

ACTIVITY UNIT

Topic

Surveillance

Civics & Society

14

Activities

Supports all
these programs



INCLUDED INSIDE:

- 11 lesson plans
- 3 practice future scenes
- A variety of tools, research, and metacognition activities
- A variety of specific problem-solving step activities

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This publication is a compilation of the hard work of many people. Special thanks are extended to our curriculum authors Kathy Frazier and Kori Frazier Morgan.



Topic Activity Contents



How might surveillance be used responsibly to balance public safety with privacy and ethical considerations in the future?

Activity Name	LESSON PLAN	RESEARCH	TOOLS	METACOGNITION	FUTURE SCENE	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	PRESENTATION	PAGE
Congratulations! Off to the Bowl	●			●		●	●	●	●	●	●		7
What's on Your Mind?	●	●											13
Private Eyes are Watching You	●	●	●	●									18
Surveillance Theme Showdown	●	●											24
Think Like a Hacker	●				●	●							28
Scan for Surveillance Problems	●						●						32
Solution Writing Errors	●							●					40
Solving a Surveillance Issue	●		●					●					46
One, Two, Three	●			●					●				51
From Solution to Action Plan	●								●	●	●		56
Eyes on Education					●	●	●	●	●	●	●	●	62
Practice Future Scene					●								69
Action Plan Showcase											●	●	71
Cracking the Code	●			●									72

Activity Focus Areas Icons



Our activity unit on each topic contains a wealth of curricular resources for use with students in a variety of settings, including out-of-school time. The highly engaging activities incorporate best practices and come with step-by-step lesson plans for research-based independent and collaborative work. Each activity is designed to help students gain insight into a specific real world topic and learn the Future Problem Solving 6-step process. For ease of use, we display icons on each lesson plan to indicate the activity focus.



Research

Explore the topic using multimedia research for background and understanding.



Tools

Utilize tools for problem solving, either generating new ideas or focusing existing ideas, in the activity.



Metacognition

Metacognition prompts allow students to explore their thought processes related to the problem-solving process, their teamwork, and their performance.



Future Scene

Practice future scenes allow students to apply the problem-solving process.



Action Plan Presentation

Tips and instructions help students present their Step 6 action plans.

Steps 1 - 6

In each activity, students explore specific steps of the Future Problem Solving process for deeper understanding and application of creative and critical thinking skills.



Identify Challenges

Generate challenges or issues related to a specific situation.



Select an Underlying Problem

Analyze possible challenges to determine a single focused area to address.



Produce Solution Ideas

Generate a variety of potential solution ideas to resolve the selected underlying problem.



Select Criteria

Create criteria to measure the merit of solution ideas.



Apply Criteria to Top Solutions

Evaluate solution ideas using student-designed criteria to identify the most promising solution.



Develop an Action Plan

Based on the strongest solution develop a plan of action to explain and implement the best solution.

For more information about Future Problem Solving, our proven 6-step process, and how it connects to a wide variety of education standards, visit resources.futureproblemsolving.org.

Education Standards Alignment



We also highlight how each activity lesson plan aligns with English Language Arts and Literacy education standard strands. Our Future Problem Solving process fulfills a wide variety of education standards. We take connecting with these standards into account when developing all our program materials so teachers can easily tailor activities to meet their specific education system and local requirements. Use the legend on the following page to connect lesson plans to specific reading, writing, speaking, and listening standards.

Surveillance Activity	Education Standard Strands Addressed											PAGE #
	1	2	3	4	5	6	7	8	9	10	11	
Congratulations! Off to the Finals	●	●	●		●	●	●	●	●	●	●	7
What's on Your Mind?	●	●	●	●	●	●		●	●		●	13
Private Eyes are Watching You	●	●		●	●	●	●	●	●	●	●	18
Surveillance Theme Showdown	●	●	●	●	●	●		●		●	●	24
Think Like a Hacker	●	●	●	●	●	●	●	●	●	●	●	28
Scan for Surveillance Problems	●	●	●	●	●	●	●	●	●	●	●	32
Solution Writing Errors	●	●	●	●	●	●	●	●	●	●	●	40
Solving a Surveillance Issue	●	●	●	●		●	●	●		●	●	46
One, Two, Three	●	●	●	●	●	●	●	●	●	●	●	51
From Solution to Action Plan	●	●	●	●	●	●	●	●	●	●	●	56
Eyes on Education	●	●	●	●	●	●	●	●	●	●	●	62
Practice Future Scene			●	●	●	●					●	69
Action Plan Showcase	●	●					●	●		●	●	71
Cracking the Code	●	●	●	●	●	●		●		●	●	72

1. Comprehension and Collaboration
2. Presentation of Knowledge and Ideas
3. Reading Key Ideas and Details
4. Literacy Craft and Structure
5. Integration of Knowledge and Ideas

6. Range of Reading and Level of Text Complexity
7. Writing Text Types and Purposes
8. Production and Distribution of Writing
9. Research to Build and Present Knowledge
10. Range of Writing
11. Vocabulary Acquisition and Use

For more information about Future Problem Solving, our proven 6-step process, and how it connects to a wide variety of education standards, visit resources.futureproblemsolving.org.

Topic Activity Unit Lesson Plans Standard Strands Addressed

SPEAKING & LISTENING	COMPREHENSION AND COLLABORATION	
	1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
	2	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
	3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
	PRESENTATION OF KNOWLEDGE AND IDEAS	
	4	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
READING & LITERACY	5	Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
	6	Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.
	KEY IDEAS AND DETAILS	
	1	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
	2	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
	3	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
	CRAFT AND STRUCTURE	
	4	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
	5	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
	6	Assess how point of view or purpose shapes the content and style of a text.
WRITING	INTEGRATION OF KNOWLEDGE AND IDEAS	
	7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
	8	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
	9	Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.
	RANGE OF READING AND LEVEL OF TEXT COMPLEXITY	
	10	Read and comprehend complex literary and informational texts independently and proficiently.
	TEXT TYPES AND PURPOSES	
	1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
	2	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
	3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
LANGUAGE & VOCABULARY	PRODUCTION AND DISTRIBUTION OF WRITING	
	4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
	5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
	6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
	RESEARCH TO BUILD AND PRESENT KNOWLEDGE	
	7	Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
	8	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
	9	Draw evidence from literary and/or informational texts to support analysis, reflection, and research.
	RANGE OF WRITING	
	10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
	VOCABULARY ACQUISITION AND USE	
	1	Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
	2	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
	3	Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college- and career-readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Gathering Intelligence



Objectives

- Students will analyze evaluator feedback from their previous Future Problem Solving booklet on Video Games for areas of strength and areas for improvement.
- Students will evaluate areas of success in the problem-solving process and determine what contributed to their good scores.
- Students will collaborate to create a list of preparation tips for the Affiliate Finals competition.
- Students will discuss how collaboration improves idea generation.

Standards Addressed

Speaking & Listening

1, 4, 6

Reading & Literacy

1, 2, 7, 10

Writing

1, 2, 4, 5, 7, 8, 10

Language & Vocabulary

1, 2, 3

Materials

- Copies of the **Video Game evaluation scoresheets** (See Preparation)
- **Investigation Form**, 1 per team or student for individual competitors (page 9)
- **The ABCs of Preparation**, 1 per team (page 10)
- **Team Timeline**, 1 per team (page 11)

Preparation

1. Review **Video Game evaluation scoresheets** and evaluator comments to assist students in analyzing their evaluations.
2. Determine how you will share the scoresheets with students and prepare them – electronically for all students, print out one per team, or print one for each student.

Procedure

PART ONE

- 1 **Say:** *I have an important announcement.* (Drum roll sound effect)
- 2 Read the invitation to the Affiliate Finals.
- 3 **Say:** *You will be competing against the best teams in [Your Affiliate Name] for the chance to compete in the Future Problem Solving World Finals at their annual International Conference! The topic of the Affiliate Finals is Surveillance. (Announce the date of the competition and the place where it will be held.)*
- 4 **Say:** *Preparation for the Affiliate Finals competition will begin today with a special investigation on the scores released for our Video Game competition performance.*
- 5 Distribute the **Video Game evaluation scoresheets**.
- 6 Discuss the following:
 - Why is paying close attention to the feedback data from your scores and evaluator comments important?
 - What does it mean to turn feedback into opportunities for growth?
- 7 Distribute the **Investigation Form** and review the directions.
- 8 Provide work time.

Closure, Part 1

Allow students to share insights from their investigation.

Gathering Intelligence



Procedure, continued

PART TWO	
1	Say: <i>Now that we have gathered intelligence about your Future Problem Solving skills from your Video Games booklet and made some team goals, let's take our preparation a little further. Think about a time you needed to prepare for a big event. What steps did you take to feel confident and successful?</i>
2	Allow time for teams to share. They may give examples relating to: <ul style="list-style-type: none"> • Concerts • Sporting events • Other school competitions such as academic team, Power of the Pen, debate club, and Science Olympiad.
3	Say: <i>Today's lesson will help you think about other ways to prepare for the Affiliate Finals." "It will also warm up your brainstorming and collaboration skills.</i>
4	Divide students into teams.
5	Distribute The ABCs of Preparation and review the directions.
6	Announce a time limit (suggestion: 15 minutes).
7	Provide work time.
8	Have students count the number of preparation ideas they listed (fluency) and share a few they think are the most interesting.
9	Distribute The Team Timeline and review the directions.
10	Provide work time.

Standards Addressed

Speaking & Listening

1, 4, 6

Reading & Literacy

1, 2, 7, 10

Writing

1, 2, 4, 5, 7, 8, 10

Language & Vocabulary

1, 2, 3

Closure, Part 2

1. Allow students to share their top ideas.
2. Discuss how these ideas can help them prepare for the next competition

Name _____



Investigation Form



Directions

1. Analyze the scores and comments you received from the evaluator for each step of your Video Games booklet.
2. Fill in each section of this Investigation Form with data collected from your analysis of the Video Games evaluation scoresheet.
3. Note strengths and areas for improvement.

What are your strengths?

What are your areas for growth and improvement?

Based on the analysis of your scoresheet, what lessons did you learn for the upcoming Affiliate competition?

Determine 3 – 5 goals for your team and write them here.



Name _____



The ABCs of Preparation



Directions: Work together as a team to create one tip for each letter of the alphabet.

A	B	C
D	E	F
G	H	I
J	K	L
M	N	O
P	Q	R
S	T	U
V	W	X
Y	Z	





Team Timeline



Directions

- 1. Identify the top 5 ideas from your brainstorming session with your team.
- 2. Write them in the space below.
- 3. Develop a timeline that identifies how and when you will accomplish your goals.
 - Begin numbering related to the calendar dates.
 - Insert goals and deadlines.

List the top five prioritized preparation plans

1	
2	
3	
4	
5	

Month: _____

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Organizing Your Research



Objectives

- Students will analyze research articles to develop understanding about the topic of Surveillance.
- Students will explain topic vocabulary in their own words.
- Students will organize their research by creating a Mind Map related to identified topic themes. Students will use their Mind Map as a foundation for generating challenges, underlying problems, and solutions.

Standards Addressed

Speaking & Listening

1, 2, 4, 5, 6

Reading & Literacy

1, 2, 4, 5, 7, 8, 10

Writing

6, 7, 8, 9

Language & Vocabulary

1, 2, 3

Materials

- **Surveillance Research Bank**, 1 per student (page 14)
- **Surveillance Vocabulary**, 1 per student (page 15)
- **Surveillance Vocabulary – Answer Key**, 1 for coach reference (page 16)
- Access to the Internet
- Poster board or large piece of bulletin board paper (1 per team)
- Markers (several different colors per team)
- Alternate: Students may create a digital Mind Map with the editable **Surveillance Mind Map** instead of using poster board and markers (page 17).

Preparation

1. Determine how to divide students into teams for research. Group them in their booklet teams or regroup into smaller groups of two or three students.
2. Decide whether students will create a digital mind map or a physical poster mind map, or if they will get to choose one or the other.

Procedure

1	<p>Discuss the importance of conducting thorough research:</p> <ul style="list-style-type: none"> • Why is it important to research a topic of study before competing in the Future Problem Solving competition? What have you learned from participating in the other problems? Are there specific examples of how preparation and research impacted the team's performance during the competition? • What have you learned about conducting research from participating in the past problems? • Why is it important to learn topic vocabulary?
2	<p>Emphasize the following related to the importance of research.</p> <ul style="list-style-type: none"> • Research provides the foundation for identifying challenges, crafting solutions, and developing action plans. • Research enhances creativity, futuristic thinking, and improves clarity in explaining ideas. • A thorough understanding of topic vocabulary allows you to understand the topic better and to use concepts and terms in your writing to show off your research and get good scores on Research Applied.
3	<p>Say: For this activity, we'll be using the Mind Map tool for organizing research. A Mind Map allows you to structure themes and concepts for analysis visually. It can turn a long list of monotonous information into a colorful and highly organized diagram.</p>

Organizing Your Research



Procedure, continued

4	Divide students into teams as determined in Preparation.
5	Distribute Surveillance Research Bank and Surveillance Vocabulary . Review the instructions.
6	Explain to students how they will create their Mind Map as you determined in Preparation.
7	Distribute any materials necessary to make the Mind Map .
8	Display the Mind Map graphic.
9	<p>Provide the following directions for creating the Mind Map:</p> <ul style="list-style-type: none"> • Step One: Start with the topic. Write Surveillance in the middle of the chart paper or digital canvas. Draw a circle around it. • Step Two: Add four branches that connect to the central topic (Surveillance). Themes include Crime and Control, Surveillance Capitalism, When Surveillance Gets It Right, and Protecting Data. Use a different colored marker for each theme. • Step Three: As you research, break each of the four branches/themes into smaller sub-topics. For example, Crime and Control might include ideas such as facial recognition, protests, and public events. Use colored markers to create a colorful graphic design. • Step Four: Add important vocabulary words, sketches, or pictures.
10	<p>Encourage students with the following:</p> <ul style="list-style-type: none"> • Look for connections and relationships between the research noted on the Mind Map. Use arrows or symbols to show those connections. • Add a touch of creativity to your Mind Map by using color and sketches. • The Mind Map may be considered a “work in progress.” Add to the branches and themes as you continue your research throughout our Affiliate Finals preparation.
11	Provide work time for creating the Mind Map and doing the research.

Standards Addressed

Speaking & Listening

1, 2, 4, 5, 6

Reading & Literacy

1, 2, 4, 5, 7, 8, 10

Writing

6, 7, 8, 9

Language & Vocabulary

1, 2, 3

Closure

1. Allow each team to share their **Mind Map**.
2. Explain the research they found most interesting or surprising.
3. Explain the primary connections they discovered.
4. Ask if there are any questions about the vocabulary.
5. Discuss how the **Mind Map** can be a valuable reference in brainstorming challenges and solutions.

Optional Extension

To allow students to work with vocabulary:

- **Vocabulary Word Wall** – Allow students to write important topic words and definitions on a half-sheet of paper such as printer paper or construction paper and hang it on the wall.
- **Vocabulary Game** – Have students make flash cards on index cards with a term on one side and its definition on the other. Read out either the definition or the term. The first student who raises a hand to answer and answers correctly with either the definition or the term gets a point. The student with the most points wins. This could also be played team against team, taking turns.



Directions

1. Examine the articles in the **Surveillance Research Bank** and any others available, such as those in Future Problem Solving's research unit, to develop understanding about the topic of Surveillance.
2. Choose a method of taking notes on what you learn so that you can refer to this information throughout this unit of study.
3. Add ideas to your **Mind Map** based on your reading.

Research Bank

Protecting Data

9 Ways smart devices can compromise your privacy | **LevelBlue**

Your house may be spying on you. Save yourself | **J.P. Morgan Wealth Management**

Top 5 methods of protecting data | **TitanFile**

Crime and Control

Surveillance technology's impact on privacy | **INC magazine**

Top 8 pros and cons of surveillance cameras in public places | **Reolink**

Surveillance and local police: How technology is evolving faster than regulation | **NPR**

The pros and cons of facial recognition technology | **ITPro**

When Surveillance Gets It Right

Intelligent surveillance as a tool for social good | **Forbes**

How can we balance security and privacy in a digital world? | **DiPLO**

Surveillance Capitalism

What is surveillance capitalism? | **TechTarget**





Surveillance Vocabulary



Directions: As you read the research articles, add definitions in your own words to the vocabulary terms shown below. It might also be helpful to search for these words on the internet.

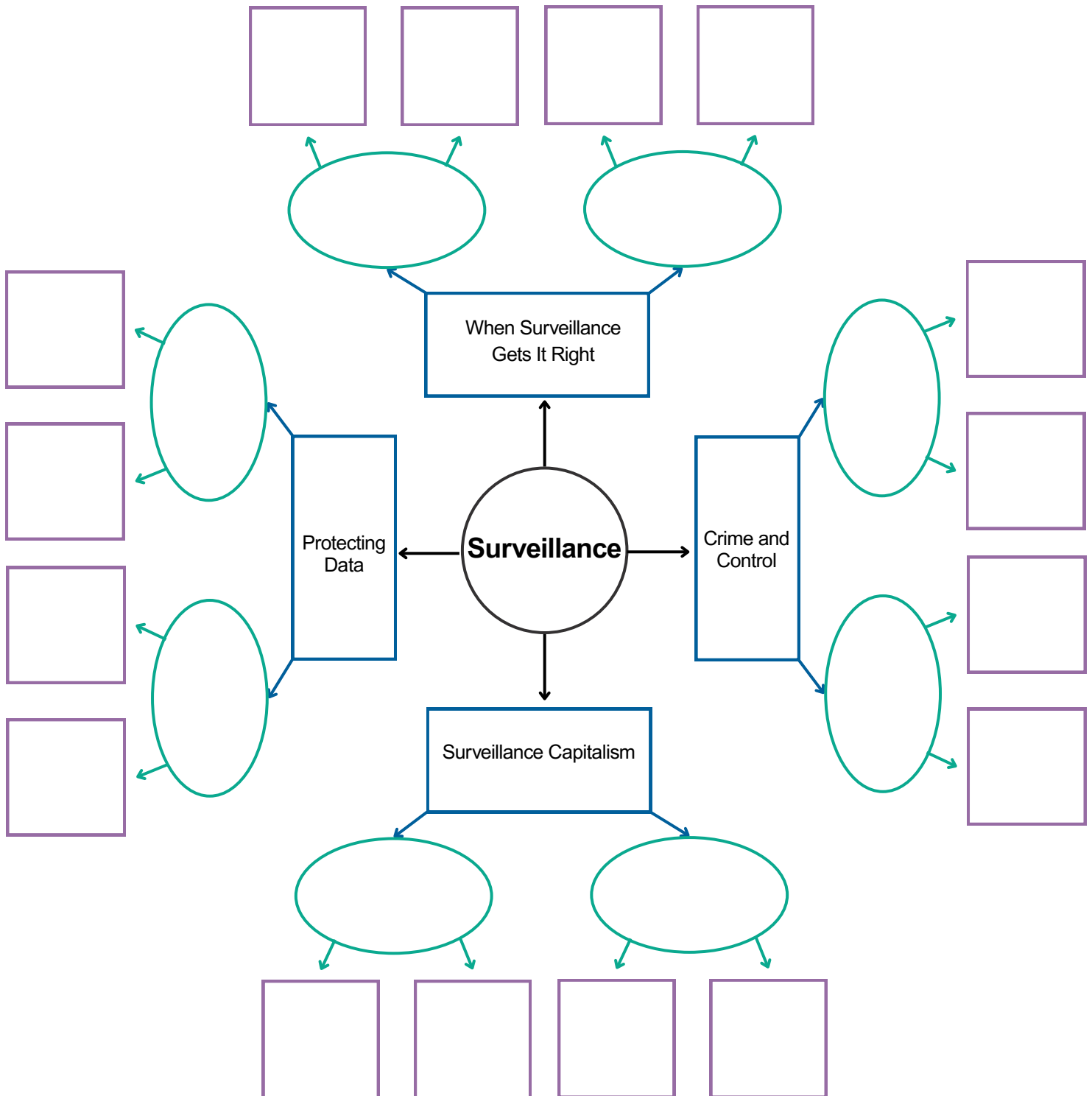
Note: These words can be found in the **Research Bank** articles. There may be other vocabulary words important to this topic that can be found from other sources, such as the research unit publication.

algorithm		Internet of Things (IoT)	
analytics		intrusion	
biometric authentication		IP camera	
CCTV		monetization	
Citizen Virtual Patrol		multi-factor authentication	
espionage		overpolicing	
functionality		protocol	
General Data Protection Regulation (GDPR)		role-based access control (RBAC)	
geofencing		surveillance capitalism	



algorithm	Internet of Things (IoT)
A process or set of rules to be followed, especially by a computer	The interconnection through the internet of computing devices in everyday objects, allowing them to send and receive data
analytics	intrusion
Systematic computational examination of data or statistics, or the information that results from the examination	The act of something coming into a place or situation where it is unwanted and uninvited
biometric authentication	IP camera
A security method that uses unique biological characteristics, like fingerprints or facial features, to verify a person's identity and grant access to secure systems or locations	A digital video camera that sends and receives video and audio data over a network, allowing remote access and monitoring
CCTV	monetization
closed-circuit television; a system that transmits video signals to a limited number of monitors, used for surveillance and security	The action of earning revenue from an asset or a business, such as turning non-revenue-generating items (like data) into cash
Citizen Virtual Patrol	multi-factor authentication
A digital policing program that allows community members to virtually patrol their neighborhoods to assist police. Residents with a computer, tablet or phone and Wi-Fi can tap into the city's live-streaming network of cameras and call the police if they see suspicious activity.	A security feature that requires users to provide two or more verification factors (something they know, have, or are) to gain access to a resource, increasing security beyond the usual password-based authentication
espionage	overpolicing
The practice of spying or of using spies, typically to obtain political and military information	A very high level of police presence in an area or community, often leading to negative consequences and a perception of excessive or unnecessary scrutiny
functionality	protocol
The range of operations that can be run on a computer or other electronic system	A set of rules or standards that govern how things are run, such as communication between computers or procedures in a scientific experiment
General Data Protection Regulation (GDPR)	role-based access control (RBAC)
In the European Union, a legal framework that sets guidelines for the collection and processing of personal information from individuals	A security method that grants access to resources based on a user's role or job function, rather than just on individual permissions, which simplifies managing access and enhances security
geofencing	surveillance capitalism
The use of tracking technology to create a virtual geographic boundary, allowing software to trigger a response when a mobile device enters or leaves a particular area, such as turning off lights when someone leaves or returns home	The widespread collection by businesses of personal data, including people's movements and behaviors online and in the physical world, and turning it into a way to make money

Directions: As you research, break each of the four branches/themes into smaller sub-topics. For example, Crime and Control might include ideas such as facial recognition, protests, and/or public events.



Analyze the Impact



Objectives

- Students will conduct action research to identify possible points of surveillance on themselves and their families.
- Students will evaluate how different forms of surveillance might be affecting their privacy and decision-making.

Standards Addressed

Speaking & Listening

1, 2, 4, 5, 6

Reading & Literacy

4, 7, 10

Writing

1, 2, 4, 5, 7, 8, 10

Language & Vocabulary

1, 2, 3

Materials

- **Action Research Surveillance Chart**, 1 per student (page 20)
- **Under Surveillance – Positive or Negative?**, 1 per student (page 21)
 - Alternate: Do this activity as a whole class with one person recording student ideas in the T-chart digitally or drawn on a whiteboard, poster, or bulletin board paper, in which case you would not need the handout.
- **My Perspective on Surveillance**, 1 per student (page 22)
- **My Perspective on Surveillance Rubric**, 1 per student (page 23)
- Note: The **My Perspective** handouts could be two-sided.

Preparation

1. Determine how to conduct **Under Surveillance – Positive or Negative?** (See Materials).
2. Determine if you will allow students to work together on **Under Surveillance – Positive or Negative?** and **My Perspective on Surveillance**.
3. Plan a day after one week of observations for students to bring in their charts and report their findings (See Closure).

Procedure

- 1 **Discuss:** *Think about the research you have conducted on the topic of Surveillance. Are you an unwilling victim?*

Allow students to share what they have learned about how ordinary people are under surveillance in their lives. Possible responses might be:

- 2
 - A phone may track where you are.
 - Check-in systems at restaurants, movie theatres, and hotels log your contact and financial information.
 - Websites you visit are recorded by the computer.
 - Microphones in your phone wait for you to say a phrase to activate the virtual assistant.
 - Chatbots log your conversations for quality assurance.
 - Utilities like water and electric track how much, when, and how you use their services.
 - Cameras in a store parking lot or in the store.
 - Video game companies track your spending habits, the types of games you play, and more to better target advertising.
 - Health technology tracks your well-being.
 - Speed limit cameras.

Analyze the Impact



Procedure, continued

3	Say: <i>This week, you will conduct research to investigate how surveillance affects your life and your family. Action research is a method where you collect data, reflect on your findings, and draw conclusions.</i>
4	Distribute the Action Research Surveillance Chart and review the directions.
5	Say: <i>You have one week to conduct your research. Be good observers. Interview family members, and we will analyze your data next week and discuss your findings.</i>

Standards Addressed
Speaking & Listening
1, 2, 4, 5, 6
Reading & Literacy
4, 7, 10
Writing
1, 2, 4, 5, 7, 8, 10
Language & Vocabulary
1, 2, 3

Closure: Action Research Analysis

- Say:** *Today, we are going to share and analyze our action research data and findings.*
 - Create a list of all the surveillance devices detected. What are the most common?
 - Where are the places where you identified surveillance?
 - Share important family interview comments.
 - Note the purpose of the surveillance. Could it be classified under any of the four Future Problem Solving research themes?
 - Crime and Control
 - Surveillance Capitalism
 - Protecting Data
 - When Surveillance Gets It Right
- Say:** *Research analysis involves identifying patterns and drawing meaningful conclusions. What patterns have you observed in your research, and what conclusions can you draw from them?*
- Discuss student answers.
- Discuss:** *Does anything else in your action research connect to the four research themes identified in this unit?*
- Discuss:** *Is surveillance in our society positive or negative?*
- Conduct the **Under Surveillance – Positive or Negative?** activity as determined in Preparation.
- If not doing the activity with the whole group, allow students to discuss their answers.
- Distribute **My Perspective on Surveillance** and the **Rubric**. Review the instructions and the choices. Announce if they will be allowed to work together or if this will be an individual project.
- Remind students to check the **Rubric** as they work so they will produce an excellent project.
- Provide work time. When students are finished, allow them to share their work with the class.
- Optional:** Allow students to work in pairs to fill out a rubric for a product that is not their own.



Action Research Surveillance Chart



Directions

- 1. Over the next week, track the number of ways that you and your family members may be under surveillance.
- 2. Record what you discover on the chart below.

Action Research Surveillance Chart			
Date and Time	Surveillance Device	Place	Purpose of Surveillance



Under Surveillance – Positive Or Negative?



Directions

- 1. Think about the results of your action research.
- 2. Use the T-chart to list the pluses (benefits) and minuses (drawbacks) of surveillance.

Plus (benefits)	Con (drawbacks)



My Perspective on Surveillance

Directions

1. Think about your perspective on the topic of Surveillance.
2. Select a project from the choice board to express how you feel.

My perspective on surveillance CHOICE BOARD

Visual art

Collage

Create a collage using images, text, and symbols to show the balance between privacy and security.

Creative writing

Diary entry

Write a diary entry from the perspective of someone living in a heavily surveilled world or working as a surveillance agent.

Role playing

Debate

Team up with classmates to act out a debate between privacy advocates and surveillance supporters.

Multi-media

Video/Animation

Create a short video demonstrating how surveillance affects your life or society.

YOUR OWN CREATIVE IDEA!

Music

Song/Rap

Write and perform a song or rap expressing your perspective on surveillance.

Game design

Develop a simple board or card game reflecting the challenges of balancing safety and privacy in a surveilled world.

Comic strip

Create a comic strip depicting a story about how surveillance affects individuals or society, using characters and dialogue to convey your perspective.

Sculpture

Build a 3D representation of the concept of surveillance (e.g., a watchful eye, cameras, or networks) and explain its symbolism.





My Perspective on Surveillance Rubric

Criteria	Needs Improvement	Developing	Proficient	Exemplary
	1	2	3	4
Creativity	The project lacks creativity and originality.	The project shows some creativity but relies on common, predictable ideas.	The project is creative and demonstrates some originality.	The project is highly original and imaginative and shows exceptional creativity in design or expression.
Understanding	Shows minimal understanding of surveillance. The examples or symbolism are unclear and incomplete examples.	Demonstrates some knowledge of surveillance, but connections, examples, and symbolism need elaboration.	Shows a solid understanding of surveillance with clear examples, connections, and well-explained symbolism.	Demonstrates a deep understanding of surveillance and an insightful analysis of examples, connections, and symbolism.
Clarity and communication	Ideas are unclear, with significant gaps in the organization and presentation.	Ideas are somewhat clear but lack strong organization and depth of expression.	Ideas are clearly communicated with logical organization and expression.	The ideas are communicated exceptionally well with clear, compelling organization and expression.
Effort and completion	The project does not meet expectations. Work shows minimal effort.	Meets some expectations, but work shows minimal effort or is incomplete in some areas.	Meets expectations. Work shows consistent effort and is completed at a satisfactory level.	Work exceeds expectations and shows extraordinary effort and attention to detail.



Details, Details, Details



Objectives

- Students will analyze surveillance situations and use research-based knowledge to add details for improving the situations.
- Students will use specific vocabulary and concepts related to surveillance.
- Students will collaborate in teams to develop understanding about the topic of surveillance.

Materials

- **Surveillance Situations**, 1 per team, 2 pages (pages 26-27)
- Different colors of pens or pencils (several for each team)

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 4, 7, 10

Writing

4, 10

Language & Vocabulary

1, 2, 3

Preparation

1. Determine how to divide students into teams.

Procedure

1	Say: An important Future Problem Solving skill is elaborating your ideas – not just to get elaboration points for your solutions but also explaining your challenge ideas logically and clearly in Step 1 and also adding details to your Action Plan in Step 6. For this activity, we are going to combine practicing creating details with the Surveillance research themes.
2	Say: Much of the topic of Surveillance revolves around whether or not there can be a balance of safety, privacy, and doing business in a digital world. Use your knowledge of the topic from research and from your own experience to complete this activity.
3	Divide students into teams as determined in Preparation.
4	Distribute Surveillance Situations . Review the directions.
5	Provide work time.
6	At the end of the work period: Say: Now we are going to see what each team had to say about each situation. This activity is going to be timed. You will need several different colors of pens or pencils. When I say 'go,' you will exchange papers with another team. You will have 4 minutes to look over their work. During that time, you may hitchhike off their ideas to add something else to their paper, or you may add comments or questions. When I say 'go' again, you will exchange papers with a different team for another 4 minutes. We will do this until everyone has looked at everyone else's work. Are there any questions?
7	Say: Go! Mark the time for 4 minutes, then repeat for each round.
8	At the end of the activity, each team should have their own paper back. Provide a few minutes for the teams to look at what the others had to say to them.

Details, Details, Details



Closure

1. Lead a discussion about each situation.
 - Were there any ideas that stood out for balancing safety, privacy, and doing business?
 - Were the WHOs chosen reasonable?
 - What details do you think were important to include that you might not have thought of to begin with?
2. **Say:** *I hope you have gotten some ideas that you can use during the upcoming competition!*

Standards Addressed
Speaking & Listening
1, 2, 4, 6
Reading & Literacy
1, 4, 7, 10
Writing
4, 10
Language & Vocabulary
1, 2, 3



Directions: For each situation below, add details for implementing the action that consider possible concerns any stakeholders might have. Add the usual who, what, how, why, when, and where details but also include as many others as you can that would be important to making the action happen. Use what you've learned about the topic of Surveillance to help you come up with ideas. You do **not** have to write in complete sentences.

Crime and Control

Your city plans to implement drone surveillance to monitor neighborhoods for crime prevention. Residents are worried about constant monitoring. Suggest details for implementing a balanced plan that addresses both safety and privacy concerns.

Surveillance Capitalism

Several popular social media app companies have been accused of collecting and selling user data without consent. Propose actions to address this issue that protect user privacy and also allow the companies to stay in business.





When Surveillance Gets It Right

The health department wants to use surveillance data to track disease outbreaks, but some citizens fear this would infringe on their privacy. Suggest procedures to ensure public health benefits without compromising individual rights.

Protecting Data

A company introduces a new smart home security device that streams live video to law enforcement. What measures can the company take to ensure the device is secure against hacking and misuse?



Cracking the Code of Data Security Challenges

Objectives

- Students will analyze a fictional home security system to identify potential vulnerabilities to hacking.
- Students will brainstorm challenges related to protecting data in a surveillance context.
- Students will apply research on Surveillance to identify challenges.
- Students will write challenges in the correct format.

Materials

- SmartSecure 360 Sales Sheet**, 1 per student (page 30)
- Think Like a Hacker Brainstorming Sheet**, 1 per student (page 31)

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 3, 4, 7, 8, 10

Writing

1, 2, 4, 5, 7, 9, 10

Language & Vocabulary

1, 2, 3

Procedure

PART ONE

- Say:** *The big news story today is that HomeSphere Technologies, a leading company in the home security space, just released a prototype of their newest innovation: the SmartSecure 360! Let's take a look at some of the promotional materials the company is using to sell their new product.*
- Distribute **SmartSecure 360 Sales Sheet**. Review the product description, testimonials, etc.
- Say:** *SmartSecure 360 sounds like a great product. However, as we know from our research on surveillance, even the most cutting-edge technology can be vulnerable to attacks. Today, your Future Problem Solving teams will think like hackers to spot challenges that could result from this technology and the broader impact these issues could have on society.*
- Divide students into teams.
- Distribute **Think Like a Hacker Brainstorming Sheet** and go over the instructions.
- Provide work time.

PART TWO

- Say:** *Now that you've analyzed this new technology, let's share the possible challenges you identified.*
- As teams share their ideas, write them on the board. Some possible ideas might include:
 - The Face Recognition feature might struggle with accuracy in low light or for non-standard facial features.
 - The Voice Command feature could be tricked with recordings of approved users' voices.
 - Video footage could be stolen if the cloud servers are hacked.



Coaching Tip

Use additional Resources Library tools like the Future Problem Solving 6-step Infographic [poster](#) to provide a roadmap for your students as they further develop their skills applying our problem-solving model.

Cracking the Code of Data Security Challenges

Procedure, continued

PART TWO	
	Discuss the broader implications of these challenges. Ask: <i>How might the weaknesses in the new security system lead to challenges for society?</i> They might give answers like: 3 The Face Recognition feature could have trouble recognizing people with darker skin tones, which could result in potential discrimination. Using a recording of someone's voice to access their home could also lead to identity theft in other areas of the victim's life, such as their finances. Stealing video footage in the cloud could result in damage to someone's reputation if it was posted online.
4	Ask: <i>Which vulnerability do you think is the most critical to address and why?</i>
5	Entertain student responses.
6	Say: <i>Our next task is to review how to write challenges in the correct format. What do you know about how to write challenges correctly?</i>
7	Student responses may include the information below. Be prepared to point out anything missing in their responses. States what the challenge is and explains why it is a challenge Is clearly written Shows cause and effect Includes research and vocabulary from both the research and the future scene Avoids extreme language and absolutes. Uses language of possibility such as "may," "might," and "could" instead of "is/are", "will" or "would." The challenges incorporate different categories
8	Say: <i>Let's practice writing a challenge in the correct format with the example in the first row of the Brainstorming Sheet. Consult with someone near you to come up with a correctly written challenge.</i>
9	Give a few minutes work time, then ask students to share their challenges. They could respond with something like this: <ul style="list-style-type: none"> Poor lighting at the door may keep the SmartSecure 360 system from recognizing someone who has permission to come into the house. An alert about this person may be an embarrassment to the person and to the family, which may strain relationships between them. The SmartSecure 360 system may misidentify someone at the door if the lighting is poor. If the person has permission to come into the house and the police are notified, this might cause strained relationships between the person and the family.
10	Say: <i>Now, work with your team to write three challenges based on ideas on your Think Like a Hacker Brainstorming handout. Choose challenges in different categories. You may use the back of your handout for recording the challenges.</i>
11	Provide work time.
12	Allow students to share challenges and lead a discussion about the merits of the challenges.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

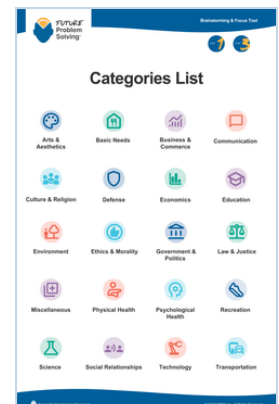
1, 2, 3, 4, 7, 8, 10

Writing

1, 2, 4, 5, 7, 9, 10

Language & Vocabulary

1, 2, 3



Coaching Tip

Use additional Resources Library Categories List tools like the poster and one-pager with all the definitions to help students learn and utilize the Future Problem Solving Categories List to generate challenges.



NEW FOR 2055!

The SmartSecure 360

SmartSecure 360: Your Home, Reimagined.

Parameters

Time:

Place:

Topic:

1 Step into the future of home security with SmartSecure 360—the all-in-one
2 solution for smarter, safer living. Designed by HomeSphere Technologies, this
3 cutting-edge system combines advanced technology with seamless
4 convenience to keep your loved ones and belongings secure.

5 Why Choose SmartSecure 360?

6 360° Advanced Protection

- 7 • Facial recognition for seamless, keyless entry
- 8 • Voice-activated alarms that respond to your commands instantly
- 9 • Advanced motion sensors that detect and alert unusual activities inside and
10 outside your home

11 Total Remote Control

- 12 • Manage your home from anywhere with the SmartSecure mobile app
- 13 • Live camera feeds and instant notifications for real-time updates
- 14 • Enhanced geofencing automatically activates your system when you leave a
15 defined area

16 Encrypted Cloud Storage

- 17 • Stores all system logs, video footage, and activity history securely in the
18 cloud.
- 19 • 24/7 access to your data through the SmartSecure web portal or app

20 Next-Generation Smart Integration

- 21 • Syncs with all smart home devices, including lights, thermostats, smart
22 locks, and appliances.
- 23 • The auto-lighting feature adjusts your lights to mimic occupancy when you're
24 away.
- 25 • Appliance safety lock prevents unauthorized use of your connected devices.

26 AI-Powered Intelligence

- 27 • Predictive alerts based on daily activity patterns to notify you of unexpected
28 events
- 29 • Smart profiles for family members or frequent visitors, reducing unnecessary
30 alerts
- 31 • Dynamic system updates ensure cutting-edge security features are always
32 at your fingertips.

33 Customizable Security Zones

- 34 • Set unique rules for different areas of your home
- 35 • Receive notifications for specific zones while ignoring routine activity
36 elsewhere

37 Imagine the Possibilities with SmartSecure 360.

39 Whether you're at home, at work, or traveling the world, SmartSecure 360
40 provides peace of mind with innovative, always-on security. Get SmartSecure
41 360 Today and Experience the Future of Home Protection!

WARNING:

This is not the official future scene. DO NOT USE this future scene for your Affiliate Finals Problem Surveillance submission.





Brainstorming Sheet



Brainstorm potential challenges and issues with the SmartSecure 360 Security System. Use the Future Problem Solving **Categories List** to consider various perspectives and categories of human activities to uncover as many challenges in as many categories as possible. Complete the grid below. An example is provided. You do **not** have to write the challenges in the correct format for this activity.

Feature	Possible Challenge	Who Could Be Affected?	Category
Facial Recognition	Poor lighting might prevent recognition, or the system might misidentify faces.	Homeowners, family members, or guests trying to enter.	Technology, Environment, Social Relationships, Ethical/Cultural

Brainstorming Underlying Problems About Police Surveillance

Objectives

- Students will apply their knowledge of the components of an underlying problem to deepen their understanding of the root causes of complex issues.
- Students will identify key ethical, social, and technological issues in scenarios related to police surveillance.
- Students will create actionable underlying problems addressing significant challenges presented in police surveillance scenarios.
- Students will collaborate to brainstorm and refine ideas, demonstrating teamwork and constructive feedback skills.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 7, 10

Writing

1, 2, 4, 5, 7, 8, 9, 10

Language & Vocabulary

1, 2, 3

Materials

- **Police Surveillance Reports**, 6 scenarios, cut out separately (pages 35-37)
- Different colors of pens (several for each team)
- **Surveillance Spotlight**, 2 pages, 6 two-sided copies (pages 38-39)
- Optional: Create “police” badges for students

Preparation

- Prepare a whiteboard or large piece of bulletin board paper to review how to write underlying problems, to share the given challenge (see Procedures #9), and to practice writing an underlying problem from a given challenge.
 - Alternative: Project a shared writing document that allows you to type in the given challenge as well as student responses for parts of an underlying problem, what each part means, and ideas for a correctly formatted underlying problem.
- Review **Surveillance Spotlight**, Phase 2. Read the 6 scenarios to be used in the activity.
- Determine how to divide students into 3 teams or 6 teams. If there are only enough students for 3 teams, start with 3 scenarios, then repeat with the other 3. If you have enough students for 6 teams, all students will get to interact with 3 scenarios but will also hear about the other 3. Each team begins with a different scenario and a **Surveillance Spotlight** handout. When each team has finished Phase 1, they hand their first scenario and the handout to another team for Phase 2 and receive another scenario and handout from a different team for their own Phase 2 work, round robin style. The scenario and the handout are passed on a third time for Phase 3. After Phase 3, the scenario and handout are handed back to the original team. With 6 teams, all scenarios can be deployed at the same time. The original team will present the two underlying problems on the handout to the whole team.

Brainstorming Underlying Problems About Police Surveillance

Procedure

1	Say: <i>Welcome, new recruits, to the Police Surveillance Academy! As surveillance technology becomes increasingly prominent in law enforcement, we aim to ensure that these advancements avoid obstacles that could make them less effective or even harmful to the public.</i>
2	(Optional) Distribute badges.
3	Say: <i>You've already been briefed about police surveillance technology through the research you've done so far. But before we start, let's review the format for our investigation. Who can tell us the four main components of a correctly formatted underlying problem?</i>
4	Write student responses on the whiteboard, piece of bulletin board paper. The parts are: <ul style="list-style-type: none"> • Condition phrase • Stem and key verb phrase • Purpose • Future scene parameters
5	Say: <i>Now let's go back and tell what each piece does and what it looks like.</i>
6	As students respond, write the descriptions beside each part. Example responses: <ul style="list-style-type: none"> • Condition phrase – describes the issue; a lead-in phrase that sets out the reason for the key verb phrase; gives a fact from the future scene that leads to the key verb phrase; can begin with "Since..." or "Because...." • Stem and key verb phrase – "How might we..." or "In what ways might we...;" one action verb phrase that tells the goal for finding solutions • Purpose – begins with "so that..." or "in order to...;" explains the desired outcome or result of solving the key verb phrase • Future scene parameters – time, place, and topic; focuses the underlying problem on the situation
7	Say: <i>Let's practice writing an underlying problem together using a given challenge. We will use the year 2040.</i>
8	Share the following challenge: Due to the fact that the police of Hurstbourne are implementing drone surveillance to monitor neighborhoods for crime, citizens are worried that constant monitoring may be an invasion of their privacy. This may lead to a lack of trust between the citizens and the police, resulting in less cooperation from citizens for reducing crime.
9	Entertain student responses for each part of the underlying problem. After a full underlying problem is written, ask for variations and discuss what kinds of solutions would be required to solve the underlying problem. Example underlying problems might be: <ul style="list-style-type: none"> • Because police drones are creating unease in neighborhoods, how might we increase public trust in police surveillance methods so that privacy is preserved in Hurstbourne neighborhoods in 2040 and beyond? • Because citizens of Hurstbourne worried about police using drone surveillance in neighborhoods to monitor crime, in what ways might we balance police surveillance and privacy in the neighborhoods so that citizens will be able to support surveillance in their neighborhoods in 2040 and beyond?

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 7, 10

Writing

1, 2, 4, 5, 7, 8, 9, 10

Language & Vocabulary

1, 2, 3

Brainstorming Underlying Problems About Police Surveillance

Procedure, continued

10	Say: Now that we have reviewed how to construct complete underlying problems, it's time for you to practice on your own.
11	Divide the students into teams as determined in Preparation.
12	Say: We are going to examine some situations related to Surveillance. You will have several tasks in this activity: Analyze a situation, answering several questions about stakeholders, issues, and consequences; determining 2 or 3 areas for underlying problems, writing a complete underlying problem, and checking the work of other teams.
13	Distribute one Police Surveillance Report and one Surveillance Spotlight to each team.
14	Say: Here how this round robin activity works. Each team will start with one surveillance scenario and one handout. You will read the scenario and complete the assignment on the first part of the handout – that's Phase 1. Then you will pass your first scenario and handout to the next team and receive another scenario and a different handout from a different team. You will follow the second set of instructions for Phase 2, then pass that scenario and handout to a third team for Phase 3. After Phase 3, the scenario and handout are returned to the original Phase 1 team. (If you have only 3 teams, tell the students this process will begin again with 3 different scenarios.)
15	Ask students to read over the directions on the Surveillance Spotlight handout and make sure they understand what they will do for each round.
16	Provide work time and monitor the handoff from one team to the next
17	When all 6 of the Surveillance Spotlights have been completed, each team will share the underlying problems on their last handout with the class.
18	Lead a discussion about how well the underlying problems have been written.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 7, 10

Writing

1, 2, 4, 5, 7, 8, 9, 10

Language & Vocabulary

1, 2, 3

Closure

Say: Congratulations! You have met the graduation requirements from the Police Surveillance Academy because of your exceptional work identifying and writing underlying problems. As you prepare for the competition, remember to use your team's strategies for this step of the problem-solving process.



Cut out the scenario cards.

Over-watchful streets

The small town of Maplewood recently installed AI-powered surveillance cameras at major intersections and public parks. The town council implemented the system to reduce crime and monitor traffic violations, promoting it as a tool to make the community safer. The AI can track individuals based on their movements and cross-reference them with a database of past offenders. Early reports show a noticeable decline in vandalism and petty theft since the cameras went live.

However, not everyone in Maplewood is celebrating. Some residents worry about the long-term implications of constant surveillance, particularly since the cameras record all activity and store data indefinitely. Citizens have raised concerns about who can access the footage and how it might be used. Privacy advocates have started a petition to restrict the system's reach, arguing that the costs of personal freedom are too high, even if crime is reduced.



Drones over Hurstbourne

The bustling city of Hurstbourne has become a testing ground for police drones equipped with advanced cameras and microphones. These drones patrol neighborhoods with high crime rates, flying over streets and alleyways to provide real-time surveillance. City officials claim drones are a cost-effective way to deter criminal activity and gather evidence. In their first month, the drones assisted in catching two burglars and prevented several car thefts.

Despite the apparent success, many residents feel the drones are intrusive. Some report hearing the buzzing of drones outside their bedroom windows late at night, creating a sense of unease. Others feel targeted, as the drones primarily patrol low-income neighborhoods with predominantly minority populations. Local activists argue that the drones exacerbate existing tensions between police and communities, turning public spaces into zones of constant surveillance.





Body camera blackout

In the suburban town of Riverview, a routine traffic stop escalated into a heated confrontation between a police officer and a driver. The officer's body camera, which is required to be on during all encounters, malfunctioned, leaving a critical gap in the video evidence. Witnesses provided conflicting accounts, with some siding with the officer and others with the driver. The lack of footage has sparked outrage among community members demanding transparency and accountability.

The incident has led to widespread debate in Riverview. Some residents call for stricter enforcement of body camera protocol and better maintenance to ensure equipment reliability. Others question whether body cameras are enough to hold officers accountable, especially when footage can be lost or manipulated. Meanwhile, trust in the police department is eroding, and protests have broken out calling for reform.



On the Digital Trail

In the tech-savvy city of Lakeview, the police department has started using social media surveillance tools to track and predict criminal activity. The software analyzes public posts, messages, and hashtags to flag potentially suspicious behavior. Recently, a local high school student posted a sarcastic comment about "robbing a bank," which the system flagged. Without contacting the family, officers arrived at her home to question her. Although the situation was resolved without charges, it left her family shaken and embarrassed.

The incident has sparked widespread concern in Lakeview about the use of digital surveillance. Parents worry that their children's jokes or impulsive online comments could lead to serious consequences. Others argue that the tools violate freedom of expression and disproportionately target younger users who are active online. While police claim the system helps prevent crimes before they happen, critics question the ethical implications of monitoring private lives so closely.



Wrong Face, Wrong Place

During a sold-out concert at Brookdale's popular Civic Arena, a man was arrested after being flagged by the venue's facial recognition system. The system had identified him as a wanted fugitive with an outstanding warrant. Police escorted him out of the arena in front of a crowd of concertgoers, causing a scene that quickly went viral on social media. Hours later, it was revealed that the man was innocent—the software had misidentified him due to a glitch in its database.

Although the man was released without charges, the incident damaged his reputation and humiliated him. His family is now considering legal action against the police and software companies. Meanwhile, public debate in Brookdale is intensifying, with some defending the technology as a necessary tool for public safety and others criticizing its flaws. The local government is now under pressure to address whether the benefits of facial recognition outweigh its risks.



Data Dilemma

In the city of Pinewood, the police department recently launched a data-driven surveillance program that collects and analyzes data from multiple sources, including traffic cameras, public Wi-Fi networks, and social media. The system is designed to predict and prevent crimes by identifying patterns and anomalies in behavior. Officials have praised the program for helping to locate missing persons and solving a string of burglaries in record time.

However, a recent cyberattack on the police department revealed significant vulnerabilities in the system. Hackers accessed personal data, including the locations and movements of thousands of residents, and posted it online. Citizens are outraged, fearing how criminals or even other governments might exploit their private lives. While the police department scrambles to improve cybersecurity measures, Pinewood residents are left questioning whether the benefits of data-driven surveillance are worth the risks of such sensitive information falling into the wrong hands.

Name _____



Surveillance Spotlight



Situation # _____

Phase 1 team names _____

Directions: Read the assigned surveillance scenario carefully. Take note of the main issues, the people involved, and the broader context. Consider these questions and note answers in the box.

- What specific problems does this scenario highlight?
- Who is directly affected by the situation?
- What are the potential consequences if the issue isn't addressed?

When you have completed the box, hand the situation and this paper to the next team.

Phase 2 team names _____

Directions: Read the assigned surveillance scenario carefully. Make additions to the box above that you think are necessary. In the box below, write 2 or 3 ideas for underlying problems. You should NOT write the underlying problems in the correct format here.

When you have a couple of ideas in the box, hand the situation and this paper to the next team.

Page 1 of 2 →



Name _____



Surveillance Spotlight



Phase 3 team names _____

Directions: Read the assigned surveillance scenario carefully. Make additions to either of the boxes on the front page of the handout that you think are necessary. In the box below, write one complete underlying problem, using an idea from the second box on the first page.

When you have completed the underlying problem, hand the situation and this paper back to the Phase 1 team.

Final round, Phase 1 team names _____

Directions: Read what the teams in Phases 2 and 3 wrote about what you wrote in the first box. In the box below, write one complete underlying problem that is different from the one in the box above, using an idea from the second box on the first page.

When you have completed the underlying problem, be ready to hand the situation and this paper to another team to review.



Solution Writing Errors

Objectives

- Students will evaluate solutions to determine if they are correctly written and relevant.
- Students will analyze solutions for elaboration, providing specific details related to the solution (who, what, how, why).
- Students will revise relevant solutions that do not meet the criteria for elaboration.

Materials

- **Data Breach**, 1 per student, 3 pages (pages 41-43)
- **Data Breach – Answer Key**, 1 for coach reference, 2 pages (pages 44-45)

Preparation

- Decide whether students will work alone, in pairs, or in teams.
- Determine how to present the scenario in Procedure #1.

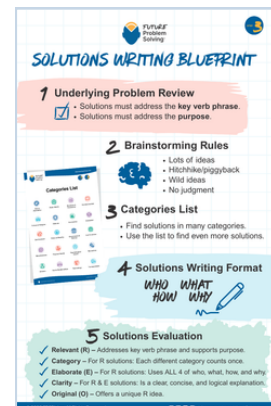
Procedure

1	<p>Present the following scenario to the students.</p> <p>John's team completed their Affiliate Finals booklet online, carefully following all the rules. They knew the security device cameras would film every step of their process. However, they failed to safeguard their privacy by avoiding cookies, regularly clearing their Internet history and cache, and using a browser that blocks or deletes third-party cookies. As a result, a data breach affected Step 3 of the Future Problem Solving process: solution writing. Analyze and evaluate their solutions for relevance and elaboration.</p>
2	Divide students as you decided during Preparation.
3	Distribute Data Breach . Review the directions.
4	Provide work time.

Closure

1. Using the **Data Breach – Answer Key**, lead students in a discussion about their answers, encouraging students to share their reasoning.
2. Optional: Best Solution Showcase. Allow students to nominate and vote on the best re-written solution from the lesson and display the solution in the room.

Standards Addressed
Speaking & Listening
1, 2, 4, 6
Reading & Literacy
1, 2, 4, 5, 7, 8, 10
Writing
1, 2, 4, 6, 7, 10
Language & Vocabulary
1, 2, 3



Coaching Tip

Use additional Resources Library tools like the Solutions Writing Blueprint poster to provide additional inspiration for your students and reinforce the components of a well-written solution.

**Directions**

1. Carefully evaluate each solution to determine if it is relevant, elaborate, and/or original. Check the appropriate boxes.
2. Identify the category and write it on the line provided.
3. Countermeasure: For any solution that is relevant but not elaborate, rewrite or add to it to make it elaborate. If it is not relevant, you do not need to revise it.

Underlying problem

Because surveillance technologies such as facial recognition and data tracking are invasive to personal privacy and often misused to discriminate against marginalized groups, in what ways might we improve countermeasures so that individuals can maintain their personal privacy globally in 2035?

Solution One

Sony will invent "The S.C.R.A.M." (Scrambling Cameras - Reducing Active Monitoring). The S.C.R.A.M. will be sold to individuals who do not wish to be filmed without their knowledge. The device can be purchased as a decorative pin for women or a wristband for men. It can also be installed as an app in a hand-held device.

	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category:

Countermeasure to improve this solution, if necessary:





Solution Two

The United Nations Policy Makers will encourage governments to pass the “Privacy Protection Act.” Anyone caught hacking or gaining access to an individual’s personal information will be prosecuted as committing a criminal offense punishable by a large fine along with time in jail. No exceptions. This law will be a countermeasure to protect personal privacy because the consequences will be harsh and consistently enforced.

	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category:

Countermeasure to improve this solution, if necessary:

Solution Three

Townhall Meetings will be organized to provide a platform for individuals to share their feelings about having their privacy invaded through facial recognition systems scanning crowds and misidentifying them as criminals or through the sale of personal data via surveillance capitalism. Therapy sessions will be made available to those traumatized by these invasive surveillance practices.

	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category:

Countermeasure to improve this solution, if necessary:



**Solution Four**

A “VPN Network” (Virtual Privacy Network) will be launched for companies to receive certification as an ethical establishment that does not practice surveillance capitalism. They will receive a seal that says: “A Privacy First company.”

	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category:

Countermeasure to improve this solution, if necessary:

Solution Five

Cybersecurity experts will develop a “Counter Hacker Tracker Program” to combat the invasion of personal privacy. AI systems will trace and identify hackers, their methods, and their locations. By using the same tools that hackers rely on, this countermeasure will flip the tables, making it harder for them to operate and easier for authorities to convict them for breaking the law.

	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category:

Countermeasure to improve this solution, if necessary:



Note: Students may determine a relevant solution is original. Those are not marked.

1. Sony will invent “The S.C.R.A.M.” (Scrambling Cameras - Reducing Active Monitoring). The S.C.R.A.M. will be sold to individuals who do not wish to be filmed without their knowledge. The device can be purchased as a decorative pin for women or a wristband for men. It can also be installed as an app in a hand-held device.

X	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category: Technology

This will be an effective countermeasure to surveillance because it has the capability to scramble pixels on surveillance devices that invade citizens' privacy.

2. The United Nations Policy Makers will encourage governments to pass the “Privacy Protection Act.” Anyone caught hacking or gaining access to an individual’s personal information will be prosecuted as committing a criminal offense punishable by a large fine and jail time. No exceptions. This law will be a countermeasure to protect personal privacy because the consequences will be harsh and always enforced.

X	This solution is relevant.		This solution is not relevant.
X	This solution is elaborate.		This solution is original.

Category: Law & Justice

No countermeasure needed to improve this solution.

3. Townhall Meetings will be organized to provide a platform for individuals to share their feelings about having their privacy invaded through facial recognition systems scanning crowds and misidentifying them as criminals or through the sale of personal data via surveillance capitalism. Therapy sessions will be made available to those traumatized by these invasive surveillance practices.

	This solution is relevant.	X	This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category: Psychological Health

This solution is not relevant. It does not address the key verb phrase or support the purpose of the underlying problem.

4. A “VPN Network” (Virtual Privacy Network) will be launched for companies to receive certification as an ethical establishment that does not practice surveillance capitalism. They will receive a seal that says: “A Privacy First company.”

X	This solution is relevant.		This solution is not relevant.
	This solution is elaborate.		This solution is original.

Category: Ethics & Morality

Countermeasure to improve this solution: Elaborate with “who” and “why.”

The Global Cyber Security Alliance will launch a “VPN Network” (Virtual Privacy Network) to certify companies that follow strict ethical guidelines in using surveillance technologies. The certified companies would display a “Privacy-First” seal, identifying them as a company that supports ethical practices for personal privacy practices. This countermeasure will let individuals know they can trust these companies to maintain their personal privacy.

5. Cybersecurity experts will develop a “Counter Hacker Tracker Program” to combat the invasion of personal privacy. AI systems will trace and identify hackers, their methods, and their locations. By using the same tools that hackers rely on, this countermeasure will flip the tables, making it harder for them to operate and easier for authorities to convict them for breaking the law.

X	This solution is relevant.		This solution is not relevant.
X	This solution is elaborate.		This solution is original.

Category: Defense

No countermeasure needed to improve this solution.

Underlying Problems and Solutions

Objectives

- Students will analyze underlying problems related to Surveillance to understand the key verb phrase and purpose of the underlying problem.
- Students will generate solution ideas for underlying problems related to Surveillance.
- Students will write relevant, elaborate solutions to given underlying problems.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 10

Writing

2, 4, 5, 10

Language & Vocabulary

1, 2, 3

Materials

- **Underlying Problem Cards**, see Preparation for the number of cards needed (page 48)
- **Using the Categories List**, one copy for each **Underlying Problem Card** (pages 49-50)

Preparation

- Read **Procedure #5**.
- Divide students into 4 teams if you want to use all 4 underlying problems. The number of **Underlying Problem Cards** you need to prepare will depend on how many teams of students there will be. If you need more than 4 teams, plan for a few teams to work on the same underlying problem but prepare a separate **Underlying Problem Card** and **Using the Categories List** handout for each team.
 - Note: In the exchange of underlying problems and handouts during the activity, it will not matter too much if teams receive an underlying problem they have already seen as long as they don't get their own handout back. There would likely be categories that haven't been used on the handout they receive.
- Determine how you will divide students into teams.
- Prepare and cut out the number of **Underlying Problem Cards** needed.

Procedure

1 **Say:** *We have reviewed the requirements for a relevant and elaborate solution. This time we are going to concentrate on generating solutions to a given underlying problem.*

2 **Say:** *One tool for coming up with 16 solutions for your underlying problem is to use the **Categories List**. This can not only increase your flexibility score (the number of different categories), it can also increase your fluency score (the number of relevant solutions).*

3 Divide the students into teams as determined in Preparation.

4 Distribute **Using the Categories List**.

5 **Say:** *In a moment, I will distribute a different underlying problem to each team. You will write the number of the underlying problem on this handout. Then I will time you for 3 minutes. In those 3 minutes, brainstorm as many solutions as you can in as many categories as you can. You don't have to write in complete sentences. When time is called, your team will exchange your handout and underlying problem with another team's handout and underlying problem.*

Underlying Problems and Solutions



Procedure, continued

6	If needed, Say: <i>If you get the same underlying problem in the exchange, that's alright. Try to fill in the category boxes with other solutions.</i>
7	Say: <i>I will time you for 3 more minutes to see if you can add solutions in empty category boxes for the new underlying problem. We will do this again so that all of you see all the underlying problems. Don't forget to try to find some creative and futuristic solutions!</i>
8	Distribute one Underlying Problem Card to each team. Remind them to write the number of the underlying problem on the page. Give them a moment to read the underlying problem, then begin timing for brainstorming, continuing this process until all the underlying problems have been seen by each team.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 10

Writing

2, 4, 5, 10

Language & Vocabulary

1, 2, 3

Closure

1. Lead a discussion on how the **Categories List** helped trigger ideas for solutions.
2. Remind students to remember the **Categories List** during competition for both Step 1 and Step 3.
3. Collect the **Using the Categories List** handouts and the underlying problems so you can distribute them in a later lesson.

Extension

- Have students write relevant, elaborate solutions with a few of their brainstormed ideas.
- Allow them to share solutions with the class for discussion or exchange their work with another team for review.

Underlying Problem Cards

Cut the underlying problems into separate “cards.”

Because some companies practice surveillance capitalism without the consent of consumers, how might we increase consumer understanding of how they can protect their data so that companies cannot take unfair advantage of consumers?

Because surveillance technology such as facial recognition and data tracking often misidentifies people, especially those in marginalized groups, how might we improve surveillance identification measures so that fewer incorrect identifications occur?

Because there are few laws about the use of surveillance technology, in what ways might we improve regulation of the use of surveillance technology so that the technology is used ethically?

Because massive amounts of data collected by surveillance technology and surveillance capitalism are stored in a variety of places, how might we protect the data from hackers so that the collected data remains secure?

Name _____



Using the Categories List



Directions: Find as many solutions to the given underlying problem in as many categories as you can in the time allowed. You do **not** have to write in complete sentences.

Underlying Problem # _____

Arts & Aesthetics



Basic Needs



Business & Commerce



Communication



Culture & Religion



Defense



Economics



Education



Ethics & Morality



Name _____



Using the Categories List



Government & Politics



Law & Justice



Miscellaneous



Physical Health



Psychological Health



Recreation



Science



Social Relationships



Technology



Transportation



Targeted Criteria Are Key



Objectives

- Students will identify the components of a well-written criterion.
- Students will evaluate criteria to determine if they are generic or advanced.
- Students will compose correctly-written, applicable criteria.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 5, 7, 10

Writing

1, 2, 4, 5, 7, 9, 10

Language & Vocabulary

1, 2, 3

Materials

- **Are You on Target?**, 1 per student (page 53)
- **Are You on Target? – Key**, 1 for coach use (page 54)
- **Simulation Drone Activity**, 1 per student (page 55)
- **Exit Tickets**, 1 per student, half-sheet (page 56)

Preparation

- Cut out the **Exit Tickets**.

Procedure

1	<p>Say: After Step 3, comes Step 4 - Criteria. Who can provide the rules for a correctly-written criterion?</p> <ul style="list-style-type: none"> • measures only one dimension • contains a superlative adverb; has an -st word • indicates the desired direction • is recognizable as a question; begins with “Which solution will...”
2	<p>Say: After determining if a criterion is correctly written, evaluators judge whether or not the criterion is applicable to the underlying problem. An applicable criterion is useful for judging the solutions to the underlying problem. A criterion that is not applicable does not receive points. Who can explain the two types of criteria that receive points?</p> <ul style="list-style-type: none"> • Generic: Generic criteria are those that can apply to nearly any underlying problem or future scene. • Targeted: Targeted criteria apply specifically to the underlying problem. Targeted criteria are useful for determining which solutions best solve the underlying problem, as they will address significant aspects of the underlying problem and future scene. <ul style="list-style-type: none"> ◦ Remember that just adding stakeholders or repeating the words of the underlying problem in each criterion does not make it targeted.
3	<p>Ask: How can you get two targeted criteria as soon as you finalize your underlying problem?</p> <ul style="list-style-type: none"> • One from the key verb phrase and one from the purpose.
4	<p>Say: Let's do a quick check.</p>
5	<p>Distribute Are You on Target?</p>
6	<p>Review the directions and provide work time.</p>

Targeted Criteria Are Key

Procedure, continued

7	At the end of the work period, allow students to share answers. Refer to the Are You on Target? – Answer Key as necessary.
8	Say: <i>Now we are going to practice writing criteria, specifically targeted ones. From our Surveillance research, we know that drones equipped with facial recognition technology are increasingly used to monitor crowds and identify individuals, including potential criminals. Integrating aerial surveillance and biometric identification provides law enforcement agencies with a powerful tool to enhance public safety. The downside of using drones is that they can lead to misidentification errors and false matches, especially for people in marginalized groups.</i>
9	Distribute the Simulation Drone Activity .
10	Say: “Believe it or not, this paper is going to become your drone.”
11	Review the directions and the underlying problem.
12	Provide work time.
13	Say: <i>Now it is time for your paper to become a drone to scan our room. Crunch your paper into a ball. It is now a drone! Have fun tossing the ‘drones’ around the room for one to two minutes.</i>
14	At the end of this time, students should each have a drone. Make sure it is not their own. If it is, have them switch with another student.
15	Say: <i>You will now evaluate the criteria on the paper you have. First determine if it is correctly written. Then determine if it is applicable. If it is applicable, determine if it is generic or targeted. If it is not applicable, check that box.</i>
16	Provide work time. Circulate among the students in case they have questions.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 5, 7, 10

Writing

1, 2, 4, 5, 7, 9, 10

Language & Vocabulary

1, 2, 3

Closure

1. **Ask:** “Keeping the paper you evaluated for the moment, did you see any errors? How might those errors be fixed?”
2. Students should now exchange papers so they get back their original paper.
3. Provide time for students to review the evaluations and discuss questions with their evaluator.
4. Distribute the **Exit Tickets**. Remind students to hand them to you when they finish.
5. Note: There might be some insight on the **Exit Tickets** that you will want to share with students at the next meeting.



Are You on Target?



Directions

Evaluate each criterion this way:

1. Write an X if the criterion is not correctly written.
2. Write an A if it is applicable to the given underlying problem. (Even if it's not correctly written, it can still be judged for applicability.)
3. If the criterion is applicable, write a G if it is generic, or a T if it is targeted.

Underlying problem

Given that surveillance capitalism leads to the storage of massive amounts of personal data, increasing the risk of breaches, how might we reduce risks presented through social media so that individuals' sensitive information remains secure in 2035?

1. Which solution will best reduce the risks presented through social media?

2. Which is most cost-efficient for social media companies?

3. Which solution will be most accepted?

4. Which solution will best keep an individual's sensitive information secure?

5. Which solution educates kids about how to reduce risks to their personal information on social media?

6. Which solution will companies most disagree with about the new regulations?



1. Which solution will best reduce the risks presented through social media?

This criterion is targeted because it is based on the key verb phrase.

A, T

2. Which is most cost-efficient for social media companies?

This criterion is generic because stakeholders are added to a generic criterion.

A, G

3. Which solution will be most accepted?

This criterion is generic because the criterion can be linked to any topic or underlying problem.

A, G

4. Which solution will best keep an individual's sensitive information secure?

This criterion is targeted because it is based on the underlying problem purpose.

A, T

5. Which solution educates kids about how to reduce risks to their personal information on social media?

This criterion is not correctly written because there is no superlative. It is targeted because it is specific to this underlying problem.

X, T

6. Which solution will companies most disagree with about the new regulations?

This criterion is not correctly written and does not indicate a positive direction.

X



Simulation Drone Activity



Directions

Using the underlying problem below as a foundation, write three criteria in the space provided. Try to come up with 3 targeted criteria. Don't fill in the Evaluation section. That will come later!

Underlying problem

Because surveillance technology such as drones is often used to collect personal data without consent, in what ways might we better regulate their use so that individual privacy is protected in 2040 and beyond in the world?

1.

Evaluation

Correctly Written

☐

Yes

☐

No

Applicable

☐

Generic

☐

Targeted

☐

Not Applicable

2.

Evaluation

Correctly Written

☐

Yes

☐

No

Applicable

☐

Generic

☐

Targeted

☐

Not Applicable

3.

Evaluation

Correctly Written

☐

Yes

☐

No

Applicable

☐

Generic

☐

Targeted

☐

Not Applicable



Name _____



Exit Ticket



What is one thing you learned today working as an evaluator that will help you to advance when writing criteria?

Name _____



Exit Ticket



What is one thing you learned today working as an evaluator that will help you to advance when writing criteria?



Steps 4, 5, and 6



Objectives

- Students will develop applicable criteria for evaluating solutions to a given underlying problem.
- Students will apply criteria to a group of solutions in order to identify the best solution to a given underlying problem using an evaluation matrix.
- Students will review the process for writing an action plan.
- Students will develop an action plan based on an identified best solution.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 5, 7, 10

Writing

2, 4, 5, 7, 10

Language & Vocabulary

1, 2, 3

Materials

- Handouts and underlying problems from **Solving a Surveillance Issue – Using the Categories List**
- **Completing the Evaluation Grid**, 1 per team (page 59)
- **Tools for Writing an Action Plan**, 1 per student (page 60)
- **From Concept to Creation – Action Plan**, 1 per team (page 61)

Preparation

- Determine how to divide students into teams.
- Determine if you will allow students to choose which underlying problem and brainstormed solutions they will use or if you want to make assignments.
 - If you are giving students a choice, you may want to make several copies of each underlying problem and each completed handout from **Using the Categories List**.

Procedure

PART ONE

- Say:** *We have 3 steps left to practice in preparation for the Affiliate competition – Steps 4, 5, and 6. For this lesson, you are going to use an underlying problem and brainstormed solutions from the last lesson.*
- Divide the students into teams as determined in Preparation.
- Announce how they will receive the handouts and underlying problems from using the **Categories List**. If you are giving students a choice, you could read the underlying problems aloud and allow teams a few minutes to discuss which one they want to use.
- Distribute the handouts and underlying problems to the appropriate teams.
- Distribute **Completing the Evaluation Grid**. Review the directions.
- Provide work time.
- Have teams exchange papers. Tell them to check the work, looking for targeted criteria and a correctly completed evaluation grid. They should hand the paper back to the original team and discuss their conclusions.

Targeted Criteria Are Key



Procedure, continued

PART TWO

- 1 **Say:** *Once you have selected your best solution, it's time to work on development of your Action Plan. Your action plan is the culmination of the creative problem solving process. It is the final step and the last thing your evaluators will read. During competition, be sure to allow time to write a complete, detailed, and well-elaborated explanation of your action plan.*
- 2 Distribute **Tools for Writing an Action Plan**. Review the handout.
- 3 Distribute **From Concept to Creation – Action Plan**. Review the directions.
- 4 Provide work time.

Standards Addressed

Speaking & Listening

1, 2, 4, 6

Reading & Literacy

1, 2, 4, 5, 7, 10

Writing

2, 4, 5, 7, 10

Language & Vocabulary

1, 2, 3

Closure

1. Instruct teams to exchange their action plans and use **Tools for Writing an Action Plan** to check the work. After checking, they should return the paper and consult with the other team about what they found.



Completing the Evaluation Grid



Directions: Use the given underlying problem and brainstormed solutions to complete Step 4 and Step 5 of the Future Problem Solving process to successfully identify the best solution.

Choose five solutions from your brainstormed list. Write them briefly in the grid. Use your underlying problem and the solutions you chose to develop five criteria in the space provided. Complete the grid to find the Best Solution.

Step 4

- Write five criteria on the lines below. Try to find as many targeted ones as you can.

1	
2	
3	
4	
5	

Step 5

- Using criterion 1, rank the solution ideas in that column from 5 to 1.
- Five represents the solution idea that best matches that criterion; one represents the solution that least matches that criterion.
- Continue with each criterion on the grid.
- Add the rows across. The highest scoring solution is the best solution.

Solution	Criterion	Criterion	Criterion	Criterion	Criterion	Total
	1	2	3	4	5	



Tools for Writing an Action Plan



TOOL ONE

Discussion of criteria

- Using three or more of your criteria, explain why this solution scored higher than several other top-scoring solutions on those criteria.
- **Why** is this solution better on most of the criteria and not as good on the others? What makes this solution better than the other high-scoring solutions? Why is it the best one?

TOOL TWO

The foundation

- **Who** will enact the solution? **Who** will get the action plan started and carry it out?
- **What** is the solution? Provide an overview of **what** will be done to solve your underlying problem.
- **How** will the action plan be carried out? Add details.
- Explain **why** the action plan addresses your key verb phrase and supports the purpose of your underlying problem.
- **Add details** to your action plan as long as they blend well with your original best solution. This could include **when** and **where** the action plan will be carried out.

TOOL THREE

Adding new dimensions

- Consider obstacles and sources of resistance to implementing your action plan. How might you overcome those challenges?
- Describe how sources of assistance might be used to help your action plan be successful.
- Include a timeline for implementing your action plan.

TOOL FOUR

Positive outcomes

- Describe how your action plan will positively impact the underlying problem, the future scene (especially the future scene charge) and the topic.

Throughout the plan

- Emphasize how your action plan has a positive, productive impact on all stakeholders (how is it humane?).
- Infuse some creative and futuristic elements into the action plan. How will this plan provide something new and different for this future scene situation beyond the ordinary?
- Pull in your topic research, using concepts and vocabulary you have learned.



Name _____



From Concept to Creation – Action Plan



Step 6

- Write an action plan using the best solution you found in **Completing the Evaluation Grid**.
- Use **Tools for Writing an Action Plan** as a reference.

Discussion of criteria

Action plan





1 May 15, 2045

2 Dear Mike,

3 It's so unreal that I'm writing you a letter by hand. On paper. Can you
4 believe people used to do this all the time? After everything that's been
5 going on at school, maybe it's time to bring this old technology back. Ha ha.

6 I'm writing to you because I can't express what I want to tell you at school.
7 Not out loud, not even through messages on our phones or LearnLink
8 tablets. Honestly, I'm kind of scared that someone might still find this letter
9 and turn it in, but I'm willing to risk it.

10 Ever since Principal Finn told us we had to wear these EduGuard watches,
11 everything has been awful. At first, I thought it might be pretty cool. Other
12 schools implementing this new surveillance smartwatch technology saw an
13 immediate decrease in school violence. Not only do the watches track our
14 movements and locations, but they also interface with facial recognition
15 technology so any students who try anything bad can immediately be
16 caught.

17 But eventually, all this weird stuff started happening. First, Amanda got in
18 trouble for sending that text during lunch. She was jealous of Sarah for
19 getting tickets to the Neon Reverie concert in Cleveland and said she could
20 "just punch her in the face." A few minutes later, the school police had her in
21 handcuffs for threatening another student! She hasn't been at school since.

22 Then, Shayla read this article online about an incident at another school
23 using EduGuard where a Black student was accused of stealing augmented
24 reality glasses from the science lab. The facial recognition technology
25 misidentified him! Apparently, this happens a lot for minority students. I'm
26 Iranian, and I'm kind of scared to go to school now. I don't want that to
27 happen to me!

28 Not only that, but the whole school environment is super off. Nobody talks to
29 each other anymore including us. I never see you at lunch because you're
30 always holed up in the cafeteria with your LearnLink tablet, and I could really
31 use your help with math. Of course, with EduGuard installing that stupid
32 tracking app, we could get accused of cheating. See what I mean?

33 I totally get that schools need to be safer, but this seems a bit extreme!
34 There must be a way to use this technology without making life so tough for
35 students. Perhaps the Future Problem Solvers can brainstorm a solution for
36 the EduGuard to help us!

37 Talk soon (I hope!),
38 Yasmin

Parameters

Time:

Place:

Topic:

WARNING:

This is not the official future scene. DO NOT USE this future scene for your Affiliate Finals Problem Surveillance submission.



Step 1 - Identify Challenges



Directions

1. Carefully analyze the future scene and identify possible challenges.
2. Write four challenges.
3. Incorporate research and vocabulary.
4. Use the **Categories List** to help increase flexibility.

1.

2.

3.

4.





Step 2 - Write an Underlying Problem



Directions

1. The underlying problem provides the direction for the rest of your packet. Carefully read the highlighted paragraph. It is called the “charge” and provides direction for the focus of your underlying problem.
2. Write your underlying problem here with all four parts.





Step 3 - Produce Solution Ideas



Directions

1. Write four solutions. Your solutions must be relevant and elaborate.
 - a. Relevant: Your solution addresses the key verb phrase and supports the purpose.
 - b. Elaborate: Your solution is detailed and includes:
 - Who will create the solution?
 - How does the solution work?
 - Why does it solve your underlying problem?

1.

2.

3.

4.





Step 4 and Step 5 - Select and Apply Criteria



Directions

- 1. Generate five criteria to determine which solution idea best solves the underlying problem and addresses the future scene situation. Try to make as many of them targeted as possible.
- 2. Remember to follow all 4 guidelines for correctly written criteria.

Criteria

1.
2.
3.
4.
5.

Apply Criteria

Write the four solution ideas selected from Step 3. List them on the grid. Use each criterion to rank the solutions on a scale from 1 (poorest) to 8 (best).

Solution #	Solution Idea	Criterion	Criterion	Criterion	Criterion	Criterion	Total
		1	2	3	4	5	

Our Best Solution: _____

Step 6 - Launching Your Action Plan

Directions

1. Write the action plan for the best solution identified in Step 6.
2. Use **Tools for Writing an Action Plan** for reference as needed.

Discussion of criteria

Action plan



Step 6 - Launching Your Action Plan



Action plan, continued

Throughout your action plan, did you address the following?

	Is it clearly humane and positive?
	Have you applied research?
	Does it show creative strength?
	Does it demonstrate futuristic thinking?



Parameters

Time:

Place:

Topic:

Mary sat in the break room on the seventh floor of the OmniTech headquarters, drinking coffee and playing MergeFish 3000 on her PersonaPad. A message appeared on her screen: "Good afternoon, Mary! You seem stressed today. How about a gift set of lavender candles and bubble bath?"

Mary laughed. OmniTech's hottest technology, PersonaPredict, had become even more accurate. Through the biometric sensors in her device, the software detected her stress levels and tailored her purchase recommendations to her mood. This was sure to please the 5 million corporations paying OmniTech to run ads for their products.

Founded in 2040 with the debut of its virtual reality social network OmniSphere, OmniTech quickly became a leader in personalized online experiences. When linked with their PersonaPad, OmniSphere opened up an alternate reality of online experiences where users could connect with people across the globe and be whoever they wanted to be.

In the last ten years, PersonaPredict, a service providing ultra-personalized online advertisements, has become the main source of OmniTech's revenue. PersonaPredict extracts massive amounts of data from shoppers, including their marital status, employment, interests, health concerns, and emotions, to recommend products with precision.

Shoppers rave about the convenience of personalized shopping experiences and the service's uncanny ability to intuit exactly what they want. Companies using the service have enjoyed unprecedented profits, with entertainment, fashion, and food ranking as the top sectors of economic growth. While shoppers love the ease of finding the exact products they want, critics have noted that the average household debt has risen 15% in the past five years, with many blaming the irresistible allure of "just for you" recommendations.

Not everyone, however, is thrilled. Fees for using PersonaPredict are high, and economists are concerned about monopolies forming among corporations that can afford them. Many small businesses have also banded together to express concerns about being able to compete. This is especially true for family businesses run by minorities, as PersonaPredict tends to favor mainstream trends over niche products.

WARNING:

This is not the official future scene. DO NOT USE this future scene for your Affiliate Finals Problem Surveillance submission.

Practice Future Scene

Surveillance – Omniscient OmniTech (Topic Activity Unit)



40 Others are concerned about the security of their data. Although
41 OmniTech's CEO claims that data is stored on secure servers, the
42 recent hacking crisis at its primary competitor, YouTech, makes
43 many users reluctant to purchase a PersonaPad. There are also
44 concerns that personal data may be sold to other companies or
45 used for demographic research or political purposes.

46 As OmniTech's influence grows, so does PersonaPredict's
47 potential to influence society in a number of areas. As a tool for
48 advertising, it has powerful advantages for businesses, yet
49 numerous consequences abound if this power is left unchecked.
50 Use the 6-step Future Problem Solving process to identify an issue
51 of concern related to PersonaPredict and formulate an action plan
52 that balances privacy with security.

Parameters

Time:

Place:

Topic:

WARNING:

This is not the official future scene. DO NOT USE this future scene for your Affiliate Finals Problem Surveillance submission.



For this activity, choose an action plan that you and your team developed as part of this unit. When you prepare a presentation for your action plan, it should begin with presenting your underlying problem and a brief summary of the plan.

Dramatic skit

Act out a scene demonstrating your action plan, highlighting its implementation and impact on the underlying problem. (If you want to practice an action plan presentation for bowl competition, ask your coach for the guidelines.)

CHOICE BOARD

Multimedia slide show deck

Design a slide presentation that explains your action plan step by step, using visuals and data to show the timeline and impact.

Prototype and model

Build a physical or digital prototype representing the key aspects of your action plan.

YOUR OWN CREATIVE IDEA!**Brochure or advertisement**

Develop an ad campaign promoting your action plan, complete with persuasive text and visuals.

Illustrated storyboard or comic strip

Create a storyboard or comic strip narrating the problem, solution, and how your action plan will impact the underlying problem.

Video pitch

Record a 2-3 minute video pitch in which you present your action plan to stakeholders, emphasizing its impact on solving the underlying problem.

Your choice

Create a unique project idea to showcase your action plan. Before starting, share your concept with your coach for approval.

Visit the Future Problem Solving Resources Library to learn more about action plan presentations.

- [Answers to FAQs on action plan presentations](#)
- [12 Action plan presentation tips dos and don'ts](#)
- [How is the action plan presentation evaluated?](#)

resources.futureproblemsolving.org



Unlocking the Secrets of Affiliate Finals Success



Objectives

- Students will develop critical thinking and teamwork through decoding encrypted messages.
- Students will create an encrypted message for their team members related to success at the Affiliate Finals.

Standards Addressed

Speaking & Listening

1, 2, 6

Reading & Literacy

1, 4, 7, 10

Writing

4, 5, 10

Language & Vocabulary

1, 2, 3

Materials

- **Encryption Packet**, 1 per student, 2 pages (pages 73-74)
- **Extension Activity**, 1 per student (page 75)
- **Encryption Packet – Answer Key**, 1 for coach reference (page 76)

Preparation

- Create **Encryption Packets** or a Google Doc document of the packet and share it with students.
- Determine how to divide students into teams.

Procedure

1 **Say:** *Encryption is a way to conceal information by altering it so that it appears to be random data. Encryption is essential for security on the internet. Do you have what it takes to crack the encrypted code and unlock the secrets of success at the Affiliate Finals? In this lesson, your team will become master code breakers. You will need creativity, critical thinking, and teamwork to tackle each challenge.*

2 **Say:** *Here are some hints for the codes in this activity.*

- Word in the sentence are scrambled and the letters of each word are scrambled.
- The alphabet has been reversed so that A = Z and B = Y.
- Words are spelled backwards.
- Numbers correspond to letters of the alphabet.
- The alphabet has been arranged so that A is represented by a different letter, say M. That means B would be N, C would be O, and so on. When you have used Z, start again with A.

3 Divide students into teams as determined in Preparation.

4 Distribute the **Encryption Packet** and provide decoding time.

Closure

1. Share the decoded messages.
2. Discuss why the messages provide important tips for success at the Affiliate Finals. Are there any messages to which the team should pay special attention?
3. **Ask:** *Do you want to try this yourself?*
4. Distribute the **Extension Activity**. Review the directions.
5. Allow students to work individually or in different teams of their own choosing.
6. Provide work time for composing the message and writing it in code.
7. When students are finished, give them time to try to break each other's code and read the message.



Encryption Packet

Case One

An encrypted message about research

MZNZVMXC DN FZT OJ PIYZMNOVIYDIB OJKDX

VIY OCZ APOPMZ NXZIZ

Case Two

An encrypted message about writing challenges

HGIREV ULI XOZIRGB ZMW YLNKOVGVMVHH

Case Three

An encrypted message about writing an underlying problem

(add commas where appropriate!)

scene time phrase key and equals and topic stem parameters purpose completeness future
phrase and place condition verb of





Encryption Packet

Case Four

An encrypted message about solution writing

1 14 5 12 1 2 15 18 1 20 5 19 15 12 21 20 9 15 14

20 3 12 12 19 23 8 15 23 8 1 20 8 15 23

1 14 4 23 8 25

Case Five

An encrypted message about criteria writing

TWIER GADETTTER ARCIETRI

Case Six

An encrypted message about writing an action plan

evaS emit ot ylluf poleved

ruoy noitca nalp



Name _____



Extension Activity

Directions: Develop a special message for your team's success at your Affiliate Finals using your own code. When you have written the message in code, write it again on a separate piece of paper so that others can try to break your code and read your message!

Case Seven

An encrypted message for your team



Encryption Packet

Case One - An encrypted message about research

Research is the key to understanding the topic and the future scene.

The alphabet begins with the letter F. F = A, G = B, H = C, I = D... etc. When you run out of letters, continue with the remaining letters at the beginning of the alphabet.

Case Two - An encrypted message about writing challenges

Strive for clarity and completeness.

The letters of the alphabet are reversed: A=Z, B=Y, C=X, D=W... etc.

Case Three - An encrypted message about writing an underlying problem

Completeness equals condition phrase, stem and key verb phrase, purpose, and future scene parameters of time, place, and topic.

Words in the sentence are scrambled.

Case Four - An encrypted message about solution writing

An elaborate solution tells who, what, how, and why.

Numbers correspond to the letters of the alphabet.

Case Five - An encrypted message about criteria writing

Write targeted criteria.

The letters of each word are scrambled.

Case Six - An encrypted message about writing an action plan

Save time to fully develop your action plan.

The words are spelled backwards.



Additional curricular resources

We hope you find this edition of our activity unit series to be a valuable resource as your students gather knowledge about Future Problem Solving topics of study.

Surveillance Research Unit

Our research unit on this topic contains a wealth of curricular resources for use with students in a variety of settings, including out-of-school time. The topic research overview identifies major themes and concepts while the resources section includes vocabulary, discussion topics, learning prompts, and assessments. Also, our curated list of suggested readings and digital resources for the topic contains helpful summaries.

Global Issues Champions Series

This series showcases student written work for the 2024 Global Issues world champion team and individual competitors by division. Their full evaluations are included. To use this publication as a coaching tool, first review the Air Quality future scene with your students. Then ask students to complete a booklet using the future scene. You can do this as a mock competition or step by step as practice. For students looking to deepen their understanding of evaluations, we recommend that you give each team a copy of the student work, step by step. Ask students to identify strengths and weaknesses in the sample work based on their understanding of the scoring rubric. Review the evaluation concepts identified in each step and look at the scores and feedback from evaluators together.

Education Standards

Our Future Problem Solving process fulfills a wide variety of education standards. We take connecting with these standards into account when developing our program materials. Teachers can easily tailor Future Problem Solving content to meet their specific education system and local requirements as needed.

How our topics are selected

Our topics represent important challenges from business, civics, society, science, and technology and serve as the thematic basis for given problem solving situations. Each school year, students get 3-5 opportunities to solve important near-future global issues based on their progress in local and regional competitions. To be considered, a topic must be broad enough to appeal to participants living around the globe, offer a range of themes and issues to explore, and be considerate of a variety of views. Lastly, of course, every topic must be accessible for all, from ages 8 to adult.

We welcome submissions of topic ideas from anyone year round. Our topics committee reviews, refines, and categorizes submissions into our diverse strands. Then options are narrowed down and screened by our regional affiliate leaders. They pre-select top candidates for each of the category strands to present to our entire global community for a vote. The community's input, including students, heavily influences the final selection. We announce topics for the upcoming competition season March 1.

About Future Problem Solving

Future Problem Solving proudly celebrates over 50 years of placing more than a million young people at the core of a dynamic, purposeful learning experience. Each year K-12 students around the world participate in a variety of challenges designed to empower curious youth to become changemakers. Problem solvers learn how to think, not what to think, and gain skills they need to succeed in work and life. Our programs help young people develop their own voices and the confidence to use them.

To learn more about Future Problem Solving, to submit a topic idea, or contact us, visit fpspi.org.