

YOUR IDEA, OUR WORLD.

Student Worksheets (Grade 9 - 12)





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WHY YOUR IDEAS MATTER

Real solutions require innovative thinking and a willingness to challenge the status quo. Challenges in health, in sustainability, and for equity-seeking groups all have solutions waiting to be found. In this workbook, you'll explore key issues in Canada and use your creativity to design solutions that could improve lives, protect the environment, or help people in need.



Instructions: Select a “What If?” scenario from the list below and envision a more equitable and sustainable Canada.

- What if everyone in Canada had access to clean drinking water?
- What if cities ran on 100% renewable energy?
- What if every Canadian had free access to mental health services?
- What if everyone had access to affordable housing?
- What if every school in Canada had a community garden?

1. Describe what life in Canada would look like if your “What If” scenario became reality. How would daily life, society, and the environment be impacted?

2. What actions could governments, businesses, or individuals take to bring about these changes?

Name: _____

Date: _____

KEY TERMS



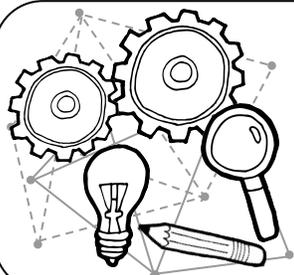
Instructions: Fill in the chart for each of the key terms below.

Definition:	Characteristics:
Sustainability	
Examples:	Non-Examples:

Definition:	Characteristics:
Health	
Examples:	Non-Examples:

Definition:	Characteristics:
Equity-seeking Groups	
Examples:	Non-Examples:

II INNOVATIVE TECHNOLOGIES



Innovative technology refers to the development of new solutions that improve quality of life, protect the environment, and benefit society. These ideas tackle current challenges and create opportunities for healthier, more sustainable communities. They range from improving access to clean water to enhancing healthcare outcomes in the future.

1. When a new technology is introduced as an innovative solution, what factors should be considered to determine if it genuinely improves quality of life?

2. How can innovative technology be prioritized across different economic sectors? Give an example from each sector that improves health, promotes environmental sustainability, or supports equity-seeking groups.

Commercial	
Transportation	
Residential	
Healthcare	
Industrial	

II INNOVATIVE TECHNOLOGIES

3. In point form, record what you know about various innovative technologies. Consider its benefits for the environment, health, or equity-seeking groups. If you're unsure, write a question you have about it.

a) Biodegradable Plastics



b) Solar Panels



c) LED Light Bulbs



d) Energy-Efficient Appliances



e) Electric Vehicles (EVs)



f) Smart Thermostats



g) Assistive Devices



h) Vertical Farming



j) Telemedicine Programs



k) Rainwater Harvesting Systems



COURSE CONNECTIONS

1. Think broadly: How can learning in different high school subjects—such as chemistry, biology, business, computer studies, mathematics, food and nutrition, and geography—be used to address major world problems like environmental sustainability, public health, and assisting equity-seeking groups?

Chemistry 	Issue: Harmful contaminants in local drinking water.
	Impact: Learning about chemical processes involved in filtration, distillation, and the use of materials like activated carbon or UV light to clean water.
Biology 	Issue:
	Impact:
Business 	Issue:
	Impact:
Computer Studies 	Issue:
	Impact:
Food & Nutrition 	Issue:
	Impact:
Geography 	Issue:
	Impact:

COURSE CONNECTIONS

2. Make connections: For this task, you will analyze innovations that improve quality of life and connect to the subject area that you are studying.

a) Write your course subject area: _____

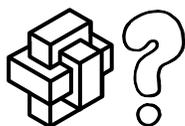
b) Identify existing innovations: Research and list three historical innovations related to your chosen subject area. Include details such as the innovation's name, creator (if known), time period, and a brief description of its positive impact on society (i.e. related to health, sustainability, or equity-seeking groups).



Innovation 1:	
Innovation 2:	
Innovation 3:	

c) Reflection: Write a paragraph reflecting on the significance of these historical innovations. Are there areas where these innovations could be improved to better support sustainable initiatives, health, or equity-seeking groups?

II PROBLEM IDENTIFICATION



For the Samsung Solve for Tomorrow contest, you will identify a **problem** related to a specific focus area (i.e. health, sustainability, or equity-seeking groups) and determine a **solution**.

1. Choose a focus area.

My Focus Area: _____

2. In the mind map below, identify challenges you have observed in your community related to your focus area.



2. For each challenge identified in the mind map, explain its impact. Connect these challenges to relevant course subject matter.

	Impact	Course Connection
1		
2		
3		
4		

Name: _____

Date: _____

II PROBLEM STATEMENT



1. Choose one challenge and write a problem statement. Which issue in your community do you want to address?

Problem Statement:

2. Write a list (annotated bibliography) of reputable online sources you can consult to learn more about this challenge.



Digital Sources:

1. URL: _____

Description: _____

2. URL: _____

Description: _____

3. URL: _____

Description: _____

4. URL: _____

Description: _____

Name: _____

Date: _____

II PROBLEM STATEMENT

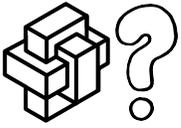
3. Explain the impact of solving the identified problem. This could include improved health, social benefits, or environmental sustainability.

4. Explain the barriers to solving the problem. Why has this problem not already been solved? Explain if any of the barriers below apply to this problem.



Lack of Awareness or Education	
Economic or Financial Constraints	
Short-Term Thinking	
Opposition from Stakeholders	
Complexity of the Issue	
Other	

II FINDING SOLUTIONS



For the Samsung Solve for Tomorrow contest, once you have identified a **problem**, you will use your knowledge from your high school course to determine a STEM-based (science, technology, engineering, math) **solution**.

1. Think of three possible STEM-based solutions that could help solve the challenge you identified.

STEM-Based Solution 1: _____

1

Brief description:

Materials or technology required:

STEM-Based Solution 2: _____

2

Brief description:

Materials or technology required:

STEM-Based Solution 3: _____

3

Brief description:

Materials or technology required:

Name: _____

Date: _____

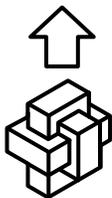
FINDING SOLUTIONS

2. Using point form notes, evaluate the impact (how it will help), cost, and ease of implementation (easy or difficult to accomplish) for each solution from the previous page.



	Impact	Cost	Ease of Implementation
Solution 1			
Solution 2			
Solution 3			

SOLUTION STATEMENT



For your entry to the Samsung Solve for Tomorrow contest, choose the one solution you are most excited about and believe will have a **positive impact** in your community.

1. How will you address an issue in your community?

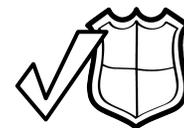
Solution Statement:

2. Why did you select this solution over the others? Consider impact, cost, and ease of implementation.

3. How does your solution integrate concepts or ideas from your course subject?

SOLUTION STATEMENT

4. How will your solution address the barriers identified on your “Problem Statement” pages?



Lack of Awareness or Education	
Economic or Financial Constraints	
Short-Term Thinking	
Opposition from Stakeholders	
Complexity of the Issue	
Other	

Peer Review: Share your potential solutions with a peer or another team. Obtain constructive feedback and consider different perspectives before making a final decision. Record their feedback here.



Name: _____

Date: _____

PROJECT PRESENTATION - Part 1



You will create a slideshow presentation to share your idea with your classmates. Use the organizer below to plan the content (clear course-relevant vocabulary and images) for your slides.

1. Title Slide	2.	3.
4.	5.	6.
7.	8.	9.

Name: _____

Date: _____

PROJECT PRESENTATION - Part 2



You will create a slideshow presentation to share your idea with your classmates. Use the organizer below to plan the content (clear course-relevant vocabulary and images) for your slides.

10.	11.	12.
13.	14.	15.
16.	17.	18.

Name: _____ Date: _____

II PROJECT PLANNING - Part 1

Create a concise overview and plan for your project.

Project Title: _____

Describe the Identified Challenge and Your Solution:

Project Objectives: Clearly state the goals of your project.



Target Audience: Identify the specific group(s) that will benefit from your solution.

Resources, Materials, and Tools: List what you'll need to carry out your solution.

1. _____
2. _____
3. _____
4. _____
5. _____

Name: _____

Date: _____

II PROJECT PLANNING - Part 2

Phase 1: Planning

Task	My Deadline
Problem Identification/Solutions	
Project Presentation Plan	

Phase 2: Editing and Revising Ideas

Task	My Deadline
First Review (Revisions to Prepare for Presentation)	
Project Presentation	
Second Review (Revisions to Prepare for Contest Entry)	

Phase 3: Entering the Contest

Task	My Deadline	Contest Deadline
Contest Entry		December 20, 2024

Reflection: What challenges do you anticipate during each phase, and how do you plan to overcome them?

Name: _____

Date: _____

II RUBRIC (General)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge	Fails to identify or support a challenge.	Identifies with limited depth.	Identifies with adequate research.	Clearly identifies with thorough research.	<u>20</u>
STEM-Based Solution	Proposes an unclear solution with little understanding.	Proposes a basic solution with limited understanding.	Proposes a viable solution with good understanding.	Proposes an innovative solution with clear understanding.	<u>20</u>
Design Process	Demonstrates a lack of understanding or application.	Applies with basic planning.	Applies with clear planning.	Applies with systematic planning.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

II RUBRIC (Science)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Science Course Concepts	Limited application of physics, chemistry, or biology concepts.	Satisfactory application of physics, chemistry, or biology concepts.	Good application of physics, chemistry, or biology concepts.	Excellent application of physics, chemistry, or biology concepts.	<u>20</u>
Engineering Design Process	Student does not apply the engineering design process during their design.	Student is still developing engineering design process knowledge and skills.	The engineering design process is effectively utilized in the design process.	The engineering design process is utilized with precision and effectiveness.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

II RUBRIC (Social Sciences)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Social Science Course Concepts	Limited application of social sciences.	Applies some social science concepts, but lacks depth and accuracy.	Effectively applies relevant social science concepts.	Thoroughly integrates a wide range of social science concepts with clear relevance and insight.	<u>20</u>
Action Plan	Provides an unclear or incomplete action plan; lacks feasibility.	Proposes a basic action plan that is somewhat feasible but lacks detail.	Develops a clear, detailed action plan that is realistic and actionable.	Presents a comprehensive and innovative action plan with well-defined steps and considerations.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

II RUBRIC (Business)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Business Course Concepts	Limited application of business course concepts.	Satisfactory application of business course concepts.	Good application of business course concepts.	Excellent application of business course concepts.	<u>20</u>
Understanding of business dynamics and barriers involved	Limited understanding of business dynamics and barriers involved in the problem.	Satisfactory understanding of business dynamics and barriers involved in the problem.	Good understanding of business dynamics and barriers involved in the problem.	Complete understanding of business dynamics and barriers involved in the problem.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

II RUBRIC (Computer Science)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Computer Science Course Concepts	Limited application of computer science course concepts.	Satisfactory application of computer science course concepts.	Good application of computer science course concepts.	Excellent application of computer science course concepts.	<u>20</u>
Understanding of the Relationship Between Computers, Coding, and Innovative Solutions	Minimal awareness of how technology can benefit society and the environment.	Some understanding of how technology can address societal and environmental challenges.	Good grasp of how technology can be used to create solutions for society and the environment.	Strong ability to propose or assess tech solutions that benefit society and the environment.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

II RUBRIC (Food and Nutrition)**Total: /80 = %****Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Food and Nutrition Course Concepts	Limited application of food and nutrition course concepts.	Satisfactory application of food and nutrition course concepts.	Good application of food and nutrition course concepts.	Excellent application of food and nutrition course concepts.	<u>20</u>
Understanding of Sustainable Practices Related to Food and Nutrition	Limited understanding of sustainable practices and how human health is affected by nutrition.	Basic understanding of sustainable practices and how nutrition impacts human health and society.	Solid understanding of sustainable practices and how nutrition affects human health and societal well-being.	Comprehensive understanding of sustainable practices and how nutrition affects human health and societal well-being.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:

Name: _____

Date: _____

RUBRIC (Geography)**Total:** /80 = %**Project Title:** _____

Criteria	Level 1	Level 2	Level 3	Level 4	
Identification of Challenge and Solution	Fails to identify or support a challenge and offer a solution.	Identifies with limited depth. Solution needs further depth.	Identifies with adequate research. Solution is viable.	Clearly identifies with thorough research. Solution is exceptional.	<u>20</u>
Application of Geography Course Concepts	Limited application of geography course concepts.	Satisfactory application of geography course concepts.	Good application of geography course concepts.	Excellent application of geography course concepts.	<u>20</u>
Understanding Geography's Impact on Sustainability and Societal Well-Being	Poor understanding of how geography relates to sustainability and societal well-being.	Satisfactory understanding of how geography relates to sustainability and societal well-being.	Good understanding of how geography relates to sustainability and societal well-being.	Displays a complete and nuanced understanding of how geography impacts sustainability and societal well-being.	<u>20</u>
Presentation Skills	Presents disorganized content with limited visuals.	Delivers a somewhat organized presentation with basic visuals.	Delivers a clear and organized presentation with visuals.	Delivers a well-organized and engaging presentation.	<u>20</u>

Comments:
