A vintage black and white photograph of a woman and a child on a seesaw in a field. The woman is on the left side of the seesaw, smiling, and the child is on the right side, sitting on the ground. A dog is lying down in the foreground. The background shows trees and a fence.

AI in the Workforce: Balancing Opportunities & Challenges in the Evolving Job Market

Karae (car-A) White
Career Educator
Engineering and Computer Science
University of Victoria

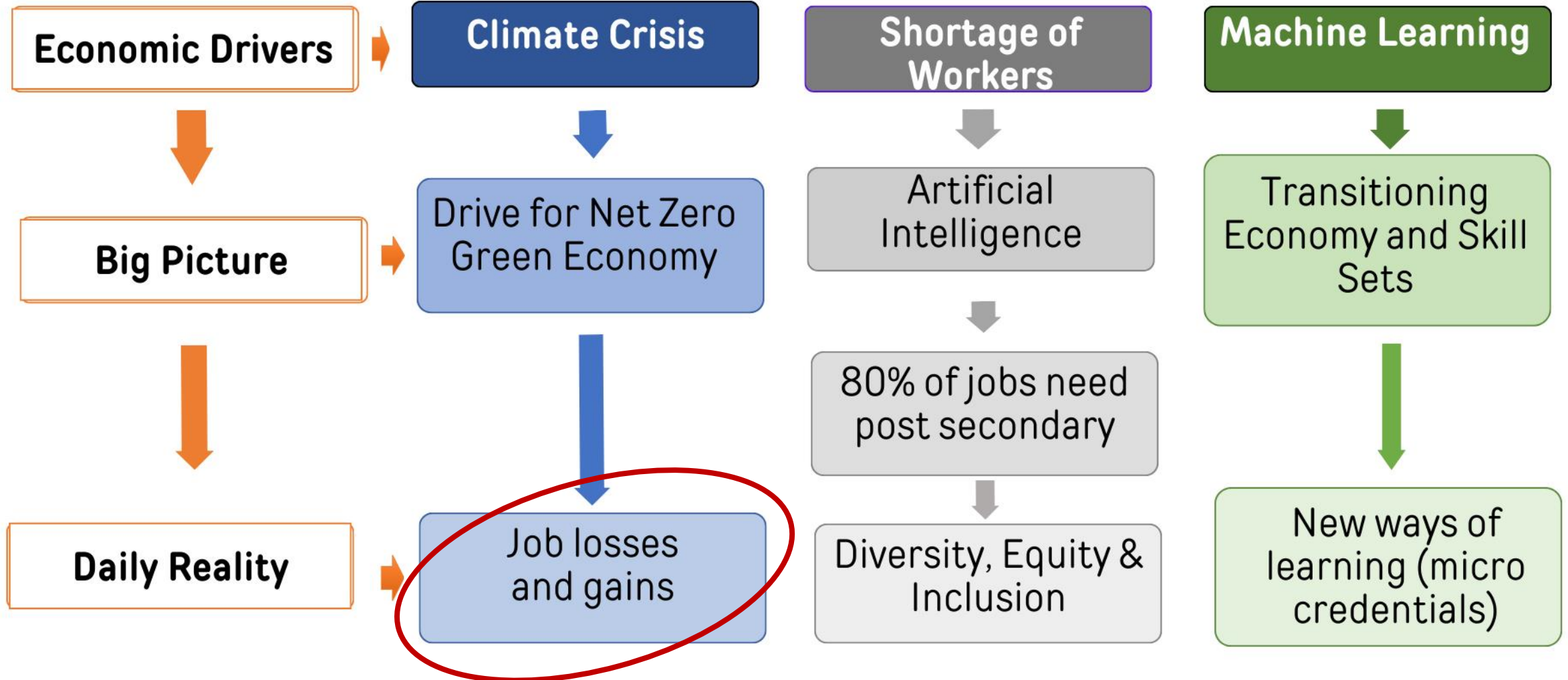
AGENDA

- Economy in a Nutshell
- Pros and Cons of Gen AI
- Prompts for WIL (career exploration and job search)
- Opportunities and Challenges
- Activity in Viewing Parties





Changes in the Economy



AGENDA

- Economy in a Nutshell
- Pros and Cons of Gen AI
- Prompts for WIL (career exploration and job search)
- Opportunities and Challenges
- Activity in Viewing Parties



Pros and Cons of Gen AI

PROS

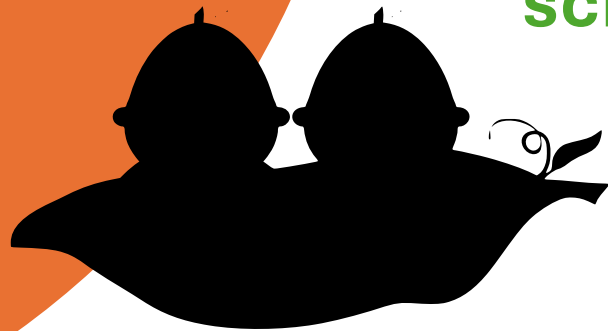
Saves time and
brain power / energy



[This Photo](#) by Unknown Author is licensed under [CC BY](#)

CONS

- Hallucinations
- **ABCs** = Accuracy, Bias, Confidentiality
- Ask the same question at least twice
- **Students will believe anything on the screen – teach them to think critically**



AGENDA

- Economy in a Nutshell
- Pros and Cons of Gen AI
- Prompts for WIL (career exploration and job search)
- Opportunities and Challenges
- Activity in Viewing Parties

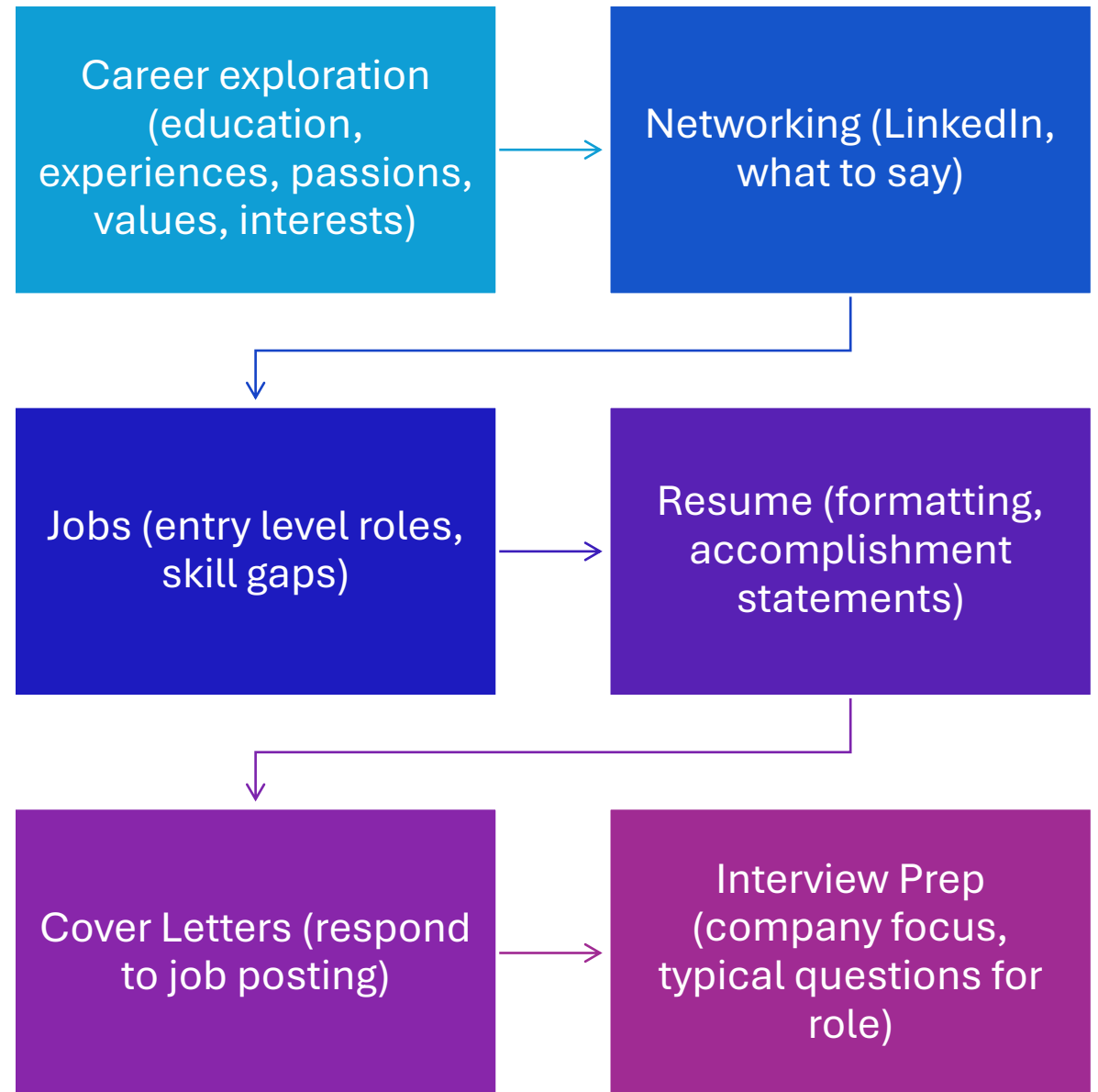


Career Education Curriculum

Using AI to Land a Job

CON:

If the student doesn't have foundational skills, they will not be able to critically evaluate if the suggestions are good or not (Leo Splateholz and Ash Senini UVic ECS, Noah Arney TRU)



Example Chat GPT Prompts

- Career Exploration: what careers are a good fit for someone who likes (course subject) + (personal interest) but dislikes (_____)
- Resumes: Add in the job posting, add in resume and ask where there are skill gaps
- Cover letters: Does this letter target this position? What is missing?
- Interview Questions and Answers: What are likely questions? What is the best way to answer (add negative thought)
- Networking: Who to network with for a career in (_____)?
- Job Search: What companies hire entry level (_____) in Victoria?

AGENDA

- Economy in a Nutshell
- Pros and Cons of Gen AI
- Prompts for WIL (career exploration and job search)
- Opportunities and Challenges
- Activity in Viewing Parties



Opportunities & Challenges

Repetitive tasks will be replaced by AI tools because of:

1. Efficiency
2. Lack of workers
3. Decarbonization



Increase in people skills



Top 10 Fastest Growing Jobs

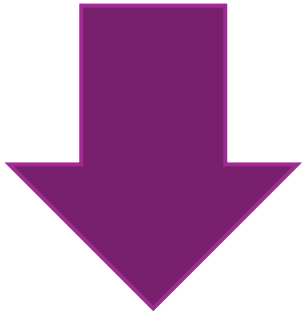
1. AI and Machine Learning Specialists
2. Sustainability Specialists
3. Business Intelligence Analysts
4. Information and Security Analysts
5. Fintech Engineers
6. Data Analysts and Scientists
7. Robotic Engineers
8. Big Data Specialists
9. Agricultural Equipment Operators
10. Digital Transformation Specialists

World Economic Forum: Future of Jobs Report 2023

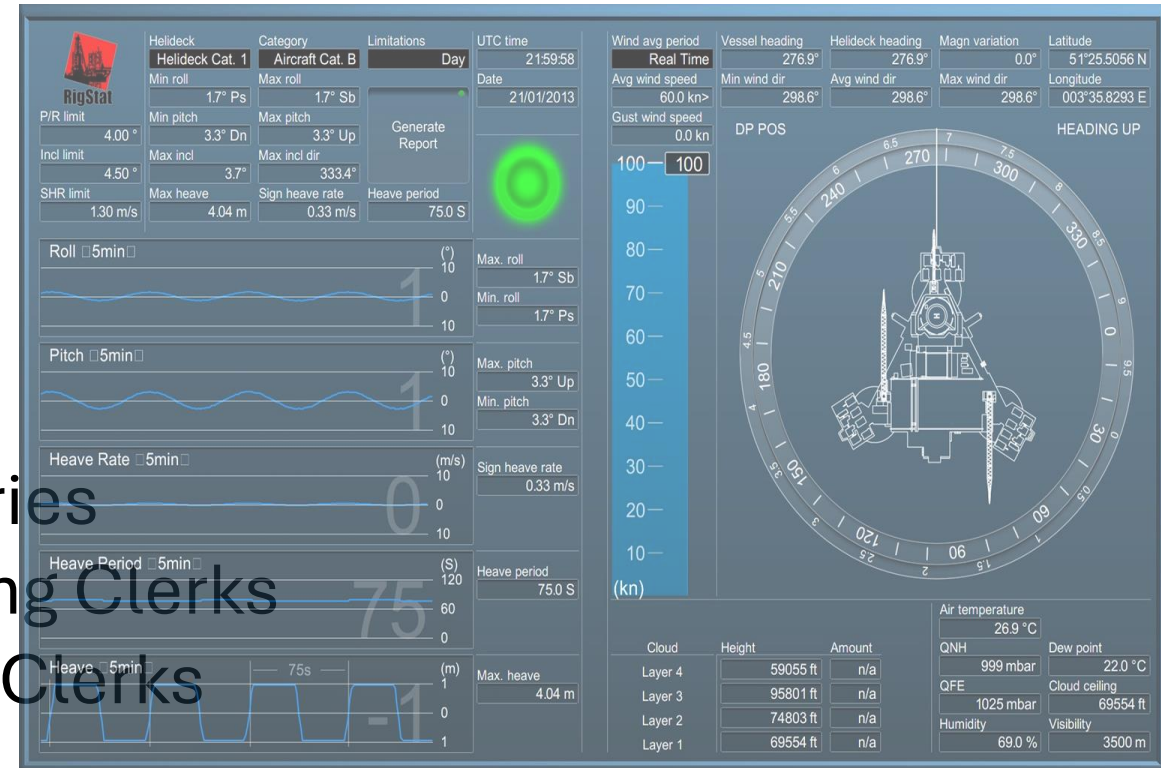


Top 10 Fastest Declining Jobs

1. Bank Tellers and Related Clerks
2. Postal Service Clerks
3. Cashiers and Ticket Clerks
4. Data Entry Clerks
5. Administrative and Executive Secretaries
6. Material Recording and Stock Keeping Clerks
7. Accounting, Bookkeeping and Payroll Clerks
8. Legislators and Officials
9. Statistical, Finance, and Insurance Clerks
10. Door to Door Sales Workers, News and Street Vendors and Related Workers



1. Bank Tellers and Related Clerks
2. Postal service Clerks
3. Cashiers and ticket Clerks
4. Data entry Clerks
5. Administrative and Executive Secretaries
6. Material – Recording and Stock Keeping Clerks
7. Accounting, Bookkeeping and Payroll Clerks
8. Legislators and Officials
9. Statistical, Finance and Insurance Clerks
10. Door to Door Sales Worker, News and Street Vendors, Related Workers



This Photo by Unknown Author is licensed under [CC BY-SA-NC](https://creativecommons.org/licenses/by-sa/4.0/)

These are entry level jobs.

What co-op jobs will students be able to do?

5 Occupations will feel impact of AI

(North American data)

- *“Artificial intelligence is already changing the way some people work, but it’s not yet poised to replace the work that humans do, according to a new report from Indeed.”*











Indeed's researchers considered 16 occupations in their study and highlighted five jobs that involve the greatest share of skills that have the potential to be replaced by AI. Those lines of work are:

1. Accounting professionals
2. Marketing and advertising specialists
3. Software developers
4. Health care administrative support staff
5. Insurance claims and inspection officers




Top 10 skills on the rise

World Economic Forum's Future of Jobs Report
• 50% of all employees will need reskilling by 2025



- | | |
|--|--|
| 1.  Creative thinking | 6.  Systems thinking |
| 2.  Analytical thinking | 7.  AI and big data |
| 3.  Technological literacy | 8.  Motivation and self-awareness |
| 4.  Curiosity and lifelong learning | 9.  Talent management |
| 5.  Resilience, flexibility and agility | 10.  Service orientation and customer service |

Type of skill

 Cognitive skills  Self-efficacy  Management skills  Technology skills  Working with others  Engagement skills

**How would you categorize these skills?
How can you capture them in co-op jobs**

Future Skills
Centre –

State of Skills
Report
(Canadian)



FACTS

- “In fact, **employment** under a **low-carbon** scenario is anticipated to be **higher** than that of the high-carbon scenario.



FUNDAMENTALS

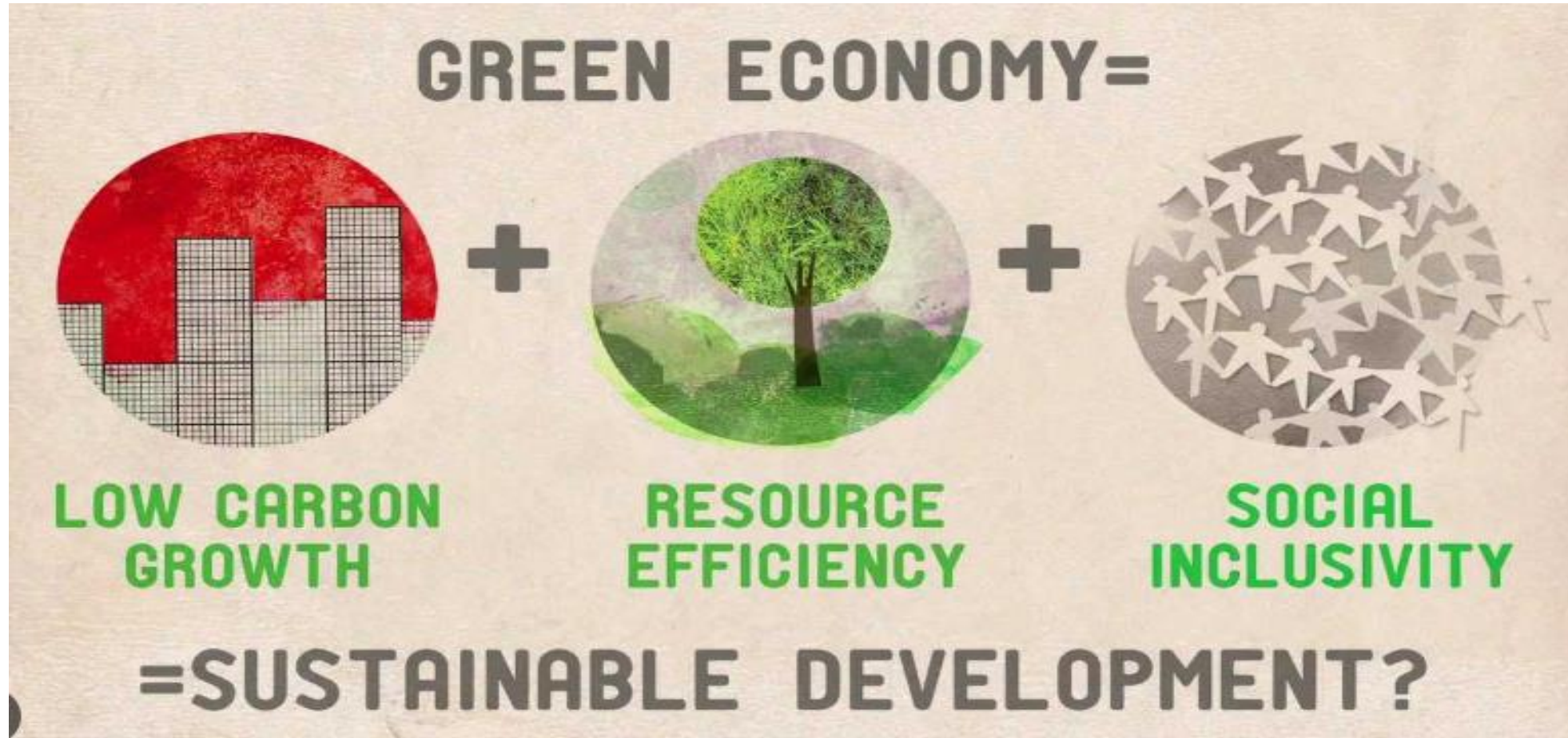
- “... focus on a fundamental base of skills, highlights the need for a well-rounded workforce that possesses **both** technical and non-technical competencies.”



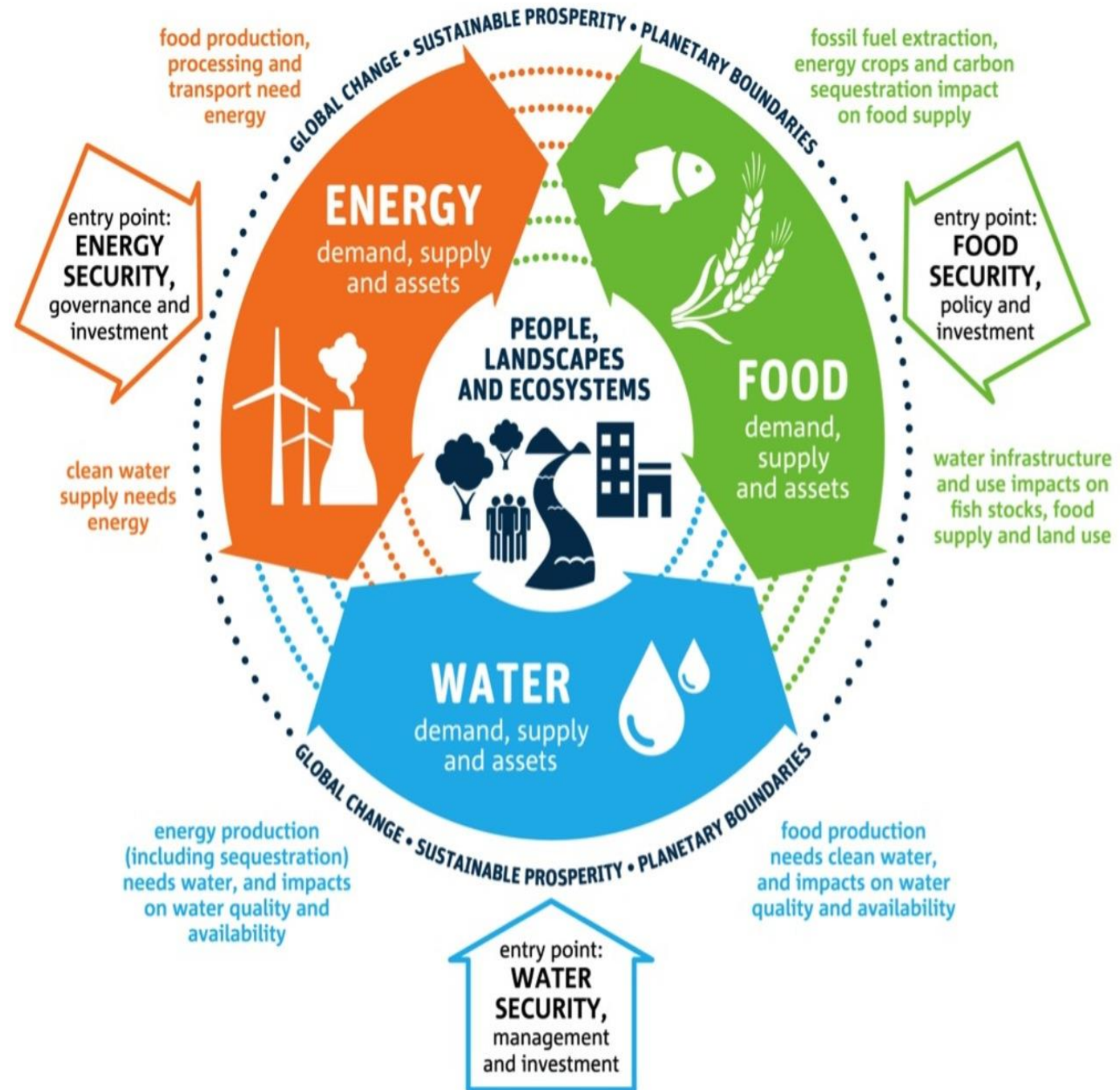
GREEN LITERACY

- “...crucial for education and training institutes to evolve to meet the demands of a green economy and ... reinforcing the importance of **green literacy**” (ecological or environmental literacy)

Green Economy – What is it?



WHY Do you want to know about the green economy?



From McKinsey & Company

The net zero transition will be

1. Universal
2. Significant
3. Front loaded
4. Uneven
5. Exposed to risks
6. Rich with opportunity



It will take massive global co-operation to achieve net zero. Need to share innovations.

UNIQUE SOLUTIONS

- “Beyond skills: importance of **place-based** and local solutions”

AGENDA

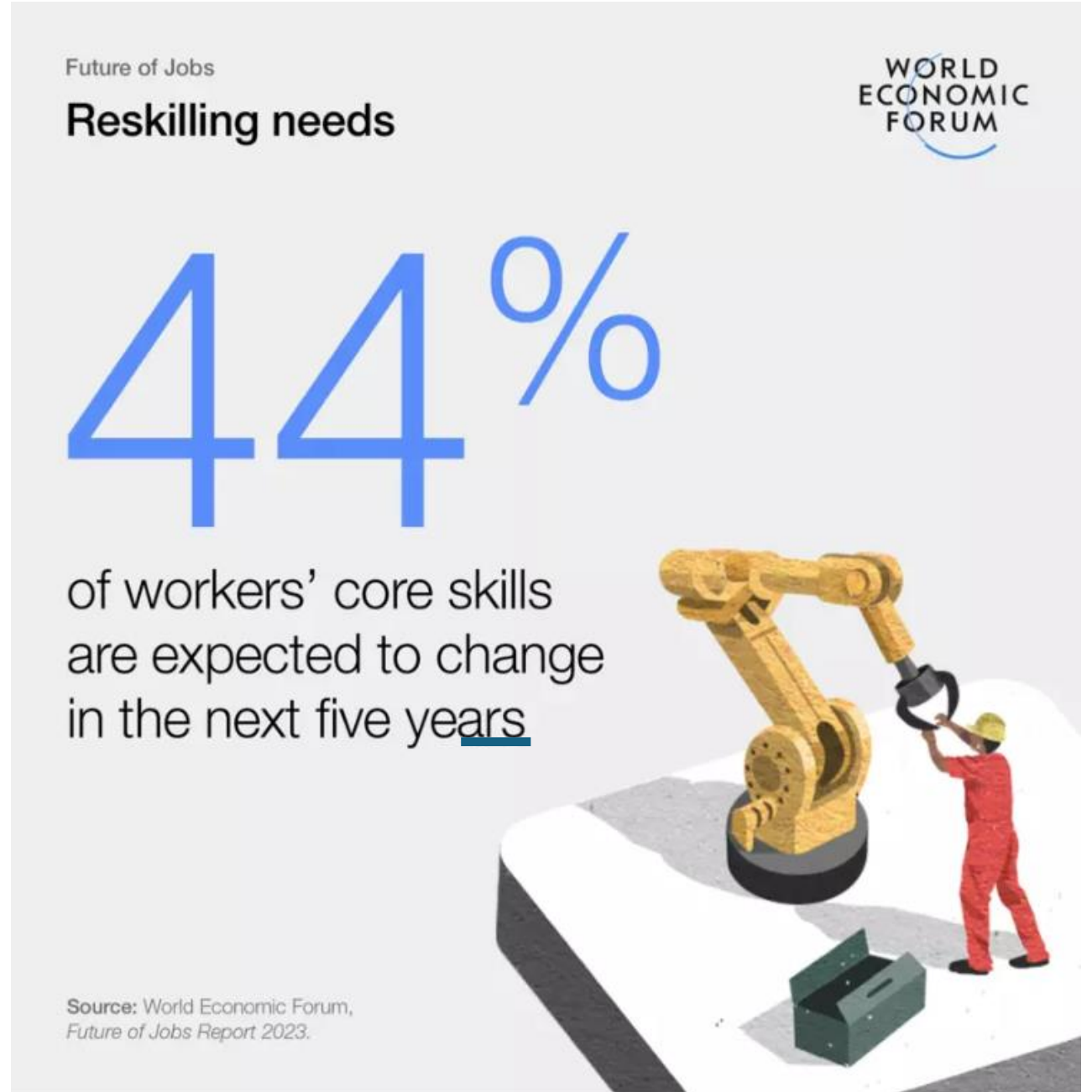
- Economy in a Nutshell
- Pros and Cons of Gen AI
- Prompts for WIL (career exploration and job search)
- Opportunities and Challenges
- **Activity in Viewing Parties**



ACTIVITY

Work Integrated Learning (WIL) will be essential

1. In your community, what have you seen AI replace?
2. Where are the skill gaps? Where are the opportunities for students?



RESOURCES

- Future Skills Centre – State of the Skills Report https://fsc-ccf.ca/projects/sustainable-jobs-for-economic-growth/?utm_source=FSC-CCF+Mailing+List&utm_campaign=1b1c54a334-skills-insights-sustainable-jobs&utm_medium=email&utm_term=0_-4fb24ad1a7-%5BLIST_EMAIL_ID%5D
- The Smart Prosperity Institute, the Diversity Institute and FSC collaborated on a foresight exercise, “[Jobs and skills in the transition to a net-zero economy](#),” to analyze the potential impact that transitioning to a net-zero emissions future would have on the Canadian economy, job creation and skills requirements across sectors. It sought to improve our understanding of different pathways for structural transformations, job redistribution and new employment opportunities, and to identify crucial skills for the evolving economic landscape associated with various decarbonization scenarios.
- FSC supported a project by the Conference Board of Canada, “[Green occupation pathways: From vulnerable jobs to rapid-growth careers](#)”, which examined the feasibility and desirability of transitioning workers from occupations susceptible to automation to rapidly growing occupations—particularly in the clean economy. A related project, “[Hiring green](#): An analysis of the demand for green skills in Canada”, analyzed the demand for green skills in Canada across regions, sectors and occupations.
- FSC invested in “[Upskilling for Canada’s climate transition](#),” a research effort by the Academy for Sustainable Innovation and the Resilience by Design Lab. This initiative took a more broad-based approach and sought to identify the challenges and opportunities surrounding a pan-Canadian, rapid-upskilling approach for climate action leadership development.
- McKinsey and Company Net Zero Transition publications <https://www.mckinsey.com/search?q=net%20zero%20transition>