



YOUR SKILLS,
YOUR FUTURE.

Feature Challenge Focused on Designing Ethical and Innovative AI Solutions

Related to ALL SHSM Sectors

Innovation Creativity & Entrepreneurship Training





CLIMATE CHANGE
SUSTAINABLE FOREST
BIO-CULTURAL DEFORESTATION

GOOD UNIVERSITY VICTIMS
WILDLIFE
CLIMATE RESPONSIBILITY

OPEN ANGE
NATIONAL

resistance
NATIVE

ENVIRONMENT
WIND

relationships
GEOGRAPHIC

Family
OVERCROWDED
UNINFORMABLE

ABILITY
CONNECTION

CRISIS TEMPERATURE
ARITHMETIC CONCEPTS

CRISIS
CLIMATE CHANGE

EVERYDAY

WEATHER

WEATHER

UNIVERSITY



YOUR SKILLS,
YOUR FUTURE.



ONTARIO COUNCIL
FOR TECHNOLOGY
EDUCATION

Introductions

Event Host (ICT SHSM Grad)

Monica Meng

Halton District School Board

Veronica Kleinsmith

Sector Partners:

Dellania Segretti & Dareen Fatimah



What is Innovation, Creativity and Entrepreneurship?

- Innovation, Creativity and Entrepreneurship is training for SHSM students and the Sector-Partnered Experience graduation requirement for the SHSM red seal
- Focuses on a real challenge from our sector partners – your final submissions from today will be considered for further development!
- We are so glad you are “here” and we hope you enjoy the experience!
- You can follow along in the Student Handbook - print or digital.



Innovation, Creativity & Entrepreneurship

Creativity is a process of generating ideas, making connections and imagining what could be.



Innovation is the generation and realization of a new idea in the world.

Entrepreneurship is a set of activities for building and scaling an idea sustainably.



The 3 GEARS: A Systematic Approach to Innovation

**Empathy &
Need Finding**



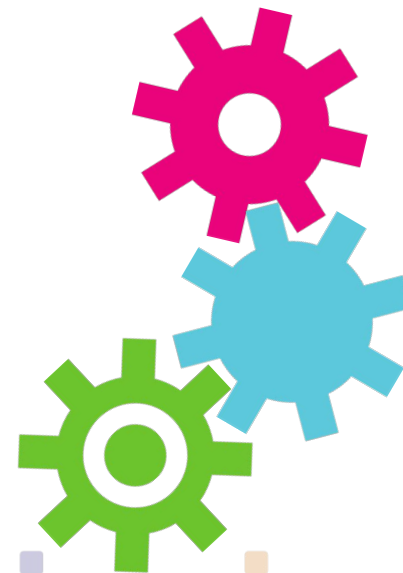
**Ideation &
Prototyping**

Strategy & Testing

The 3 Gears power our ability to be innovative, creative and entrepreneurial!

Need Finding

- There is always a need, even when you are not looking.
- Why is innovation, creativity and entrepreneurship so important?
- [Link: The BeeHome Through the Years](#)



From A Challenge



The Better Solution!



Gear 1: Empathy & Need Finding

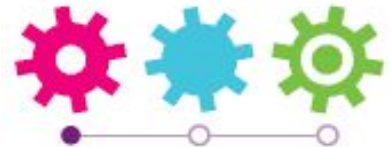
- **Empathy** is the ability to understand the thoughts and feelings of other people, as different from one's own.
- **Empathy** is vital to innovation because understanding that there are needs in the world other than one's own can be life changing

Connected ICE Mindset



I have a responsibility to create new ideas that meet needs in the world.

I can see the value in understanding the world from another person's perspective.



Need Finding...

Need finding is the ability to identify the unmet needs of others, even if they may not be clear to the person who has that need.

“ If I had asked my customers what they wanted, they would have said a faster horse.”



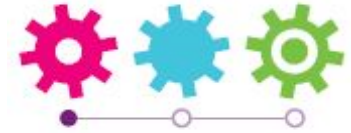
- Henry Ford



Needs are not solutions



Needs Last, Solutions Often Don't



Kodak

“I need to capture memories of my daily life.”



Empathy & Need Finding:



- We are now going to hear from our Industry Partners who will share some insight and a specific challenge.
- Document any information in your workbook on **pages 4** that is key for building empathy and identifying the needs of the industry partner.

A screenshot of a workbook page titled "Empathy & Need Finding". The page features the logos for "SHSM" (Shoreline High School Marine) and "eSKILLS OF FUTURE". Below the logos, the text "Potential Challenge 1" is centered. The form contains three sections: "Community Partner:", "Challenge:", and "Notes:". A small icon of three interlocking gears is located in the bottom right corner of the page.

Potential Challenge 1
Community Partner:
Challenge:
Notes:



Sector Partner

Implementing AI Dellannia Segreti & Dareen Fatimah





IMPLEMENTING ARTIFICIAL INTELLIGENCE

OCTE April 2026

Benefits, Ethics & Your AI Compass

YOUR FACILITATORS

Dareen Fatimah

Social Worker · Research & Teaching Assistant
Doctoral Candidate, OISE – University of Toronto

Session focus:

AI introduction · AI in different sectors and challenges

Dellannia Segreti

Teacher and Researcher ·
Doctoral Student, OISE – University of Toronto

Session focus:

AI Ethics in Education · Critical Thinking
Student-facing AI Policy & Reflection

WHERE ARE YOU STARTING FROM?

*A quick check-in
before we begin*

1

Have you used an AI tool in the last week?

Yes / No / Not sure

2

Will AI mostly help or replace workers in your sector?

Share your initial thoughts

3

One word: How do you feel about AI right now?

No wrong answers here

Session Roadmap

1

What is AI?

2

Benefits of AI

3

Challenges of AI

4

AI Policies

5

AI Ethics

6

AI Self-Reflection

◀ Part 1: Understanding AI

Part 2: Ethics & Reflection ▶

WHAT IS AI?

AI is software that learns from experience rather than following fixed instructions.

Instead of a programmer writing a rule for every situation, AI figures out the rules itself by studying millions of examples.

Do you know that you've already used AI today?

Spotify. Google. TikTok. Autocorrect.



Machine Learning

Learns from data,
improves over time



Natural Language Processing


Reads, understands
& responds to language



Computer Vision

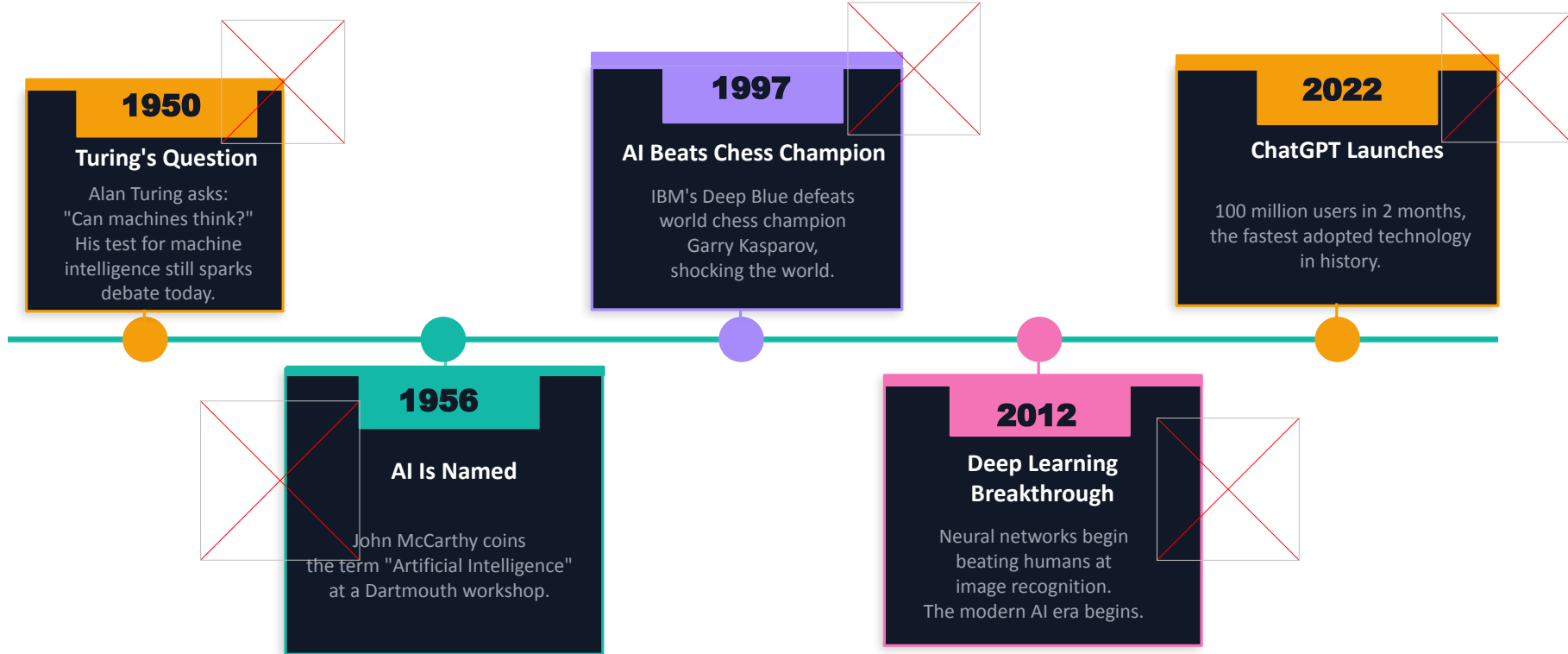
Recognizes images,
faces & objects

You've seen these at work: Spotify's "Discover Weekly" · Netflix recommendations · Google Translate · Face ID · Spam filters · ChatGPT

 **Think** The tools listed above, did you know it was AI?

How AI Evolved?

Understanding the evolution of AI helps you understand what it can and can't do.



The pace is accelerating, what happens in the next 10 years is partly impacted by how we decide to use AI today.

How Does AI Learn?

It's closer to how you learned to ride a bike than how you studied for a test.

1



Feed It Data

AI is trained on massive amounts of data, including images, text, and audio. But that **data was created by humans** in a world shaped by inequality.

2



It Makes Guesses

AI looks for statistical patterns, the most common associations in its training data. **It doesn't understand context or lived experience the way humans do.**

3



It Gets Edited

Who decides what CORRECT means? Human reviewers, often underpaid workers in the Global South flag errors.

4



It Gets Faster & Confident Either Way

After training, AI can process new data very quickly, BUT fast **doesn't mean its right.**



Think of it like this:

When you first played a video game, you didn't win right away. Your brain noticed patterns, when to jump, when to slow. AI does the same thing, just with code instead of a brain, and data instead of gameplay.

BENEFITS OF IMPLEMENTING AI

For Organizations & Business

- Increased efficiency and productivity
- Cost savings through automation
- Enhanced customer / client experiences
- Better decision-making with real-time data

For Technology & Innovation

- Advanced data analysis and insights
- New products, services, and tools
- Improved accuracy and reliability
- Accessibility and equity improvements

AI IN YOUR SECTOR



CONSTRUCTION

Safety Prediction

Procore flags schedule risks and site hazards in real time

Hands-Free Logging

Dragon voice-to-text records safety notes and inspections on the go

Admin Automation

Autodesk Docs tracks, sorts, and flags outstanding work orders automatically



HEALTHCARE

Predictive Care Alerts

Early warnings for patient deterioration before symptoms spike

Diagnostic Support

AI detects patterns in imaging and lab data clinicians make the final decision

AI Scribing

DAX Copilot listens to patient conversations and generates clinical notes

Key insight: In both sectors, AI handles the data, humans make the decisions.

AI IN YOUR SECTOR



Business

Customer Analytics

AI analyzes purchasing patterns and behavior to predict demand, personalize marketing, and reduce waste. It is used in retail, banking, and hospitality.

Fraud Detection

ML flags unusual transactions in real time, protecting businesses and consumers to a certain degree.

Human Resources (HR) Tools & Hiring

AI screens resumes and ranks candidates, but raises serious concerns around who gets filtered out before human reviews the file.



Environment

Precision Agriculture

AI sensors monitor soil moisture, crop health, and weather patterns, reducing water and pesticide use to improve yields.

Climate Modeling

AI processes massive datasets to improve climate predictions (weather app), and track deforestation.

Wild Life Monitoring

AI computer vision tools scans field camera images automatically, helping conservationists track and identify species and flag threats like habitat loss.

Key insight: In all sectors, AI handles the data, humans make the decisions.

AI FOR ACCESSIBILITY

Technology that includes, not just automates

AI opens career pathways that paperwork-heavy workplaces once closed off.

Dragon Naturally Speaking

Dragon Medical One in Healthcare

Voice-to-text for workers with mobility, literacy, or disability-related barriers. Enables hands-free documentation in real work environments.

Kurzweil 3000

Literacy & Learning Support

Reads text aloud, supports comprehension, and assists students and professionals with learning disabilities navigating dense written content.

Reflection

Have you used a tool like this before?
Think about the difference such tool might make for someone with visual impairment.

MANAGING INFORMATION OVERLOAD

Every career field produces more information than any one person can read. AI tools help you sort, summarize, and find what's relevant fast.

NotebookLM

Research

Upload articles and ask questions across multiple sources at once, helpful for research-heavy assignments

Perplexity AI

Search

AI-powered search with cited sources like Google, but with reasoning and synthesis built in

Airtable

Management

AI-powered workspace to visualize strategy, align priorities, and launch projects

AI Search Strings

Library

Use AI to generate search queries for academic databases like JSTOR, ERIC, or your school library system

⚡ Key question: Are you using AI to think WITH, or to think FOR you?

CHALLENGES IN AI



Data Privacy



Know what data you're sharing, check privacy policies before using any AI tool with personal or client information



High Costs & Access



Many powerful AI tools have free tiers, research what's available at your school or institution



Talent & Skills Gap



Learning to use AI critically NOW is one of the most transferable skills for any career sector



Bias & Errors



AI reflects the data it was trained on, always verify outputs, question the source, and think critically

STEPS TO IMPLEMENT AI

1

Define Objectives

What problem are you solving? Who benefits and who might be left out?

2

Collect Data

What data is needed? Is it ethical, representative, and unbiased?

3

Choose Technologies

Match the tool to the task, not the other way around

4

Develop & Test

Build, trial, and gather feedback from real users in the field

5

Integrate Systems

Connect with existing workflows and maintain meaningful human oversight

6

Monitor & Optimize

Continuously evaluate outputs, fairness, privacy, and real-world impact

PART 1 — TAKEAWAYS

AI is already present in construction, healthcare, and education, not just in tech companies

The same tools that increase efficiency can also increase equity and accessibility

Implementing AI responsibly means asking: Who does this serve? Who might it leave out?

Not all shortcuts are bad, knowing the difference is the real skill

Session Roadmap

✓

What is AI?

✓

Benefits of AI

✓

Challenges of AI

4

AI Policies

5

AI Ethics

6

AI Self-Reflection

Now entering Part 2: AI Policies, Ethics & Self-Reflection

ONTARIO'S RESPONSIBLE AI DIRECTIVE

TRANSPARENT

● Explain AI decisions in plain language

● Disclose when and how AI is being used

ACCOUNTABLE

● Humans remain responsible for AI decisions

● Clear lines of oversight and review

RESPONSIBLE

● Human rights-affirming and non-discriminatory

● Safe, secure, and privacy-protected

Privacy Laws You Should Know:

FIPPA

Freedom of Information and Protection of Privacy Act, governs provincial public bodies

MFIPPA

Municipal version of FIPPA, applies to local government and school boards

PHIPA

Personal Health Information Protection Act, governs health data collection and storage

WHAT IS ETHICAL AI USE?

UNESCO's Four Core Foundational Values



Human Rights & Dignity

AI must respect, protect, and promote human rights for everyone everywhere



Peaceful, Just Societies

AI should reduce inequality and support democratic values not undermine them



Diversity & Inclusiveness

AI must represent and serve all people not just those with data, power, or resources



Environmental Flourishing

AI development must account for its environmental footprint and long-term sustainability

WHAT AI TECHNOLOGIES HAVE YOU TRIED?

Think about tools you use every day — even casually. More than you might expect counts as AI.

Chatbots & Writing

- ChatGPT
- Claude
- Gemini
- Microsoft Copilot

Image & Art

- DALL-E
- Midjourney
- Canva AI
- Adobe Firefly

Search & Research

- Perplexity
- Google AI Overview
- NotebookLM
- Consensus

Productivity

- Grammarly
- Otter.ai
- Microsoft Copilot
- Google Docs AI

Entertainment

- Spotify recommendations
- Netflix / YouTube algo
- TikTok FYP
- Snapchat filters

School & Accessibility

- Kurzweil 3000
- Dragon Dictate
- Khan Academy AI
- Quizlet AI



You've likely used AI more than you realize.

NOT ALL SHORT- CUTS ARE BAD!

Before you reach for an AI tool, ask:



Risk

Am I letting AI replace my thinking, or support it?



Learning

Is AI helping me understand this, or just helping me finish it?



Long-term

What skills do I want to carry with me beyond this task?

THINK ABOUT YOUR AI USE



Intent

Why am I using AI?

Is there a genuine need or am I using it out of habit, pressure, or convenience?



Impact

Who is helped or harmed?

Think about direct and indirect effects on yourself, peers, clients, or the environment



Transparency

Would I be comfortable explaining this?

Would I be okay sharing this use with a teacher, employer, or client?



Alignment

Does this fit my values and the rules?

Does it align with existing policies and with who I want to be?

GREY AREAS & MORAL TENSIONS

Where do you see grey areas in AI use (courses, assignments, or career sector)?

Scenario: Using AI to help draft an essay

Tension: Is it your work? Does it matter if you edited it heavily?
What does your teacher's policy say?

Scenario: AI translation for a multilingual student

Tension: Does this support learning or bypass the requirement to practice language skills?

Scenario: AI summarizing research articles

Tension: Saves time, but could you miss critical nuance that changes your understanding?

Scenario: AI-generated feedback on your work

Tension: Helpful scaffold or false confidence if the AI is wrong?

DEVELOP YOUR AI COMPASS



Policies and regulations give boundaries, but YOU make the everyday choices.



You will continue to engage with AI technologies long after this session ends.



Reflection and discussion help you notice your own grey areas before they become problems.



Your AI compass is not fixed; it grows as your experience and the technology evolve.

PART 2 — TAKEAWAYS

Ontario's AI Directive and UNESCO's values give you a foundation, daily choices are yours

The IITA framework (Intent, Impact, Transparency, Alignment) is a tool you can use right now

Grey areas are real the goal isn't to avoid them, it's to notice and reason through them

Keep developing your AI compass as technology and your own experience evolve



DESIGN MY SECTOR — AI Challenge

In small groups, work through these three prompts. You'll report back to your teacher.

1

The Problem:

Name one real challenge in your sector that creates barriers for workers, clients, or people trying to enter the field.

2

The Tool:

Design and/or describe an AI tool (real or imagined) that addresses it without cutting humans out. Who still makes the final call? Why does that matter?

3

The Grey Areas:

What are the 'grey areas' and moral tensions that need to be considered in AI use in your sector? Provide specific examples and state the ambiguity.

4

The Line:

What is one task in your sector that AI should NEVER replace? Support your argument and use reasoning.

Debrief: Connect your answers back to YOUR AI Compass — Intent → Impact → Transparency → Alignment

Resources List

Canada Artificial Intelligence and Data Act - ised-isde.canada.ca/site/innovation-better-canada/en/artificial-intelligence-and-data-act

Ontario Responsible AI Directive · ontario.ca/page/responsible-use-artificial-intelligence-directive

UNESCO AI Ethics · unesco.org/en/artificial-intelligence/recommendation-ethics

AI Tools Mentioned: NotebookLM, Perplexity, Consensus, Dragon Naturally Speaking, Kurzweil 3000, Procore, Autodesk Docs, DAX Copilot



The Challenge You will use Today

How might we use AI to support

your sector in an ethical way?



SHSM **SKILLS OF FUTURE** Gear 2: Ideation

Write your "How might we..." question from the previous page into the bubble. Then start generating ideas to meet the need. Every idea is a good idea! Do this part quickly!

(Note: A large purple speech bubble is centered in the writing area.)

(Note: A small logo with letters 'i', 'c', 'e' is in the bottom right corner.)

Shifting Gears: Gear 1 to Gear 2

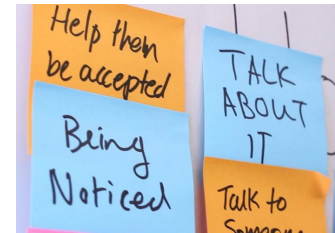


- **Need finding instructions – Part 1**

1. Work individually, ask yourselves:
 - What does the community partner need?
 - Which of their needs are currently unmet?
2. In your workbook list as many needs as you can possibly think of.

Remember - When Generating the NEEDS:

- No judgment, every idea or need is a good one
- Quantity, leads to quality
- Build on ideas of others and make them better
- Move quickly, keep ideas flowing



05:00



Shifting Gears ... How might we?

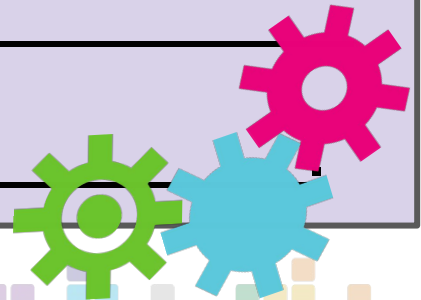
Need finding instructions – Part 2

3. In your group or individually select one unmet need that seems interesting or compelling.

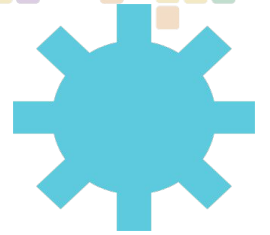
You will write a “how might we” question related to this need in this format:

How might we help _____

with their need to _____



05:00



SPECIALT HIGH SKILLS MATCH
SHSM

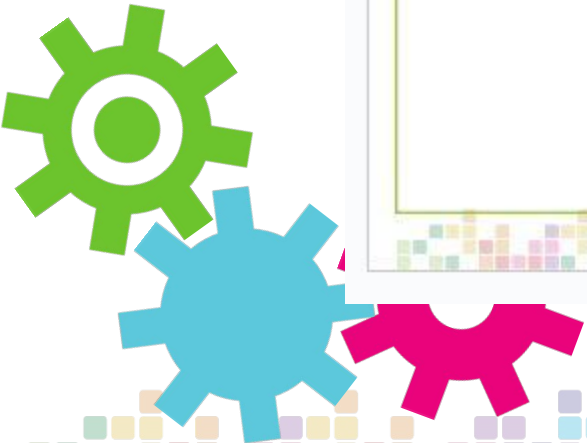
**YOUR SKILLS.
TO FUTURE.**

Gear 2: Solutions Ideation

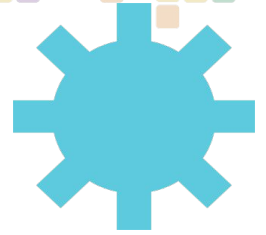
Write your "How might we..." question from the previous page into the bubble. Then start generating ideas to meet the need. Every idea is a good idea! Do this part quickly!



i
c e



Gear Two: Ideation & Prototyping



Ideation is the generation of new ideas

A good ideation session generates diverse and divergent ideas. By the end of this activity, you will have generated dozens of ideas relating to your “How might we” question, and cluster them according to relevant themes.

Connected ICE Mindset



I believe that there are multiple possibilities and that I am capable of creating them.

I am willing to take smart risks and learn from them.

I believe I can learn from the ideas and strategies that I build, regardless of their success.



Rules for Ideation - Generating Your Ideas

With your how might we question at the centre of your page - Imagine solutions to the question!



Remember – when Generating your Ideas:

- Defer judgment
- Build on ideas of others
- Go for quantity
- Move quickly!



Tips for Ideation and Generating New Ideas...



Not Great



Better



Ideal

Helpful ideas...

- Are visual – Use images as well as sticky note function
- Are concrete and specific

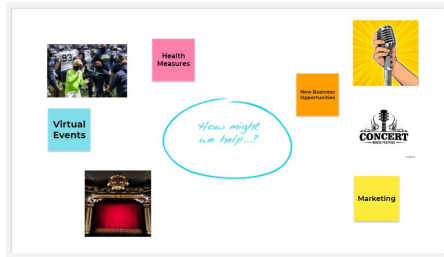


Gear 2 Activity: Ideation



Instructions:

- Preferably on sticky-notes document as many ideas to solve the “How might we” challenge statement that you came up with.
- If you don’t have sticky notes then place your ideas all over the **page 7** of the student workbook.

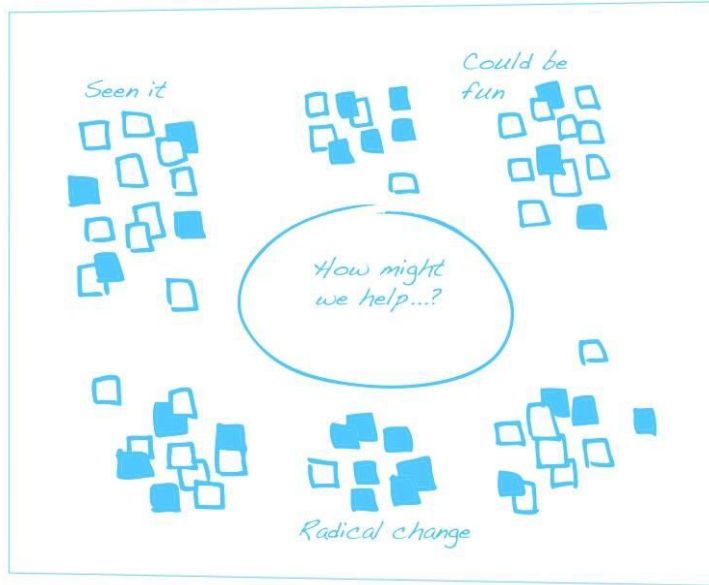


During this stage the
QUANTITY of ideas matters
more than the **QUALITY!**



05:00

Gear 2: Clustering Your Ideas



Cluster your ideas into the following categories:

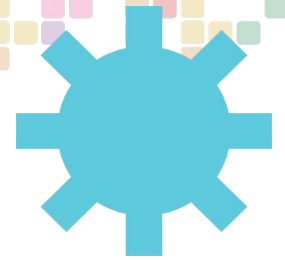
- Seen It
- Could be Fun
- Radical Change



Organize your ideas like this on **page 13** of the student workbook.

05:00

Gear 2: Prototyping



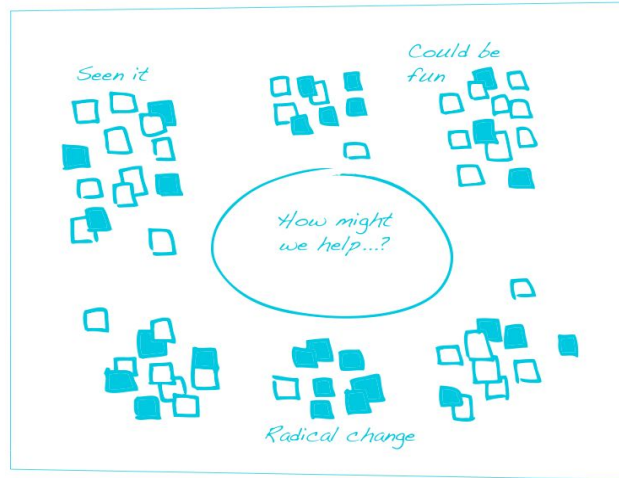
Prototyping is a method for visualizing an idea, for the purpose of gaining feedback and further developing the idea.

From your Ideation (idea generating) session – you are going to move forward with one idea...



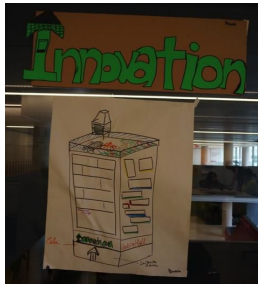
Gear 2: Ideation & Prototyping

- Choose one idea to move forward with and put a star beside that idea

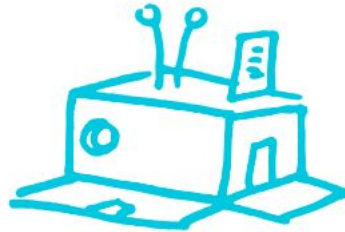


Gear 2: Prototyping helps you share your ideas with others.

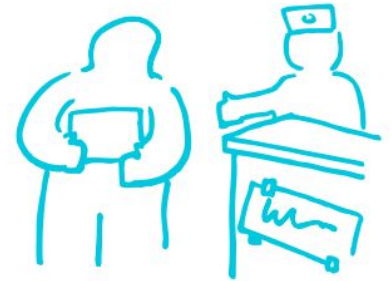
Sketch



Build



RolePlay



Gear 2 Activity: Sketch



- Visualize your idea and draw it on **page 9** of the student workbook
- Make it big and fill the space!
- **DO THIS INDIVIDUALLY!!!**
- What will it look like?
- Don't get caught up on details



05:00

Gear 2 Activity: Mashup

Now you will take your ideas and MASH THEM UP into one idea that will solve the initial “How Might We challenge!”



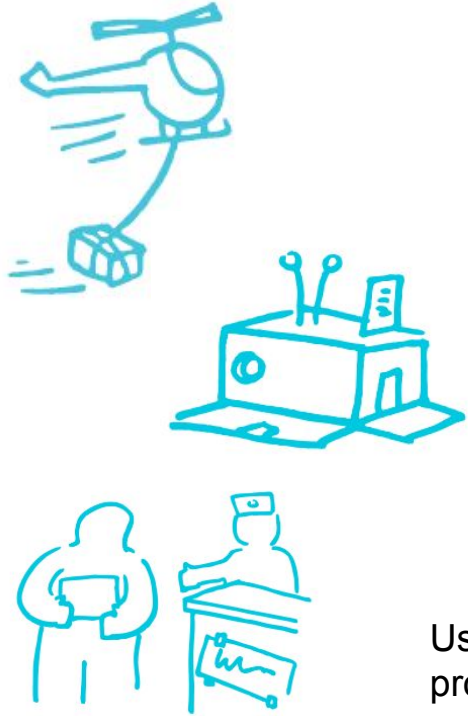
First, you will share your idea sketch with your team.
Spend:

- 1 minute describing your idea
- Listen, asking the following questions for feedback
- What do you like? Why?
- What would you change? Why?
- What questions do you have?
- Make notes as you listen



Document the components of other ideas that you like and think are useful into **page 11** of the student workbook


Activity: Mash up Prep



  Gear 2: Mash-Up

As others share their ideas document the parts of their ideas that you like the best.

Idea 1	Idea 2	Idea 3	Idea 4

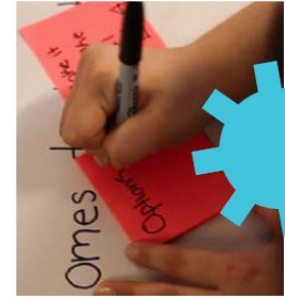


Using features from all of the other ideas create a new prototype on **page 11** of the student workbook



05:00

Gear 2 Activity: Mash Up Debrief



Create new ideas out of all the well-liked features and intentions of the different ideas, mashing the best parts of the ideas into a new idea.



05:00

Shifting Gears - 2 to 3

How Might We
Question:

Draw a Picture of your idea:

**Describe your idea (In
1-2 Sentences) :**

Either as a team or individually create a new prototype that you will move forward with through the rest of the process (page 11).



03:00

Thank you





Gear 3: Strategy & Testing


Strategy is a set of choices made to achieve a desired outcome.

- Developing strategy requires entrepreneurs to consider how the choices they make can lead to a successful outcome for their innovations.

Reflect and Think:

- Does your solution meet the needs of the target market?

Step back:

- Who is your target market?
 - Are you getting to the right people with the right message and medium?
- 

Strategy is About Making Choices to Win

To build a system that will let your idea come to life, there are two fundamental choices:

- Why would a customer choose your product or service over other competitive offerings? Example:



- Who is their customer?
- What is their product or service?
- How do each of these organizations win?



Gear 3: Making Strategic Choices




You've all come up with fantastic ideas, now it's time to make some choices.



Reflect and Think:

- Does your solution meet the needs of the target market?

  Gear 3: Making Strategic Choices


Who is your customer?	What is your product or service?	How will you win?	Does your solution meet the needs of the target market?



  Gear 3: Presenting Your Innovations

Create a 5-minute presentation that answers the following questions (can be a recorded google meet, video, google slides, etc., your choice). Use the template below to help you plan your presentation. Evaluate your plan...add to it if you need to, take away from it if you need to.

What was the need you heard?	What is your idea? Share the single sentence that describes it.	What is the strategy?	What are the impacts and consequences of your idea and strategy on the world around you?





Gear 3: Making Choices as a Team or Individually

- Take time to finalize your idea
- Do you need to make any changes?
- How will you present your idea to the industry partner?
- As a group make necessary changes, go back if you have to.
- Evaluate your plan...add to it if you need to, take away from it if you need to.
- Question what you have done.
- **REFINE YOUR PLAN**, no restrictions! Present your idea however you like...





Gear 3: Presenting Your Innovations

Create a 5-minute presentation that answers the following questions (can be a recorded google meet, video, google slides, etc., your choice) 4.

Presentation Development Template

- What was the need you heard?
- What is your idea? Share the single sentence that describes it.
- What is the strategy?
- What are the impacts and consequences of your idea and strategy on the world around you?





Presentations and Feedback

- Submit your pitch/presentation to your SHSM Lead
- The top 2 from each school will be submitted for review to the industry partner that you chose.

