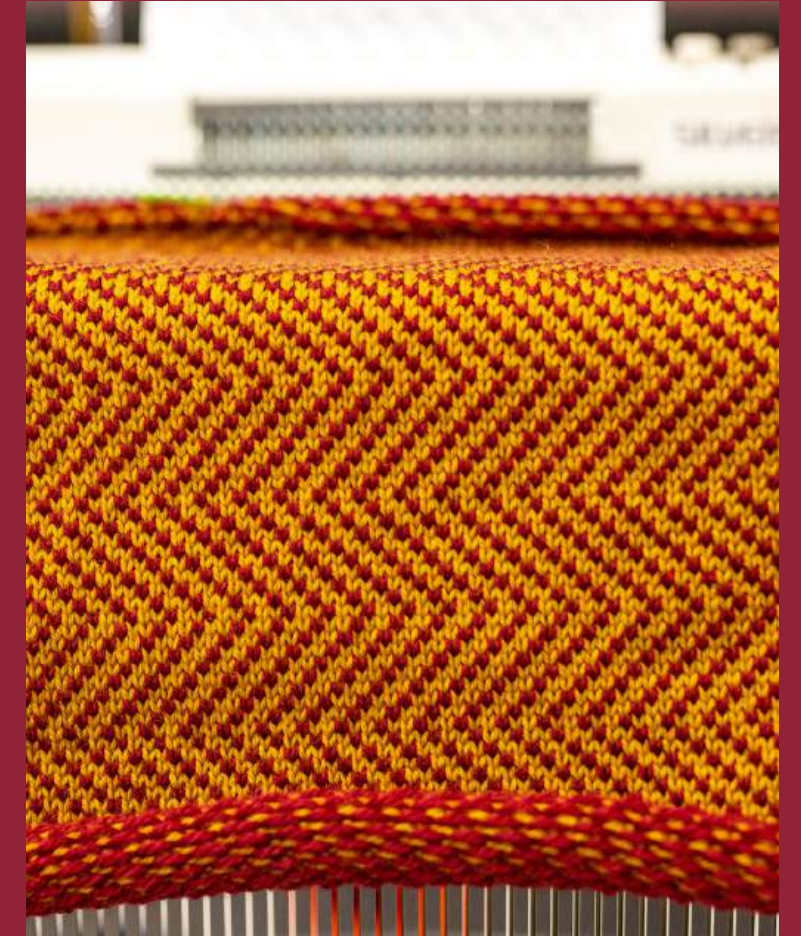
Fibre Arts
TECHNOLOGY CLUB

- F.A.T. Club meets every Tuesday 3:00-5:45 pm

- Come learn to knit or crochet!

- Open to everyone

Media
CREATION

VUZE 3D 360 DEGREE CAMERA

DSLR KITS

CAMCORDERS

LENS KITS

Media CREATION
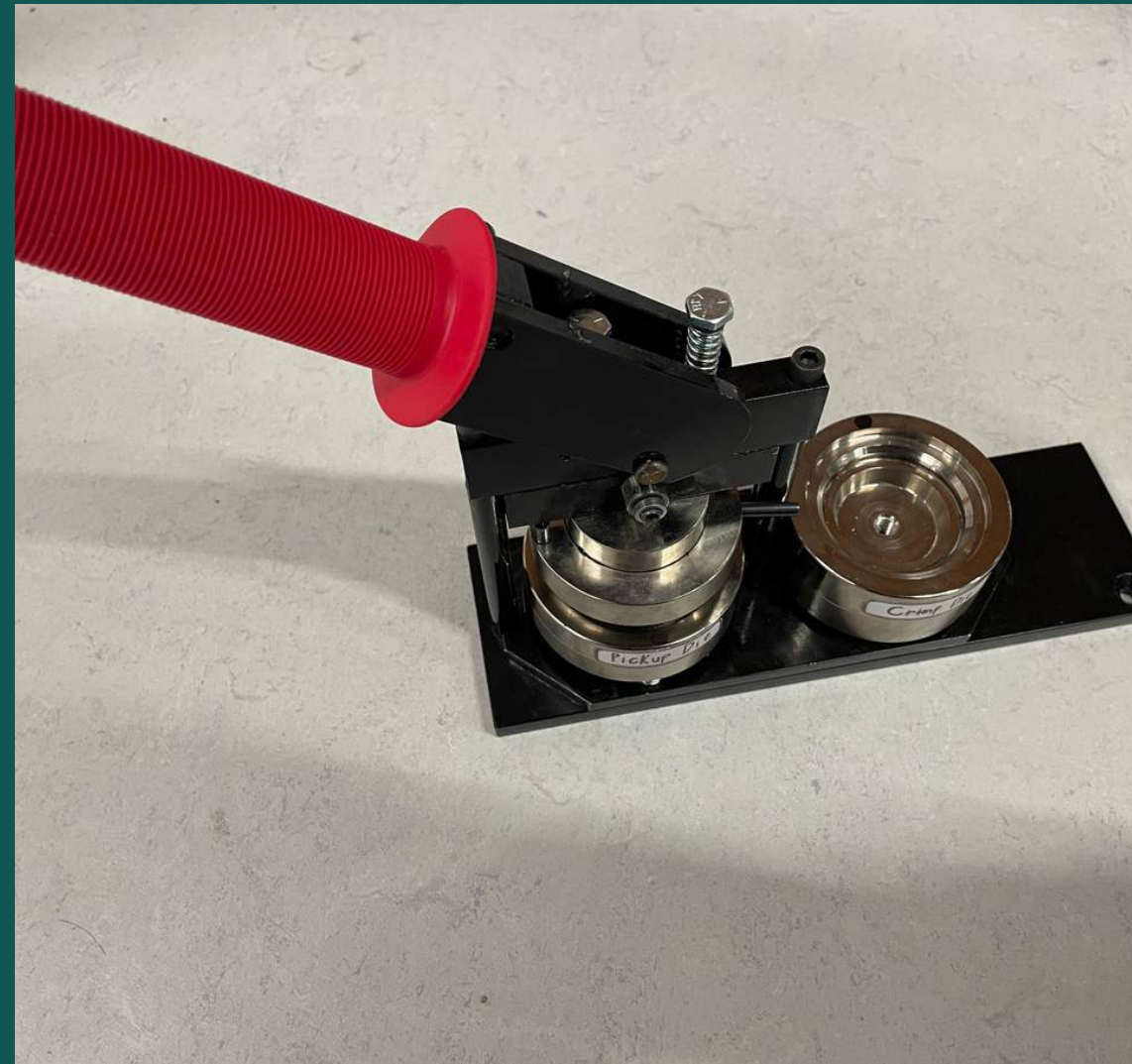
BUTTON MAKER
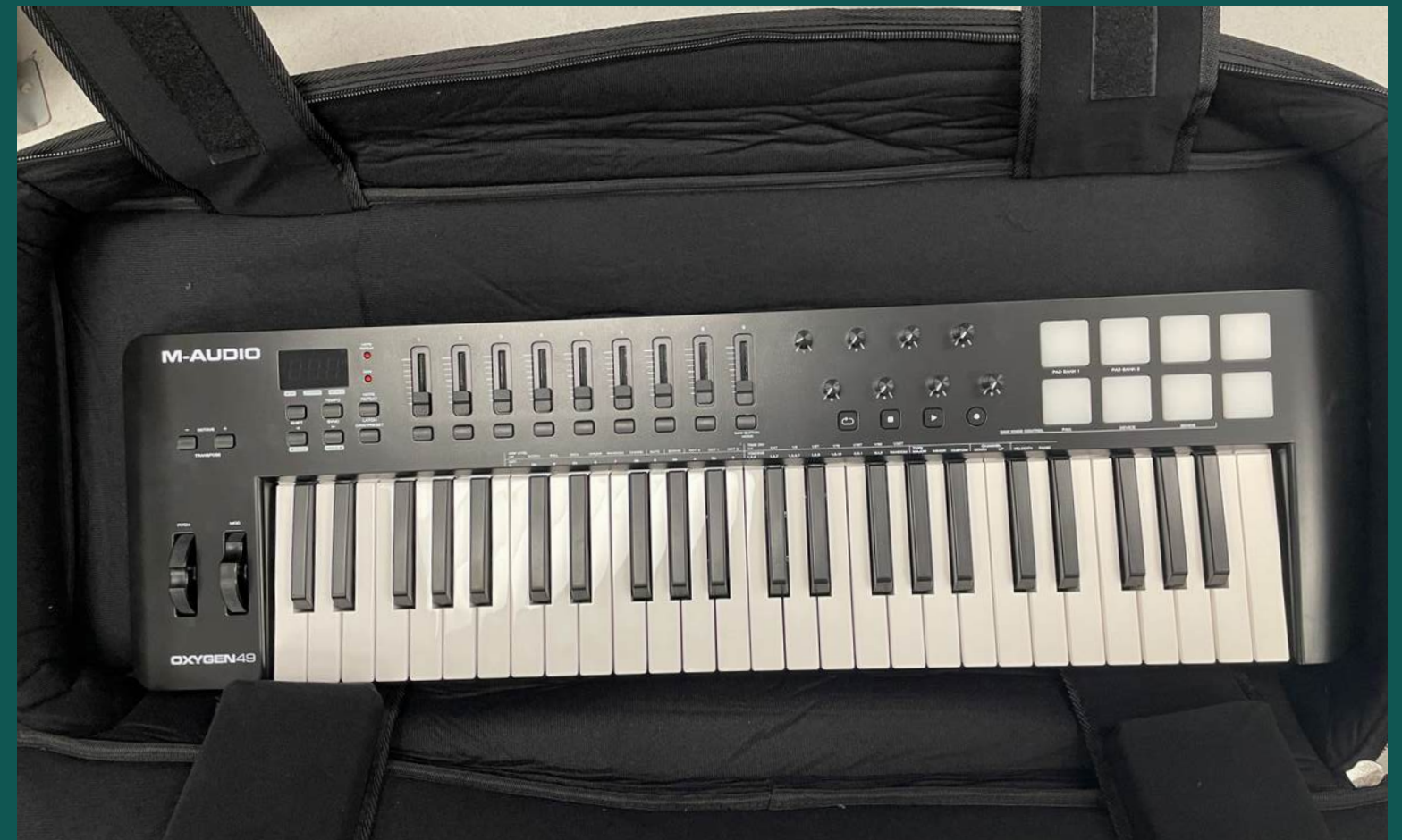
MIDI CONTROLLERS (25 AND 49 KEYS)

Media
CREATION

AMBISONIC AUDIO RECORDER
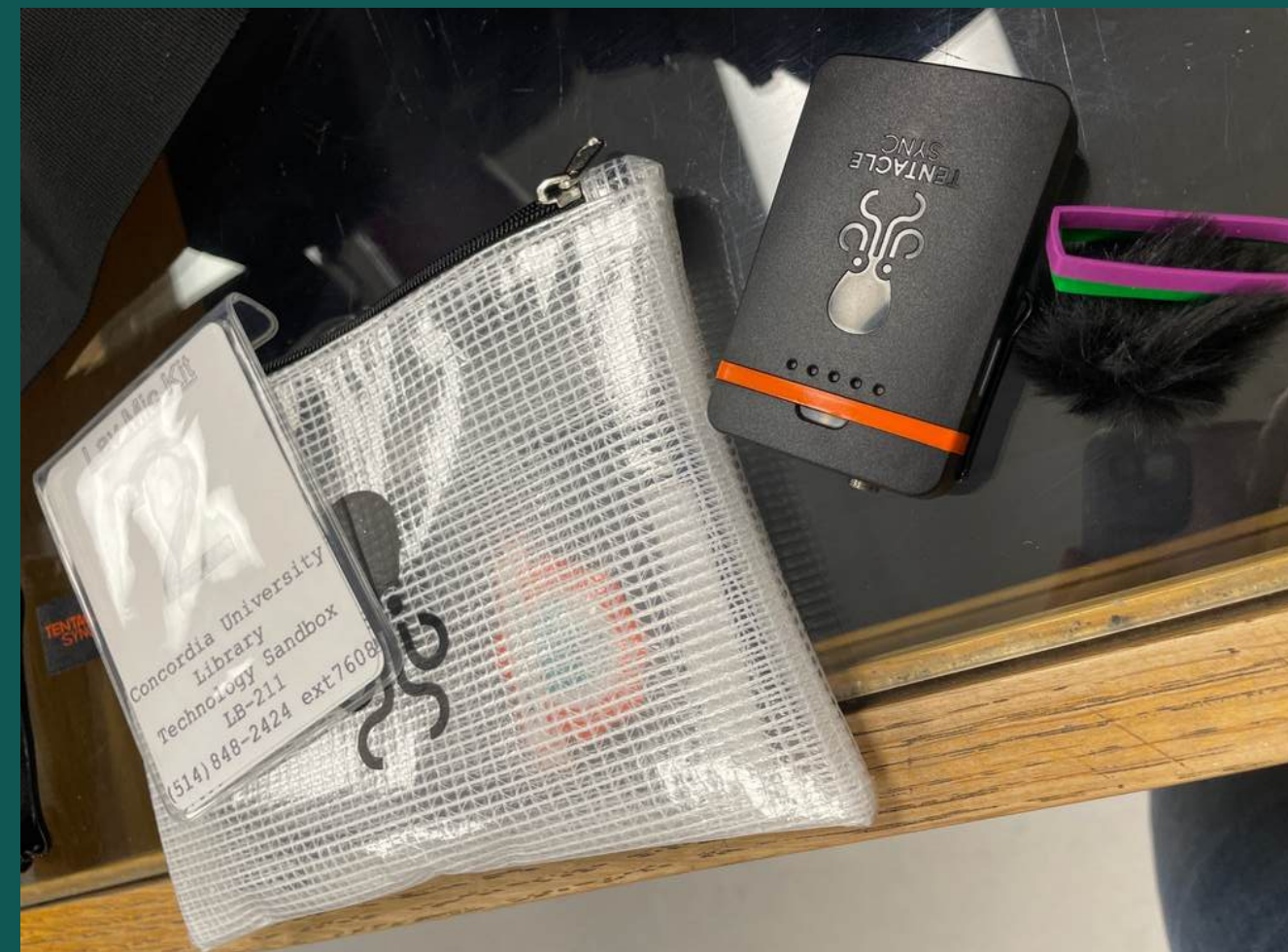
LAVALIER MIC & RECORDER

Media
CREATION

- **Vuze 3D 360 camera (lendable)**
- **Audio equipment (lendable)**
  - midi controllers (25, 49 keys)
  - audio recorder & lavalier mic,
  - ambisonic audio recorder
  - podcasting/interview recording kits (presonus audiobox iTwo & Shure SM58-LC microphone)
- **Microscope**
- **Mini projectors (lendable)**
- **Camera equipment (lendable)**
  - DSLR kits and accessories
  - Lens kits (50 mm, 10-18 mm lenses)
  - Camcorders

MINI PROJECTORS

Electronics
EQUIPMENT

- Small oscilloscope (lendable)
- Precision screwdriver kits (lendable)
- Digital calipers (lendable)

ANALOG DISCOVERY KIT (OSCILLOSCOPE)

PRECISION SCREWDRIVER KITS

3d scanning and modelling
EQUIPMENT

- Arctec Eva 3D scanner
- iPads and Apple pencils (lendable)

ARCTEC EVA 3D SCANNER

VR/XR
EQUIPMENT

- Vive trackers
- Valve index - Steam
- HoloLens 2 (Augmented reality)
- Occulus Quest (x4 - lendable)
- HTC Vive Pro Kit (lendable)

OCCULUS QUEST

HOLOLENSE

Computing Power
EQUIPMENT

- Alienware m15 gaming laptops
- Alienware Aurora R13
- eGPUs and graphics cards
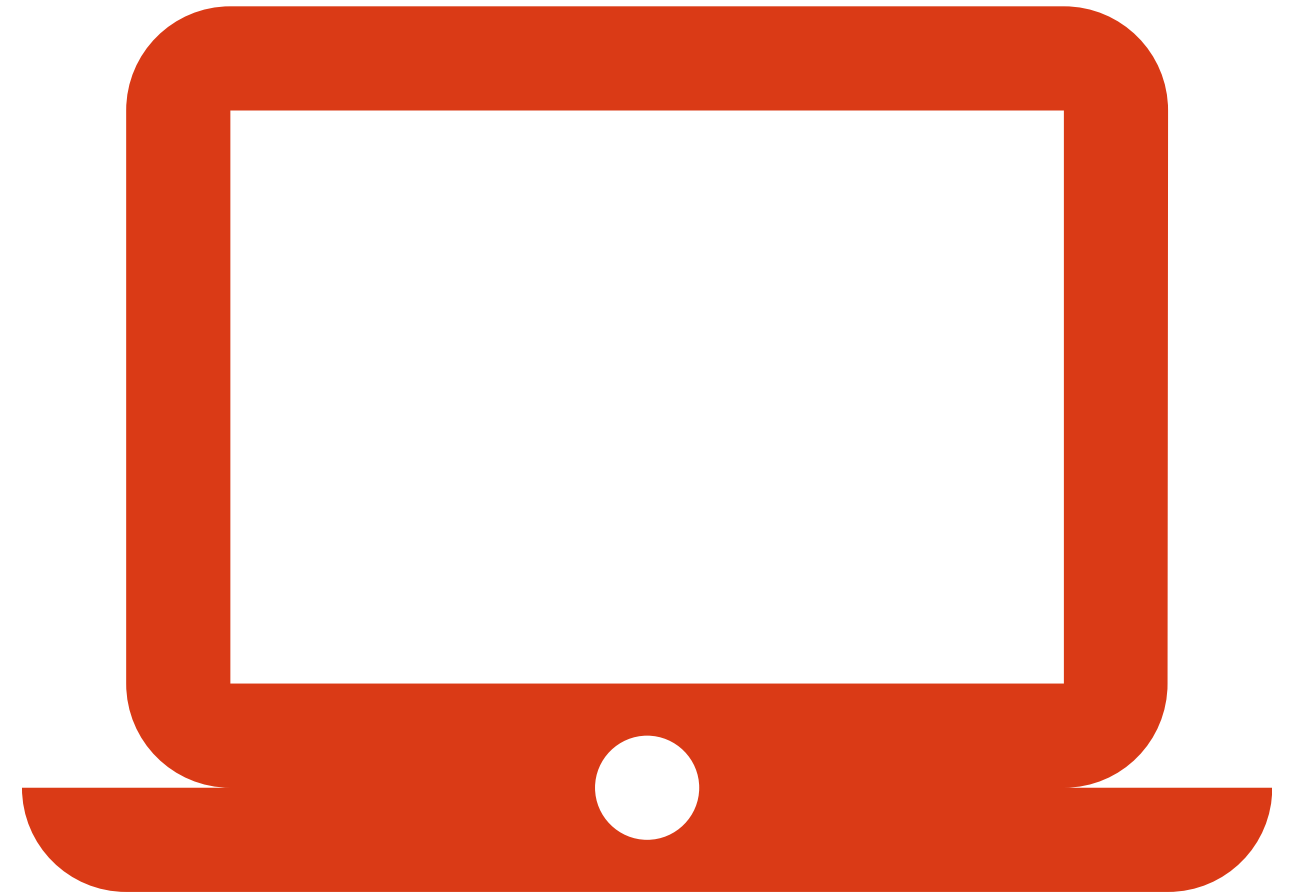
TECHNOLOGY SANDBOX VISIT
(10-15 MINUTES)

TINKERCAD
(10-15 MINUTES)

TINKERCAD

- 3D design, circuits, codeblocks
- Explore these Tinkercad sites:
  - https://www.tinkercad.com/classrooms-resources
  - https://www.tinkercad.com/lessonplans
  - https://www.tinkercad.com/learn

Library laptops: connect to wifi with your netname password. It may take a few tries to connect. If it does not work, right click on the 'ConcordiaUniversity' network and select "forget". Retry connecting.

DISCUSSION

- What is one new thing you learned today by visiting the Technology Sandbox and/or exploring Tinkercad?

DISCUSSION

- What is one new thing you learned today by visiting the Technology Sandbox and/or exploring Tinkercad?

- Has this visit given you new ideas as to how to incorporate technology in the elementary classroom?

WORKSHOPS

Visit our library events page to check out our
general workshops and Technology Sandbox workshops!

Thinking Critically about AI Tools	Arduino 101	Sticker Party: Digital Die Cutting
Zine making	Researching Indigenous topics	Design for 3D Printing

WRITING ASSISTANCE

Every Tuesday 11-2

LB-2 (near Ask Us desk)

Webster Library

MAPPING IT OUT

Individually, take two minutes right now to **draw a diagram or picture of your process** for completing the research assignment in this course.

How will you start?

Where will you stop?

What are your steps?
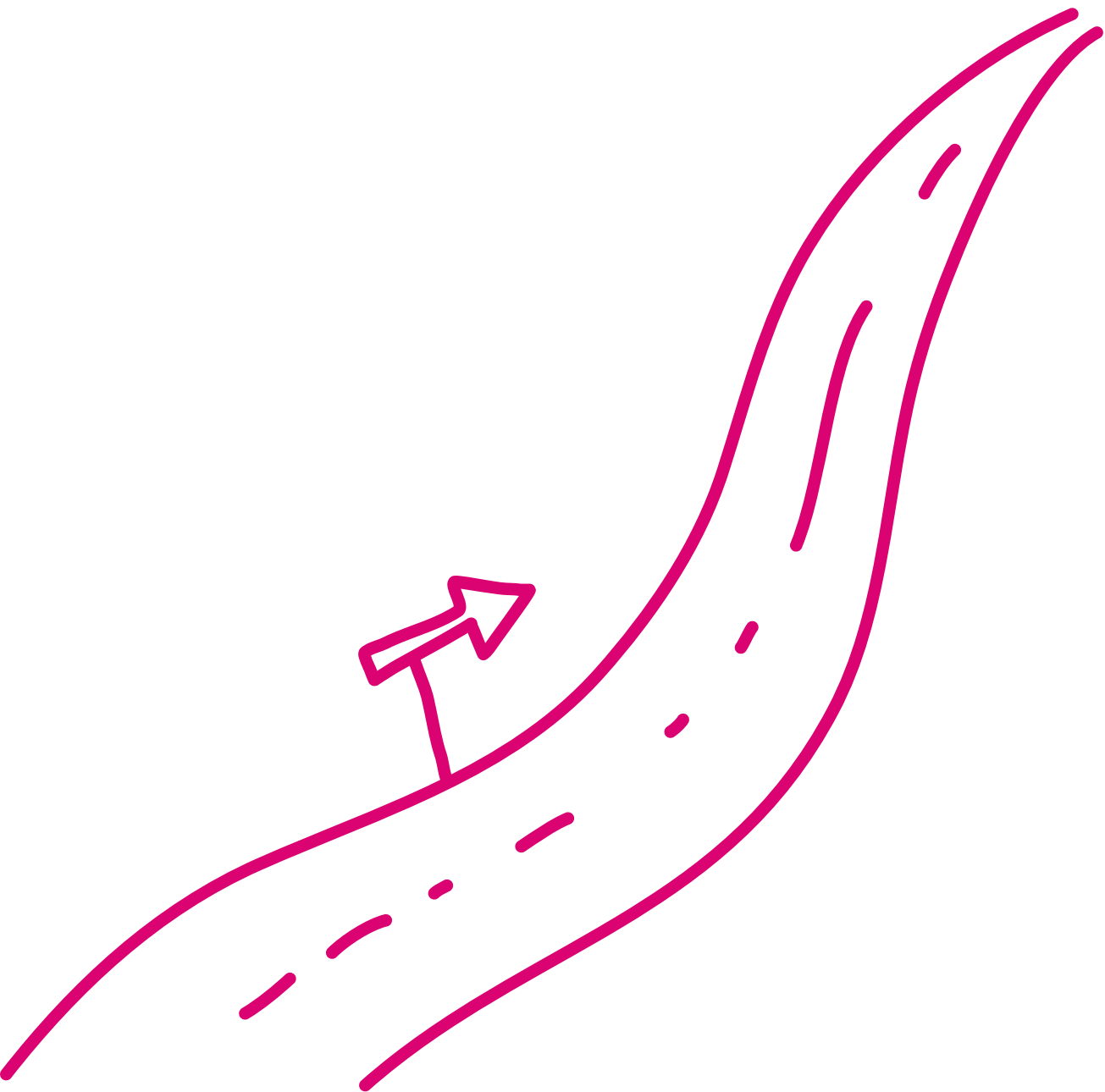
The reality is....

Your process might feel
messy or chaotic.

Don't worry: clarity will
emerge!

Model of the Information Search Process (Kuhlthau, 2004)

	Initiation	Selection	Exploration	Formulation	Collection	Presentation	Assessment
Feelings (Affective)	Uncertainty	Optimism	Confusion Frustration Doubt	Clarity	Sense of direction / Confidence	Satisfaction or Disappointment	Sense of accomplishment
Thoughts (Cognitive)	vague ――――――――→			focused ――――――――――――→	increased	interest	Increased self-awareness
Actions (Physical)	seeking	relevant Exploring	information ―――――――→	seeking	pertinent Documenting	information	

THE RESEARCH PROCESS

Step 1
DEFINE
the topic

Step 2
NARROW
the topic

Step 3
GATHER
background
information

Step 4
CREATE
a research
question

Step 5
DEVELOP
a working thesis
statement

Step 6
FIND
and evaluate
sources

Step 7
CITE
sources

Step 8
WRITE
the paper

Developing a research question and search strategy

Developing a research question

WHO
- Who are being affected?
- Who are we interested in?

WHAT
- What are we interested in?
- What is happening?

WHEN
- Time frame?
- Certain moment in time?

WHERE
- Where did it happen?
- Geographic scope?
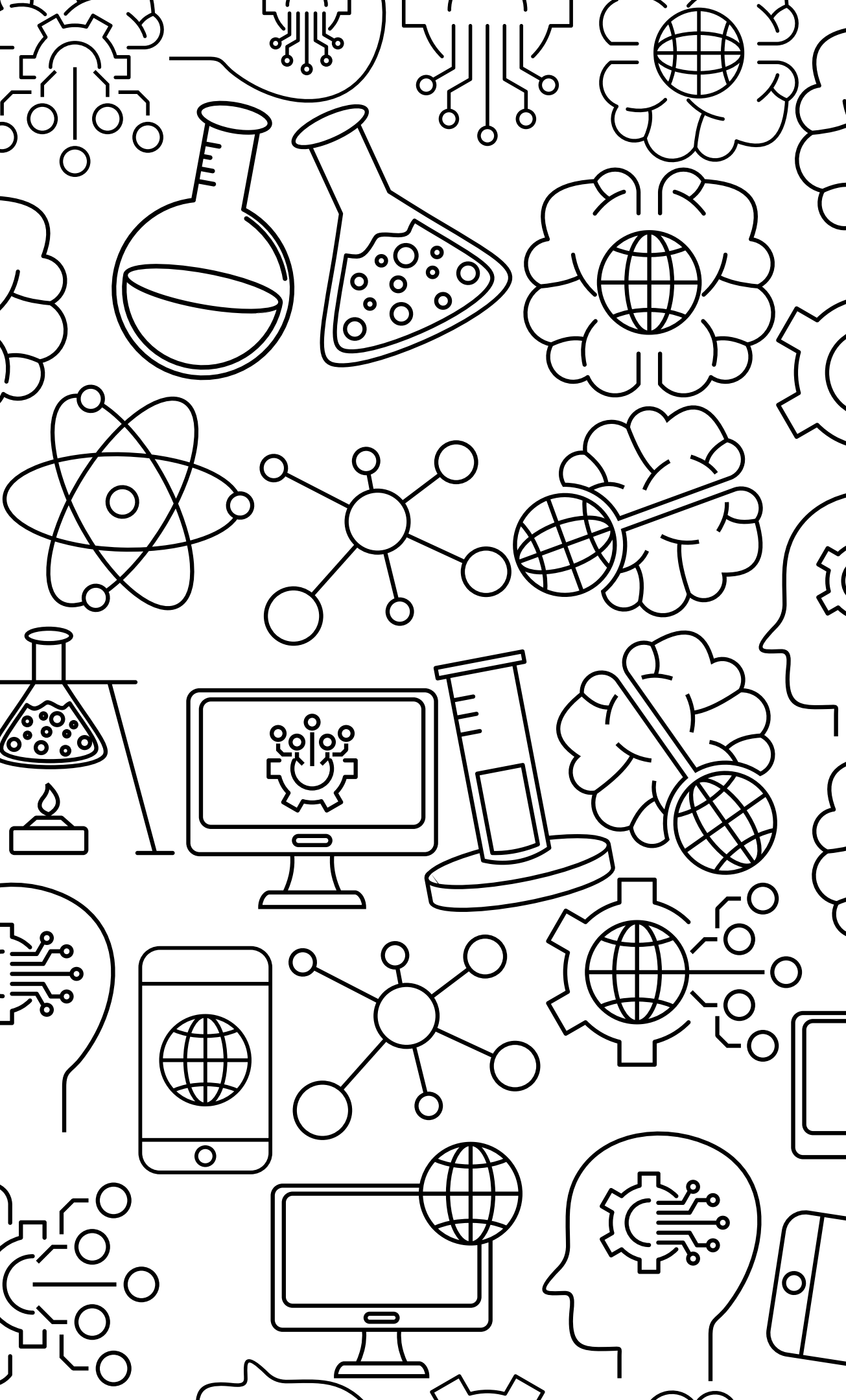
RESEARCH QUESTION

Does the availability of diverse makerspace technologies impact elementary students' engagement in STEM-related activities?

KEY CONCEPTS

Does the availability of diverse makerspace technologies impact elementary students' engagement in STEM-related activities?

Key concept	Key concept	Key concept	Key concept
makerspace	elementary students	engagement	STEM

SYNONYMS OR RELATED CONCEPTS

Key concept	Key concept	Key concept	Key concept
makerspace	elementary students	engagement	STEM

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Key concept	Key concept	Key concept	Key concept
makerspace	**elementary students**	**engagement**	**STEM**
Makerspace technology			
Makerspace tools			
Makerspace materials			

SYNONYMS OR RELATED CONCEPTS

Key concept	Key concept	Key concept	Key concept
makerspace	**elementary students**	**engagement**	**STEM**
Makerspace technology	Primary students		
Makerspace tools	K-6 students		
Makerspace materials	Elementary education/ Elementary classrooms		

SYNONYMS OR RELATED CONCEPTS

Key concept	Key concept	Key concept	Key concept
makerspace	**elementary students**	**engagement**	**STEM**
Makerspace technology	Primary students	Motivation	
Makerspace tools	K-6 students	Involvement	
Makerspace materials	Elementary education/ Elementary classrooms	Participation	

SYNONYMS OR RELATED CONCEPTS

Key concept	Key concept	Key concept	Key concept
makerspace	**elementary students**	**engagement**	**STEM**
Makerspace technology	Primary students	Motivation	Science
Makerspace tools	K-6 students	Involvement	Technology
Makerspace materials	Elementary education/ Elementary classrooms	Participation	Computer Science

ANDS & ORS

Key concept	Key concept	Key concept	Key concept
AND	**AND**	**AND**	
makerspace	**elementary students**	**engagement**	**STEM**
OR	*OR*	*OR*	*OR*
Makerspace technology	Primary students	Motivation	Science
OR	*OR*	*OR*	*OR*
Makerspace tools	K-6 students	Involvement	Technology
OR	*OR*	*OR*	*OR*
Makerspace materials	Elementary education/ Elementary classrooms	Participation	Computer Science
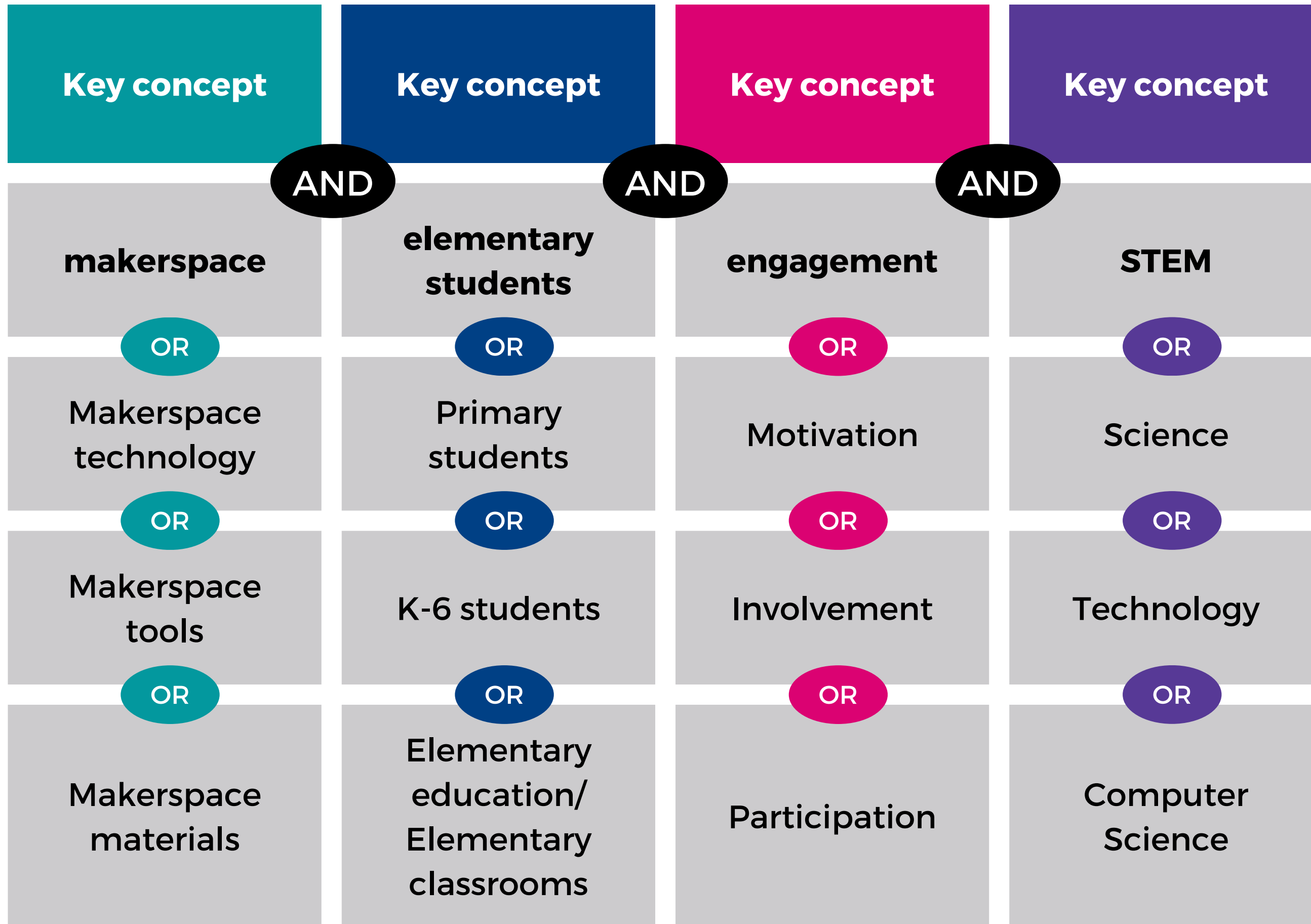
ANDS & ORS
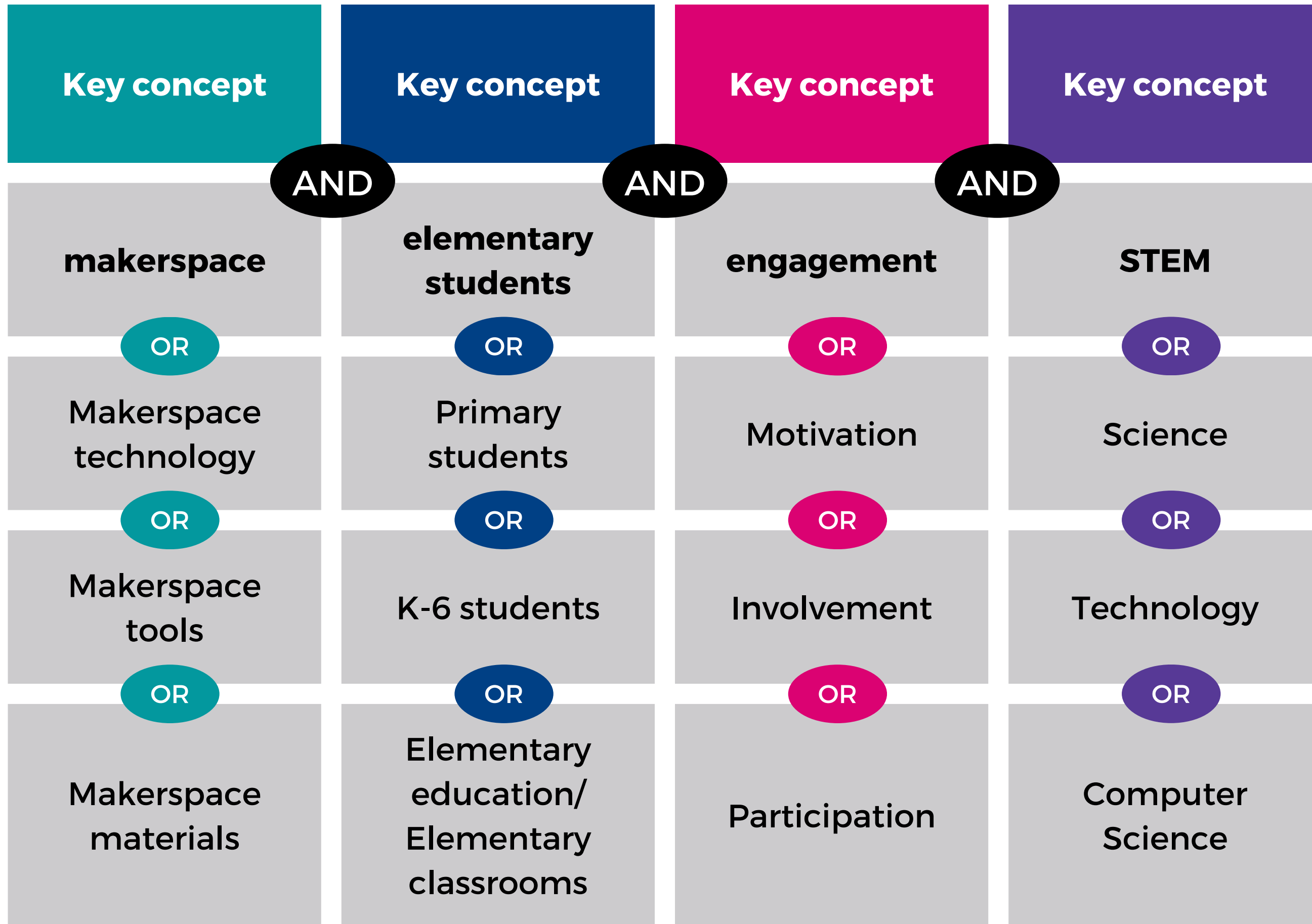
AND

Combines concepts

OR

"OR" give you "MORE"!

Key concept	Key concept	Key concept	Key concept
AND	**AND**	**AND**	
makerspace	**elementary students**	**engagement**	**STEM**
OR	*OR*	*OR*	*OR*
Makerspace technology	Primary students	Motivation	Science
OR	*OR*	*OR*	*OR*
Makerspace tools	K-6 students	Involvement	Technology
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Makerspace materials	Elementary education/ Elementary classrooms	Participation	Computer Science
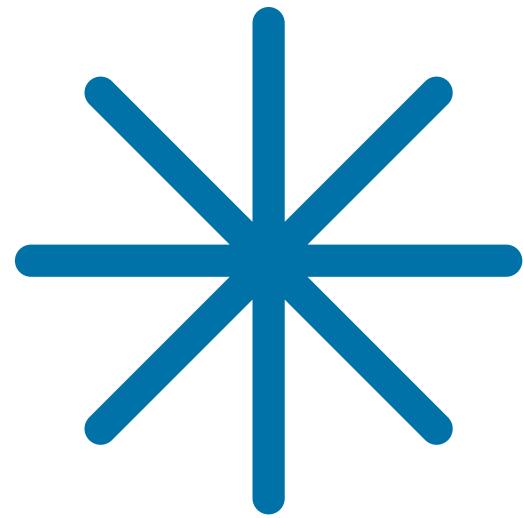
Asterisk

When placed near the end of a word finds variants. Can also be used for spelling variants.

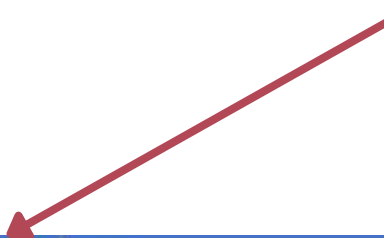Example: learn* = learning, learner, learners, learned

Quotation marks

Using quotation marks ensures that results retrieved contain only the exact phrase.

Example: "language policy", "educational standard*", "elementary student*"

HOW DO I KEEP TRACK OF ALL THIS INFORMATION?

Literature Review Synthesis Matrix and Research Log templates

Citation (APA)	Methods	Intervention	Keywords / Subjects	Concept 1:	Concept 2:	Concept 3:	Key quotes	Gaps, problems, unresolved questions, notes on sources

Found under "workshops and guides" tab

Date	Database name	Search terms	Search limits	Results
			Scholarly/Peer-reviewed	
18-Sep-23	Education Source		Date range	

Inclusive Voices

Apply practices for counteracting the effects of bias and exclusion of voices

Algorithmic Effects

Explain how algorithms shape search results and why this matters

Visually Mis(Representing) Data

Making data legible using graphs and diagrams has great potential. This unit helps you differentiate clarifying graphs from manipulating ones.

Different Types of Data

Data surrounds us in many ways, but how do we talk about and use it?

Misinformation and Disinformation

Recognize some of the complexities in how misinformation and disinformation can be propagated in academic information and popular media

Information Source Types

What kinds of information is out there? This is a brief overview of how to recognize and use each kind.

AI Deepfakes

Define deepfakes and some of the ways in which they are created

Tips for Searching

Learn strategies for different types of search tools

Choosing Your Search Tool

Identify types of search tools: web search engines, chatbots, AI search assistants, and databases

CRITICAL TOOLKIT FOR NAVIGATING INFORMATION

Are you an undergraduate student participating in the FutureBound program?

After reviewing the content and completing the activity for one of the units, you can complete a reflection form to have it count as one activity towards your Digital Capabilities & Mindsets certificate!

Subject guides

- [Education subject guide](#)
- [Applied linguistics/TESL subject guide](#)
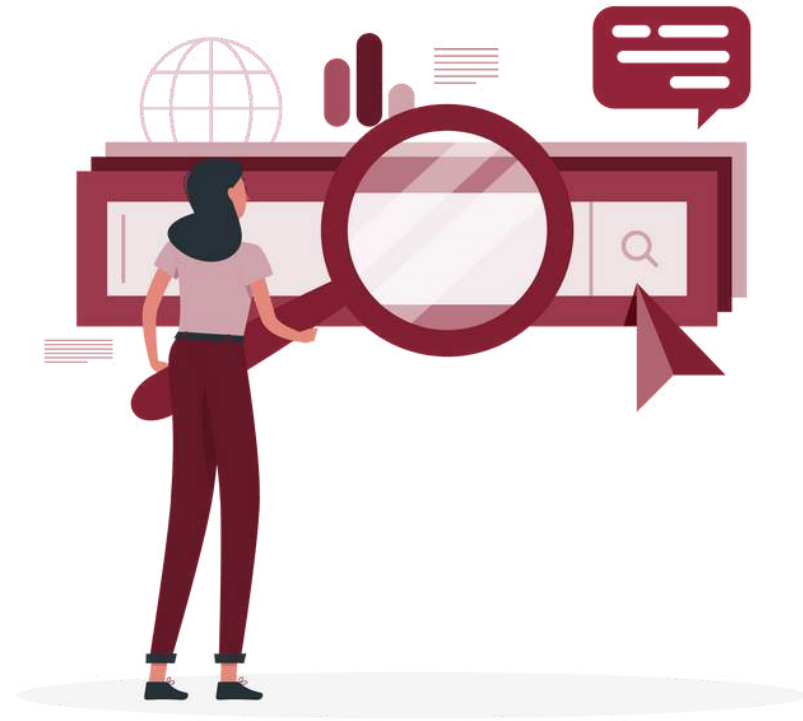
Electronic Resources

DATABASES BY SUBJECT

Browse databases by subject or search for a specific database

E-JOURNALS

Search by journal publication title

(E.g., Computers & Education)

Education Databases

ERIC

Covers over 1,100 current journals, most of which are peer reviewed; also includes conference papers, research reports, and other grey literature (ERIC Documents).

EDUCATION SOURCE

Includes thousands of scholarly and professional journals covering all areas of Education.

SEARCH DEMO

Makerspace OR "makerspace technolog*" OR "makerspace tool*" OR "makerspace material*"

AND

"elementary student*" OR "primary student*" OR "K-6 student*" OR "elementary education"

AND

engagement OR motivation OR involvement OR participation

AND

STEM OR science OR technology OR "computer science"

Other resources

PROQUEST COMBINED CANADA

Search for Education related stories in fulltext Canadian daily newspapers newspapers, news sites, and journal articles

REPÈRE

French language periodicals; useful for coverage of the Quebec education system.

ÉRUDIT

Scholarly coverage of education issues relative to Canada and Quebec

EUREKA

Provides full text access to English and French language Canadian newspapers, magazines, newswires, blogs and broadcast transcripts. A valuable source for regional and local Canadian news coverage.

CANADIAN PUBLIC POLICY COLLECTION

A large collection (over 43,000 documents) of electronic monographs and reports from Canadian public policy institutes, government agencies, advocacy groups, university research centres, think-tanks, and other public interest groups.

APA Citation Guides
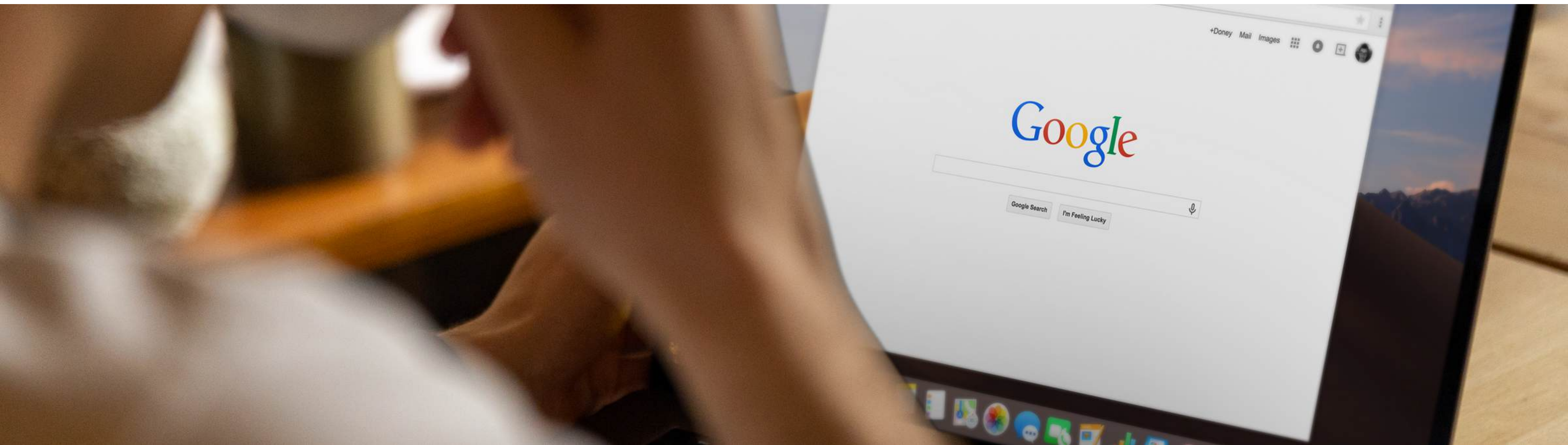
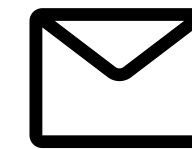APA GUIDE (CONCORDIA LIBRARY)   APA OWL PURDUE   THE OFFICIAL GUIDE TO APA STYLE
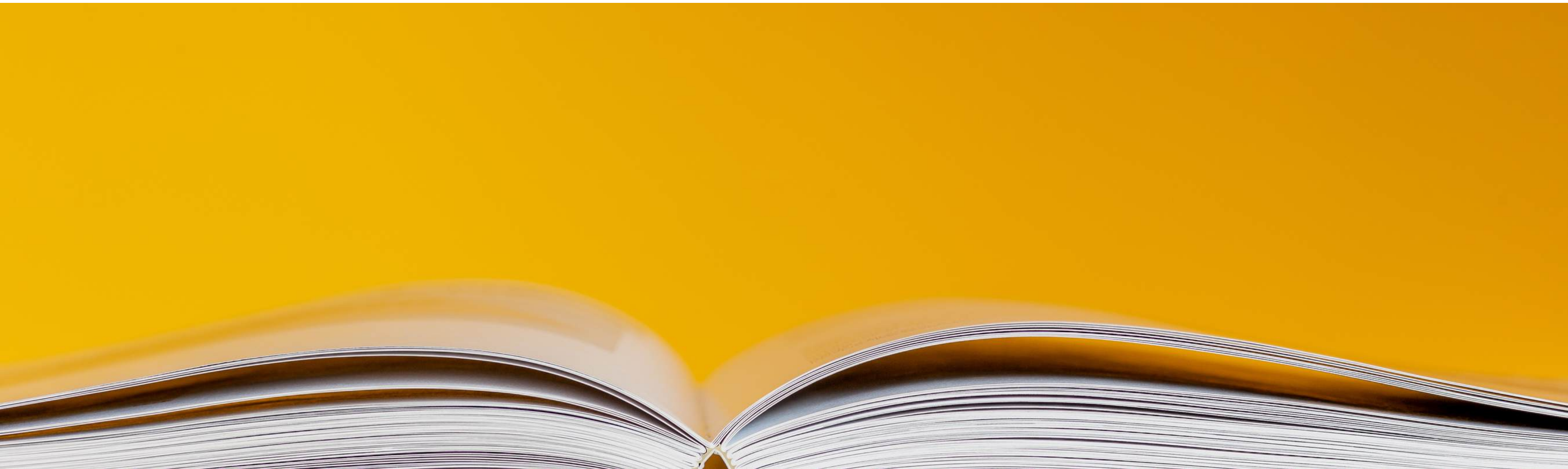
Google Scholar

Visit our guide to **Set up Google Scholar to find library resources.**

Google vs. Google Scholar vs. Library databases (Newcastle University)

MELISSA. RIVOSECCHI@CONCORDIA.CA

Contact me for research help
and/or to set up an appointment
(via Zoom or in person)

or visit the Ask Us desk!