Federal Aviation Administration

Aviation, Animation & ELA

with FAA's Aviation Career Video Series

Teacher Guide for Grades: 6-8

Lessons 1 through 5

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Teacher Guide Introduction

Welcome to Aviation, Animation & ELA *with FAA's Aviation Career Video Series* Teacher Guide – an exciting educational resource designed to introduce students in grades 6–8 to the dynamic world of STEM careers within the Federal Aviation Administration (FAA). This teacher guide accompanies videos from the Junior AOVers series on FAA's Youtube channel. The series highlights the work of Air Traffic Safety Inspectors within the Air Traffic Safety Oversight Service (AOV).

Through engaging video content, students will gain a deeper understanding of how professionals in AOV ensure the safety and efficiency of the National Airspace System. Each video is a micro-lesson on specific topics that explain how AOV conducts safety oversight of the National Airspace System. This guide extends and enhances the video topics through activities aligned with Career and College Readiness (CCR) and English Language Arts (ELA) Standards. At the end of each video students receive a Jr. AOVer digital badge. The videos and activities support academic skill development and inspire students to explore future pathways in science, technology, engineering, and math.

This guide follows the WIPPEA lesson structure (Warm-up, Introduction, Presentation, Practice, Application), providing a complete instructional strategy to help students:

- Build awareness of aviation-related STEM careers,
- Analyze multimedia content for meaning and structure,
- Connect classroom learning with real-world applications.

Let's take flight into the world of aviation safety—and open your students' eyes to the STEM careers shaping the skies.

Video Series Title: Virtual Field Trips to the Air Traffic Safety Oversight Service

How to Use This Guide

Address CCR and ELA Standards While Building STEM Career Awareness

Purpose:

This guide helps you incorporate aviation content into your classroom through engaging lessons aligned with CCR and ELA standards. By using the animated video series and related activities, you can support your students' reading, listening, and critical thinking skills while sparking interest in real-world STEM opportunities.

Overview of the Approach:

- **Engage Students with Multiple Media**
  The lesson uses an animated video about careers in the Air Traffic Safety Oversight Service. Students interact with visual, auditory, and written information, which deepens their understanding and meets CCR standards focused on interpreting and evaluating diverse types of media.

- **Step-by-Step Skill Building**
  The activities are influenced by Bloom's Taxonomy. They are designed to gradually build students' skills: starting with identifying key ideas and summarizing, moving on to analyzing how visuals support narration, then integrating information from different formats, and finally applying their knowledge through creative writing.

- **Highlight STEM Career Awareness**
  While practicing literacy skills, students also learn about exciting STEM careers in the National Airspace System (NAS), making the content relevant and motivating.

Tips for Using the Guide in Your Classroom:

- **Make the Video the Lesson's Anchor**
  Use the animated video as a central tool to introduce and explore STEM careers, helping students visualize these professions.

- **Connect Activities to Standards**
  Each activity is linked to specific CCR and ELA standards to ensure students develop clear, measurable skills in reading, listening, and writing.

- **Encourage Discussion**
  Use guided conversations to deepen students' understanding of STEM careers and connect the content to their future possibilities.

- **Adjust to Your Students' Needs**
  Tailor the timing and complexity of lessons based on your students' grade level and reading abilities.

Video Series: Lesson and Activity Summary Chart

Video Title	Learning Outcomes	Activity Title	Activity Objective	Associated Standards
Air Traffic Safety Oversight Service (AOV): STEM Careers in the National Airspace System	1. **Identify** key roles of Air Traffic Controllers and Systems Specialists. 2. **Analyze** how visuals enhance narration. 3. **Collaborate** to summarize and explain video segments. 4. **Create** a script, storyboard, or presentation about a STEM aviation career.	**Activity 1:** Segment Summarization & Mapping	Identify main ideas and sequence events.	-CCR Anchor 1 - CCSS.ELA-LITERACY.RI.6.2 / 7.2 / 8.2
		Activity 2: Visual and Verbal Connection	Analyze how visuals support narration.	-CCR Anchor 7 - CCSS.ELA-LITERACY.RI.6.7 / 7.7 / 8.7
		Activity 3: Video Segment Analysis Worksheet	Analyze how each part fits the overall message.	-CCR Anchors 1 & 7 - CCSS.ELA-LITERACY.RI.6.1 / 7.1 / 8.1 - RI.6.7 / 7.7 / 8.7
		Activity 4: STEM Career Video Script or Storyboard	Apply understanding creatively through scripting or storyboarding.	-CCR Anchor 4 - CCSS.ELA-LITERACY.W.6.3 / 7.3 / 8.3 - CCSS.ELA-LITERACY.SL.6.4 / 7.4 / 8.4
Oversight: Think Like a Safety Inspector	1. **Recall** roles and safety steps of Air Traffic Safety Inspectors. 2. **Analyze** how inspectors collect data and make safety decisions. 3. **Collaborate to summarize** key ideas with evidence.	**Activity 1:** Identifying Career Paths in Aviation	Identify and summarize different STEM careers in aviation.	-CCR Anchor Standard 1 - RI.6-8.3

Video Title	Learning Outcomes	Activity Title	Activity Objective	Associated Standards
	4. **Write** an evidence-based paragraph on inspectors' role in aviation safety.			
		Activity 2: Analyzing Safety Data and Critical Thinking	Analyze parachute incident data and inspector decision-making.	-CCR Anchor Standard 1 - RI.6-8.3
		Activity 3: Mapping the National Airspace System (NAS)	Create a simplified aeronautical chart including parachute operations.	-CCR Anchor Standard 7 - RI.6-8.7
		Activity 4: Create Your Own Safety Oversight Plan	Design a safety oversight plan for a new aviation issue.	-CCR Anchor Standard 8 - W.6-8.2
Oversight: Rules in the National Airspace System	1. **Discuss** the importance of rules in daily life and NAS. 2. **Identify** central idea and key details on NAS safety rules. 3. **Write** an evidence-based summary on role of rules. 4. **Collaborate** to create a visual linking NAS activities to rules.	**Activity 1:** Understanding the Importance of Rules	Identify reasons why rules are necessary in the NAS using evidence from the video.	-CCR Anchor Standard 1 - RI.6-8.2
		Activity 2: Visualizing NAS Activities	Analyze NAS activities and explain the need for rules for each.	-CCR Anchor Standard 7 - RI.6-8.7

Video Title	Learning Outcomes	Activity Title	Activity Objective	Associated Standards
		Activity 3: Summarizing the Video's Main Idea	Write a summary identifying the central idea and supporting details of the video.	-CCR Anchor Standard 1 - RI.6-8.2
		Activity 4: Designing Rules for a New NAS Activity	Create safety rules for a hypothetical NAS activity.	- CCR Anchor Standard 8 - W.6-8.2
Oversight: Safety Risk Management	1. **Explain** risk management with real-life examples. 2. **Outline** the five steps of the D.I.A.A.T. model. 3. **Apply** the D.I.A.A.T. steps in a graphic organizer. 4. **Develop and present** a risk management plan using D.I.A.A.T.	**Activity 1:** Breaking Down the D.I.A.A.T. Model	Identify and summarize the five steps of the FAA's D.I.A.A.T. Safety Risk Management model.	-CCR Anchor Standard 1 - RI.6-8.3
		Activity 2: Hazard Hunt — Identifying Risks	Identify hazards in a scenario using the "Identify Hazards" step of the model.	-CCR Anchor Standard 8 - RI.6-8.3
		Activity 3: Risk Analysis and Assessment Chart	Analyze and assess potential risks based on severity and likelihood.	-CCR Anchor Standard 7 - RI.6-8.3
		Activity 4: Creating a Risk	Create and communicate a plan to reduce	-CCR Anchor Standard 8 - W.6-8.2

Video Title	Learning Outcomes	Activity Title	Activity Objective	Associated Standards
		Treatment Plan	or eliminate risks using the D.I.A.A.T. model.	
AOV Credentialing Program	1. **Define** credentialing and explain its importance in public safety jobs. 2. **Identify** roles and responsibilities of FAA AOV credential holders. 3. **Organize** credentialing roles into a structured chart. 4. **Research and present** credentialing in other professions.	**Activity 1:** Understanding Job Roles	Identify and summarize duties of AOV credential holders.	-CCR Anchor Standard 1 - RI.6-8.2
		Activity 2: Vocabulary Detective — What is Credentialing?	Define and explain "credentialing" using video context.	-CCR Anchor Standard 4 - RI.6-8.4
		Activity 3: Analyze the Credentialing Program's Importance	Analyze how credentialing maintains NAS safety.	-CCR Anchor Standard 8 - RI.6-8.3
		Activity 4: Create Your Own Safety Role	Design a new NAS safety role and explain its duties.	-CCR Anchor Standard 7 - W.6-8.2

Video Engagement Strategy *(Grades 6–8)*

1. Video Title: Air Traffic Safety Oversight Service (AOV) STEM Careers in the National Airspace System.

Learning Outcome:
By the end of the lesson, students will be able to:

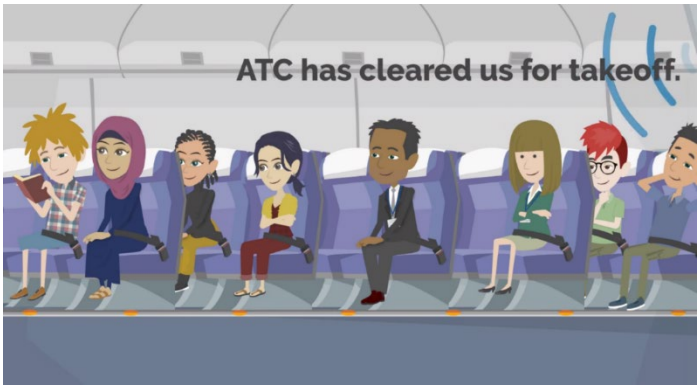
1. **Identify** the main ideas and key roles of Air Traffic Controllers and Airway Transportation Systems Specialists from segmented video content.
2. **Analyze** how visuals in the video support and enhance understanding of the narrated information about aviation careers.
3. **Collaborate** with peers to summarize video segments and explain how each part contributes to the overall message about aviation safety.
4. **Create** a short video script, storyboard, or presentation that accurately conveys information about a STEM career in aviation using evidence from the lesson.

Lesson Plan: STEM Career in the National Airspace System (NAS)

Duration: 45-60 minutes

Standards:
Career and College Readiness Standard (CCR):
CCRS Anchor Standard 2 – Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

Reading Standard (ELA):
CCSS.ELA-LITERACY.RI.6.3 / 7.3 / 8.3 – Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.



Video Link:
https://www.youtube.com/watch?v=05PBNgYc0Q8&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=1

Vocabulary

Video Title: Air Traffic Safety Oversight Service (AOV) STEM Careers in the National Airspace System.

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
equipment	Tools or machines used for a job	aviation	The science and practice of flying airplanes	Federal Aviation Administration (FAA)	U.S. government agency that controls air travel
technician	A worker who fixes or takes care of machines	procedures	Steps or rules to do something correctly	Air Traffic Safety Oversight Service (AOV)	Group that watches over air traffic safety
safely	Without danger or harm	organization (ATO)	A group of people working together	Air Traffic Controllers (ATC)	People who help pilots fly safely
pilot	A person who flies an airplane	monitor	To watch or check carefully	Airway Transportation Systems Specialists (ATSS)	Experts who fix and keep air traffic machines working
flight	The act of flying	protocols	Official ways to do things	oversight	Watching and checking to keep things safe
power	Energy that makes machines work	analyze	To look at something carefully to understand it	National Airspace System (NAS)	The sky area controlled for safe flying
repair	To fix something broken	evaluate	To judge or decide how good something is	aeronautical charts	Special maps for airplanes
monitor	To watch or check	critical(ly)	Thinking carefully and deeply	Safety Risk Management	Planning to avoid dangers
taxi	When a plane moves slowly on the ground	incidents	Unplanned events or accidents	D.I.A.A.T. model	A method to manage safety risks
runway	The strip where planes take off or land	corrective action	Fixes made to solve problems	credentialing	Official proof of skill or ability

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
landing	When a plane comes down to the ground	report	A written or spoken description of something	proficiency	Skill or ability in doing something well
safe	Free from harm or danger	data	Information or facts	designated examiner	A person who checks if others meet required skills
rules	Instructions for how to behave or do things	responsibility	Being in charge or having a job to do	practical examinations	Tests that show how well someone can do a job
danger	Something that can cause harm	severity	How serious or bad something is	proficiency manager	A person who makes sure others keep their skills
crosswalk	A place for people to safely walk across a street	likelihood	The chance that something will happen	direct safety-related services	Jobs directly related to keeping people safe
traffic lights	Colored lights that control cars and people	hazards	Things that can cause danger	aviation professionals	People who work with flying or airplanes
pedestrian	A person walking	eliminate	To get rid of something	security	Protection from danger or harm
procedures	Steps to follow to complete a task	barrier	Something that blocks or stops movement	maintain	To keep something in good working condition

Grade Levels: 6th, 7th, and 8th

W – Warm-up

- Start with a question: "What jobs help airplanes take off, fly safely, and land?"
- Discuss briefly and list students' ideas.
- Show a still image or short teaser clip from the video to spark curiosity about aviation careers.

I – Introduction

- Explain that today, students will watch a video about two STEM careers in aviation: Air Traffic Controllers and Airway Transportation Systems Specialists.
- Tell students they will focus on how different parts of the video help explain the roles and importance of these careers, and how the information connects.

P – Presentation

- Play the video segment (from the narration text video) in manageable parts (2-3 minutes each).
- After each segment, pause and model how to:
    - Identify the main idea of the segment (e.g., what job is being described, what task is shown).
    - Explain how this segment fits into the overall message about aviation safety careers.
    - Observe and discuss visuals (e.g., control tower, runway lights, technicians working) and how they support the narration.
- Highlight vocabulary or technical terms introduced in the video and discuss their meaning.

P – Practice

- Divide students into pairs or small groups.
- Assign each group a specific segment or scene from the video (or provide timestamps).
- Ask groups to:
    - Summarize their segment's main points.
    - Explain how their segment contributes to understanding aviation careers.
    - Describe how the visuals in their segment help explain the information.
- Groups share their analysis with the class to reconstruct the full video's message collaboratively.

E – Evaluation

- Have students complete a quick written or oral quiz:
    1. What does an Air Traffic Controller do?
    2. How do Airway Transportation Systems Specialists help keep air travel safe?
    3. Pick one segment of the video and explain how it fits into the whole story.
    4. Describe one visual from the video that helped you understand a job or process.

A – Application

- Students create a short video script or storyboard illustrating one STEM career in aviation, using information learned from the video.
- Alternatively, students can research a related aviation career and present findings in a short video or slideshow, including visuals.

Video-Based Activities for STEM Careers in Aviation

Activity 1: Segment Summarization & Mapping

Objective: Identify main ideas and sequence events.

Standards:
Career and College Readiness (CCR) Standard:

- **CCR Anchor 1:** Read closely to determine what the text (video narration) says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Reading Standard (CCSS.ELA-LITERACY.RI.6.2 / 7.2 / 8.2):

- Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

Materials:

- Video access (projector, computer, or tablets)
- Large chart paper or whiteboard
- Markers or sticky notes
- Student notebooks or paper for summaries

Instructions:

- After watching each video segment, students write 2-3 sentences summarizing the key points.
- On a large classroom chart or digital board, students place their summaries in the order they appear in the video, creating a visual timeline or "story map."
- Discuss how each segment builds on the previous one and contributes to understanding aviation careers.

Assessment:

- Students write a clear, accurate summary of their assigned video segment.
- Students correctly place summaries in logical sequence on the timeline/chart.

Rubric (9 pts total): Segment Summarization & Mapping (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Summary Clarity & Accuracy *(Main idea identification)*	Writes a **clear, concise, and accurate summary** of the video segment, free of personal opinion.	Summary is mostly accurate and clear with **minor details missing** or slight phrasing issues.	Summary is **partially accurate** or includes irrelevant or unclear information.	Summary is **incomplete, inaccurate**, or overly vague; may include opinion.	**Understanding, Summarizing**	**-CCR.R.1** – Cite textual evidence **-RI.6–8.2** – Determine and summarize central idea
Sequence Placement *(Event mapping and logical order)*	Correctly places the summary in the **logical sequence** of the video's progression; clearly contributes to understanding the career flow.	Placement is mostly correct with **minor order confusion**.	Placement shows **some understanding**, but is **out of sequence** or unclear.	Summary is placed **incorrectly** and disrupts overall understanding of the timeline.	**Applying, Analyzing**	**-RI.6–8.2** – Identify structure and development of ideas **-CCR.R.1** – Support understanding with evidence
Contribution to Class Map/Discussion *(Collaborative thinking)*	Actively contributes to building the class map and **engages in discussion** about how segments connect.	Participates in map activity and provides **some input** during discussion.	Offers **limited contribution** or passive participation.	Rarely contributes to group work or discussion.	**Applying, Creating**	**-SL.6–8.1** – Participate in collaborative discussions**CC-R.SL.1** – Engage effectively in a range of conversations

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Use of Evidence from Video *(Support for summary)*	Summary includes **key details from narration and visuals**, supporting central ideas with clear evidence.	Uses **some relevant details** from the video to support the summary.	Evidence is **vague, general, or inconsistently connected** to the summary.	Summary includes **little or no evidence** from the video.	**Evaluating, Understanding**	**-CCR.R.1** – Cite evidence from multimedia sources **-RI.6–8.1** – Support ideas with specific textual/video details

Summary of Learning Goals Assessed:

- Develops **critical summarizing skills** using multimedia.
- Encourages **logical sequencing** and collaborative synthesis.
- Reinforces citing and explaining **evidence from video content** (not just text).

Activity 2: Visual and Verbal Connection

Objective: Analyze how visuals support the narration.

Standards:
Career and College Readiness (CCR) Standard:

- **CCR Anchor 7:** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

Reading Standard (CCSS.ELA-LITERACY.RI.6.7 / 7.7 / 8.7):

- Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject.

Materials:

- Screenshots or printed still images
- Student notebooks or paper
- Pens/pencils

Instructions:

- Provide students with screenshots or still images from the video (e.g., control tower, runway lights, technicians fixing equipment).
- In pairs, students describe what they see and explain how the image relates to what is said in the video segment.
- Share answers aloud and discuss how visuals help clarify complex information or technical terms.

Assessment:

- Students provide descriptions of visuals.
- Students explain how images support understanding the narration.

Rubric (9 pts total): Communication & Visual Presentation (Grades 6-8)

Criteria	3 – Excellent	2 – Good	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Visual Description *(Interpretation of visual/multimedia)*	Provides a vivid, accurate, and detailed interpretation of visual content; demonstrates a deep understanding of how it contributes to meaning.	Provides some relevant interpretation, but lacks detail or clarity.	Interpretation is minimal, unclear, or inaccurate.	**Remembering, Understanding, Evaluating**	**-CCR.7** – Integrate/evaluate visual content **-RL/RI.6–8.7** – Analyze multimedia representation
Connection to Narration *(Integration of ideas)*	Thoughtfully explains how visuals enhance or support the narrative/message; uses specific examples to draw meaningful connections.	Provides a basic explanation of the visual's relevance to the narration with limited examples.	Makes no connection, or connection is inaccurate or unsupported.	**Analyzing, Evaluating**	**CCR.1** – Cite evidence **-CCR.7** – Integrate formats **-SL.6–8.2** – Interpret info from diverse media
Communication (Writing/Speaking) *(Clarity, structure, and audience awareness)*	Communicates ideas with clarity and precision; uses effective structure, vocabulary, and tone for purpose and audience.	Communicates with some clarity; minor issues in structure or language.	Communication is unclear or lacks coherence; inappropriate tone or word choice.	**Applying, Creating**	**CCR.4** – Clear and coherent writing **-SL.6–8.4** – Present claims clearly **-W.6–8.4** – Writing appropriate to task/purpose

Summary of Learning Goals Assessed:

- **Reading standards (R.1, R.7)** are addressed through analyzing visuals and connecting to text.
- **Speaking & Listening standards (SL.2, SL.4)** are assessed through oral presentation or explanation.
- **Writing standards (W.4)** are applied in the structure and clarity of written communication.
- **CCR Anchor Standards** guide the critical thinking, analysis, and presentation aspects of this rubric.
- **Visual Description**: Students must *evaluate* visual elements and how they represent or enhance ideas.
- **Connection to Narration**: Encourages *integration of content* from visual and textual/multimedia sources.
- **All Criteria Together**: Build toward students being able to analyze how meaning is constructed through **multiple formats** — core to CCR.7.

- **Visual Description**: Students must *evaluate* visual elements and how they represent or enhance ideas.
- **Connection to Narration**: Encourages *integration of content* from visual and textual/multimedia sources.
- **All Criteria Together**: Build toward students being able to analyze how meaning is constructed through **multiple formats** — core to CCR.7.

Activity 3: Video Segment Analysis Worksheet

Objective: Practice analyzing how each part fits the overall message.

Standards:
Career and College Readiness (CCR) Standard:

- **CCR Anchor 1 & 7:** Read closely to analyze text and integrate multimedia information for a comprehensive understanding.

Reading Standard (CCSS.ELA-LITERACY.RI.6.1 / 7.1 / 8.1 and RI.6.7 / 7.7 / 8.7):

- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Integrate multimedia information presented in different formats to understand the topic.

Materials:

- Printed or digital worksheets
- Pens/pencils
- Video with segment timestamps

Worksheet Prompts:

1. What career or task is highlighted in your assigned video segment?
2. What is the main purpose of this segment (inform, explain, show a problem/solution)?
3. How do the images and sounds in this segment support the narration?
4. How does this segment connect to what you saw before and what might come next?
5. Write down two new vocabulary words from the segment and define them.

Instructions:

- Students complete the worksheet individually or in pairs for their segment.
- Share responses in small groups or with the whole class.

Assessment:

- Completes worksheet with thoughtful, accurate answers.
- Uses evidence from video to support responses.

Rubric (4 pts total): Video Segment Analysis Worksheet (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Segment Understanding *(Question 1 & 2)*	Clearly and accurately **identifies the career/task and main purpose** of the segment; includes insight into function within the larger video.	Identifies career/task and purpose with **minor gaps** or limited elaboration.	Basic identification of task and purpose; may be **incomplete or unclear**.	Misunderstands or omits task and/or purpose.	**Understanding, Analyzing**	**CCR.R.1** – Read closely for understanding **-RI.6–8.1** – Cite evidence to support analysis
Multimedia Integration *(Question 3)*	**Explains how visuals and sound** support the narration with **specific, relevant examples**.	Explanation is mostly clear with **some reference** to visuals and sound.	Explanation is **limited** or examples are vague.	**Little or no connection** between media and narration.	**Analyzing, Evaluating**	**CCR.R.7** – Integrate/ evaluate media **-RI.6–8.7** – Analyze multimedia presentation
Contextual Connection *(Question 4)*	**Thoughtfully connects** segment to earlier and future parts of the video, showing understanding of structure.	Makes a **basic connection** to the video's overall message or sequence.	Connection is **vague or underdeveloped**.	**No clear connection** made to other parts of the video.	**Analyzing, Understanding**	**CCR.R.1 & R.7** – Analyze structure and integrate formats **-RI.6–8.1** – Support inferences with evidence
Use of Evidence *(Across responses)*	**Cites specific, relevant examples** from the video that directly support answers.	**Some evidence cited**, though not always fully explained or relevant.	Minimal or **general evidence**; lacks direct support.	**No evidence** used or unrelated examples.	**Evaluating, Applying**	**CCR.R.1** – Cite evidence**RI.6–8.1** – Support inferences and claims

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Vocabulary Understanding *(Question 5)*	**Defines two vocabulary words** correctly and in context; shows clear understanding.	Defines **two words** with **minor errors** or unclear context.	Defines **one word correctly**; the second may be vague or incorrect.	**No vocabulary defined** or definitions are incorrect.	**Remembering, Understanding**	**CCR.L.4** – Determine meaning of unknown terms**L.6–8.4 & L.6–8.6** – Acquire/use academic vocabulary

Summary of Learning Goals Assessed:

- Demonstrates **close viewing and analysis** of multimedia content.
- Integrates **textual and visual evidence** to support understanding.
- Builds skills in **contextual analysis**, **evidence-based reasoning**, and **academic vocabulary**.

Activity 4: STEM Career Video Script or Storyboard

Objective: Apply understanding creatively.

Standards:
Career and College Readiness (CCR) Standard:

- **CCR Anchor 4:** Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings.

Writing Standard (CCSS.ELA-LITERACY.W.6.3 / 7.3 / 8.3):

- Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

Speaking and Listening Standard (CCSS.ELA-LITERACY.SL.6.4 / 7.4 / 8.4):

- Present claims and findings clearly, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes.

Materials:

- Paper or digital devices
- Colored pencils or markers (optional)
- Reference video/notes

Instructions:

- Students write a short script or draw a storyboard about one aviation STEM career featured in the video, explaining the role and its importance.
- Encourage inclusion of visual details and clear explanations modeled from the video.
- Students can present their scripts/storyboards in class or submit them digitally.

Assessment:

- Script/storyboard accurately describes career and tasks.
- Includes clear visuals or descriptions that support explanation.
- Presentation (if applicable) is clear and engaging.

Rubric (16 pts total): STEM Career Video Script or Storyboard (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Career Accuracy & Clarity *(Career description and role)*	Clearly and accurately describes the **STEM career and its responsibilities**, with strong relevance to the video.	Describes the career and its role with **minor gaps** in detail or clarity.	Provides a **partial or unclear** description of the career or its tasks.	Career is **misunderstood or not clearly presented**.	**Understanding, Analyzing**	**CCR.R.4** – Interpret technical and domain-specific language **-W.6–8.3.A** – Establish context and narrator/characters
Narrative or Visual Structure *(Script or storyboard organization)*	Script or storyboard has a **clear sequence** of events or ideas with **logical structure** and strong flow.	Organization is mostly clear but **may lack transitions** or flow in some parts.	Narrative or visuals show **basic structure** but with unclear or weak progression.	Lacks structure or sequencing; **disorganized**.	**Applying, Creating**	**W.6–8.3.C/D** – Use sequencing and transition words effectively **-SL.6–8.4** – Sequence ideas logically
Use of Descriptive Details *(Support and elaboration)*	Uses **specific, relevant details** (visual or written) to explain the career and engage the audience.	Includes some relevant details but **may lack depth** or development.	Limited use of details; some **general or unrelated** information.	Few or no details used; explanations are **vague or missing**.	**Analyzing, Creating**	**W.6–8.3.B** – Use sensory and descriptive language **-SL.6–8.4** – Use pertinent details to support ideas
Vocabulary & Word Choice *(Technical language and connotation)*	Uses **precise, technical vocabulary** related to the career, with clear definitions or context.	Includes some relevant vocabulary with **minor errors** or unclear usage.	Uses **basic vocabulary** or misuses technical terms.	**Incorrect or absent vocabulary** related to topic.	**Understanding, Applying**	**CCR.R.4** – Interpret words and phrases in context **-SL.6–8.6** – Use academic and domain-specific vocabulary
Presentation or Submission	Presentation is **clear, expressive, and**	Mostly clear presentation or submission	Presentation or submission	Submission is **unclear, rushed, or**	**Applying, Creating**	**SL.6–8.4** – Present ideas clearly with appropriate detail

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Quality *(Delivery or completion)*	**engaging** (if applicable); written/digital submission is complete and well-formatted.	with **minor issues** in clarity or completion.	is **partially complete** or lacks clarity.	**missing elements**.		**-W.6–8.4** – Produce coherent writing appropriate to task

Summary of Learning Goals Assessed:

- Demonstrates **creative application** of content knowledge.
- Communicates understanding using **narrative or visual storytelling**.
- Integrates **technical vocabulary** in context.
- Emphasizes **presentation clarity** and audience awareness.

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2. **Video Title:** Oversight: Think Like a Safety Inspector

Learning Outcome:
By the end of the lesson, students will be able to:

1. **Recall** key roles and safety steps Air Traffic Safety Inspectors perform in the National Airspace System.
2. **Analyze** a specific video segment or transcript passage to identify how inspectors collect data and make safety decisions.
3. **Collaborate** in pairs or groups to summarize a key idea or event and cite evidence from the video or transcript.
4. **Write** a short, evidence-based paragraph explaining how Air Traffic Safety Inspectors help keep the National Airspace System safe.

Lesson Plan: Thinking Like an Air Traffic Safety Inspector

Duration: 45-60 minutes

Standards:

- **Career and College Readiness (CCR) Standard:**
  CCR Anchor Standard 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.

- **Reading Standard (ELA 6-8):**
  RI.6-8.3 — Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes)

Video link:
https://www.youtube.com/watch?v=nxpmSrobqO0&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=2

Vocabulary

Video Title: Oversight: Think Like a Safety Inspector

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
report	A written or spoken description of something	analyze	To look at something carefully to understand it	analyze (critical thinking)	To study something deeply to find important details
parachute	A device that helps people float safely to the ground	incidents	Accidents or unexpected problems	corrective action	Steps taken to fix a problem
engineer	A person who designs or builds machines or structures	evaluate	To decide how good or useful something is	oversight	Watching and checking to make sure rules are followed
carrier	A company that provides transportation (like an airline)	protocols	Official ways to do things	aeronautical charts	Special maps for airplanes
team	A group working together	data	Information or facts	evaluate (in detail)	To carefully judge or study something

Grade Levels: 6th, 7th, and 8th

W- Warm-Up

Begin by asking students:

- "Have you ever thought about how airplanes stay safe in the sky?"
- Show a quick 1-2 minute clip or a brief summary of the FAA Air Traffic Safety Inspector video to spark interest.
- Ask students what jobs they think might exist to keep planes and passengers safe.

I - Introduction

- Students watch the full FAA AOV video or read the transcript provided.
- Prompt students to note down key roles and steps inspectors take to ensure safety (collecting data, reviewing rules, collaborating with other teams, etc.).

P - Presentation

- Teacher models how to analyze a section of the transcript: for example, the story about parachute operation incidents, showing how inspectors collected data and made decisions.
- Discuss how the inspectors "think critically" — analyze facts, make plans, and follow up.

P - Practice

- Students work in pairs or small groups to:
    - Identify and summarize one key idea or event from the video (e.g., parachute operation safety measures).
    - Cite evidence from the transcript to support their summary.

E - Evaluation

- Students individually write a short paragraph answering:

    - "How do Air Traffic Safety Inspectors help keep the National Airspace System safe? Use evidence from the video."
- Use the rubric below to assess their response.

A - Application

- Students brainstorm and create a simple "Air Traffic Safety Inspector" checklist for a hypothetical new aviation safety issue (e.g., drone traffic or weather monitoring).
- Share their checklist with the class and explain their reasoning using evidence from the video.

Materials Needed

- FAA Air Traffic Safety Inspector video or transcript
- Student notebooks or devices for note-taking
- Projector or screen for showing video clips
- Printed rubric and writing paper or digital submission tool

Teacher Instructions

- Prepare the video and transcript in advance.
- During the presentation, model close reading and critical thinking explicitly.
- Monitor group work, supporting students in citing textual evidence.
- Encourage students to connect STEM careers with reading comprehension and critical thinking skills.
- Provide clear expectations for paragraph writing and checklist creation.

Assessment

Written paragraph response:

- How do Air Traffic Safety Inspectors help keep the National Airspace System safe? Use specific evidence from the video/transcript.

Video-Based Activities for Thinking Like a Safety Inspector

Activity 1: Identifying Career Paths in Aviation

Skills Practiced: Comprehension, Identifying Key Details

Objective: Students will identify and summarize different STEM careers related to aviation presented in the video.

Aligned Standards:

- CCR Anchor Standard 1: Cite specific textual evidence.
- RI.6-8.3: Analyze how key individuals are introduced and elaborated in a text.

Materials:

- Video segment (first 1:30 minutes) or transcript excerpt describing careers
- Graphic organizer for careers (columns: Career Title, Job Description, Prior Experience)
- Writing paper or digital document

Instructions:

1. Watch the first part of the video where three inspectors introduce their careers.
2. Fill in the graphic organizer with each person's job title, what they did, and how it relates to their current role.
3. Discuss as a class why having different backgrounds helps the FAA team work better.

Assessment:

- Completed graphic organizer with accurate career details and job descriptions.

Rubric (8 pts total): Identifying Career Paths in Aviation (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Career Detail Accuracy *(Graphic organizer: career, job description, background)*	All careers are identified with **complete, accurate job descriptions** and **clearly explained prior experience**.	Most careers are correctly identified; job details are **mostly accurate** with some gaps in background info.	Some careers or job details are **missing or partially accurate**; backgrounds are unclear.	Organizer is **incomplete or mostly inaccurate**; careers are misunderstood or missing.	**Understanding, Analyzing**	**-CCR.R.1** – Cite evidence **-RI.6–8.1** – Support conclusions with evidence
Use of Video or Transcript Evidence *(Support for career details)*	Career information is supported with **specific and relevant evidence** from the video or transcript.	Uses **some relevant evidence** from the video or transcript; may not fully connect to all details.	Evidence is **general or inconsistently used** across careers.	Little or **no evidence** is used to support descriptions.	**Understanding, Evaluating**	**-CCR.R.1** – Cite specific textual evidence **-RI.6–8.1** – Analyze explicit and inferred content
Analysis of Background Experience *(Connections between past roles and current career)*	Clearly **analyzes how prior experience contributes** to each FAA team member's current role.	Makes basic or partial connections between prior experience and current role.	Provides a **limited or vague explanation** of the relationship between past and current roles.	**No clear analysis** of background or connections.	**Analyzing, Applying**	**RI.6–8.3** – Analyze how individuals are introduced and elaborated
Participation in Discussion *(Collaborative synthesis)*	Actively participates in class discussion, offering **insightful comments** on how team	Contributes to discussion with **relevant comments** or reflections.	Participation is **minimal or off-topic**.	**No participation** or comments are unclear/off-task.	**Applying, Creating**	**-CCR.SL.1** – Participate effectively in discussions **-SL.6–8.1** – Engage in collaborative discussions

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
	diversity improves performance.					

Summary of Learning Goals Assessed:

- Identifies **key individuals and career paths** accurately.
- Supports understanding with **evidence from video or transcript**.
- Analyzes how **backgrounds influence roles**, supporting career literacy.
- Builds **collaborative thinking** through discussion.

Activity 2: Analyzing Safety Data and Critical Thinking

Skills Practiced: Analytical Thinking, Inference, Textual Evidence

Objective: Students will analyze the parachute operation incident data story and explain how inspectors used critical thinking.

Aligned Standards:

- CCR Anchor Standard 1: Make logical inferences supported by textual evidence.
- RI.6-8.3: Analyze how an event is illustrated and elaborated in a text.

Materials:

- Transcript excerpt about parachute operation incidents
- Chart paper or digital tool for creating cause-effect diagrams
- Markers or drawing tools

Instructions:

1. Read the section about the parachute incident report.
2. In groups, create a cause-effect diagram showing how the data led to action by inspectors.
3. Present your diagram, explaining the inspectors' reasoning and how they worked with other teams.

Assessment:

- Cause-effect diagram with clear links and group oral explanation.

Rubric (8 pts total): Analyzing Safety Data and Critical Thinking (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Cause-Effect Diagram Clarity *(Logical organization of event and outcomes)*	Diagram **clearly and logically maps** causes and effects of the incident,	Diagram shows **mostly clear connections**, with some logical order;	Diagram includes **basic links**, but some are confusing, incomplete, or disorganized.	Diagram is **inaccurate or unclear**, with weak or missing cause-effect links.	**Analyzing, Understanding**	**-RI.6–8.3** – Analyze how events are elaborated **-CCR.R.1** – Make

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
	showing how data led to inspectors' actions.	minor links may be unclear.				inferences supported by evidence
Explanation of Reasoning *(Group oral explanation of inspector thinking)*	Group **clearly explains the inspectors' reasoning**, using specific, relevant details from the transcript.	Group explains reasoning with **some clarity**, using a few relevant details.	Explanation is **vague or partially correct**; few details are cited.	Explanation is **unclear or lacks connection** to text; little to no evidence used.	**Evaluating, Explaining**	**-CCR.R.1** – Support conclusions with textual evidence **-SL.6–8.4** – Present ideas clearly with relevant details
Use of Textual Evidence *(Supporting claims with examples)*	Evidence from the transcript is **specific, accurate, and well-integrated** into the diagram and explanation.	**Some accurate evidence** used; may lack context or be partially explained.	**Limited or unclear use of evidence**; may be general or not directly tied to points.	**Little or no textual evidence** used to support analysis.	**Understanding, Evaluating**	**-RI.6–8.1** – Cite specific textual evidence **-CCR.R.1** – Read closely and support inferences
Collaboration & Presentation *(Teamwork and delivery)*	Group collaborates effectively and **presents clearly**, with organized visuals and shared speaking roles.	Presentation is mostly clear with **minor delivery or collaboration issues**.	Group shows **some teamwork**, but presentation lacks clarity or engagement.	**Presentation is disorganized** or relies on one speaker; group effort not evident.	**Applying, Creating**	**-SL.6–8.1** – Collaborate effectively in groups **-SL.6–8.4** – Present information clearly

Summary of Learning Goals Assessed:

- Encourages **critical thinking and inference** from real-world safety data.
- Builds **logical reasoning** through visual representation (cause-effect).

- Reinforces the use of **textual evidence** and collaborative explanation.

Activity 3: Mapping the National Airspace System (NAS)

Skills Practiced: Application, Spatial Reasoning, Collaboration

Objective: Students will apply knowledge by creating a simplified aeronautical chart including parachute operations.

Aligned Standards:

- CCR Anchor Standard 7: Integrate information from different media or formats.
- RI.6-8.7: Integrate information presented visually with text in order to understand the topic.

Materials:

- Blank map outline of a simple airspace or local area
- Markers or digital drawing app
- Transcript excerpt about aeronautical charts and parachute operations

Instructions:

1. Review the video segment about adding parachute operations to aeronautical charts.
2. In pairs, mark locations of parachute zones and flight paths on a blank map.
3. Add symbols or labels and prepare a short explanation of why these markings are important.

Assessment:

- Completed map with accurate labels and paired explanation.

Rubric (8 pts total): Mapping the National Airspace System (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Map Accuracy & Detail *(Correct placement of parachute zones*	Map is **accurate and complete**, with clearly marked parachute zones	Most zones and paths are **correctly marked**, with minor	Some **elements are missing or inaccurately placed**;	Map is **mostly inaccurate or incomplete**, with incorrect or missing labels.	**Applying, Creating**	**-CCR.R.7** – Integrate information from media formats

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
and flight paths)	and flight paths using appropriate symbols and scale.	inaccuracies or unclear symbols.	symbols may be unclear or inconsistent.			**-RI.6–8.7** – Interpret visual and textual information
Visual Clarity & Labeling *(Use of symbols, labels, and organization)*	Symbols and labels are **clearly presented**, consistently used, and enhance understanding of the airspace system.	Symbols and labels are **mostly clear**, with some inconsistencies or minor confusion.	Labels or symbols are **partially used** or difficult to interpret.	Symbols/labels are **missing or unclear**; presentation is disorganized.	**Understanding, Applying**	**-RI.6–8.7** – Interpret and organize visual information effectively
Explanation of Airspace Features *(Purpose and importance of chart elements)*	**Effectively explains** why chart markings matter using relevant information from the video and/or transcript.	Provides a **clear explanation**, though some points may be underdeveloped or partially explained.	Offers a **basic or general explanation**; lacks detail or clarity.	Provides **little or no explanation** of the chart's purpose or relevance.	**Analyzing, Explaining**	**-CCR.R.7** – Evaluate content in diverse media **-RI.6–8.7** – Connect visuals to textual context
Collaboration & Presentation *(Pairwork and delivery of explanation)*	Pairs work **effectively and equitably**, presenting information **clearly and confidently**.	Pair demonstrates **mostly effective collaboration**, with clear but not fully polished presentation.	Some teamwork present; presentation may be **disorganized or unevenly shared**.	**Minimal collaboration**; presentation is unclear or only one partner contributes.	**Applying, Creating**	**-SL.6–8.1** – Collaborate effectively in groups **-SL.6–8.4** – Present ideas clearly with supporting detail

Summary of Learning Goals Assessed:

- Applies knowledge of airspace using **visual-spatial thinking**.
- Promotes **visual literacy** through mapping and labeling.
- Strengthens skills in **collaborative presentation** and explaining **real-world systems**.

Activity 4: Create Your Own Safety Oversight Plan

Skills Practiced: Synthesis, Application, Writing

Objective: Students will design a simple safety oversight plan for a new aviation-related issue using critical thinking skills.

Aligned Standards:

- CCR Anchor Standard 8: Delineate and evaluate the argument and specific claims in a text.
- W.6-8.2: Write informative/explanatory texts to examine a topic and convey ideas clearly.

Materials:

- Worksheet with guiding questions for planning (What is the safety issue? What data would you collect? What rules apply? Who would you collaborate with?)
- Writing paper or digital submission

Instructions:

1. Review how the FAA inspectors used data and rules to improve parachute safety.
2. Choose a hypothetical new issue (e.g., drone flights, weather hazards).
3. Complete the worksheet and write a brief plan explaining how you would oversee safety for this issue.

Assessment:

- Written plan that addresses all guiding questions and uses logical reasoning.

Rubric (12 pts total): Create Your Own Safety Oversight Plan (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
Clarity of Safety Issue & Context *(Identification of aviation-*	Clearly defines a **relevant and realistic safety issue**	Identifies a clear issue with **basic context** or relevance.	Issue is **partially defined** or lacks relevance /clarity.	Safety issue is **vague, unrealistic**, or missing.	**Understanding, Applying**	**-W.6–8.2.A** – Introduce a topic clearly

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
related concern)	and provides strong context for why oversight is needed.					**-CCR.R.8** – Evaluate claims and evidence
Application of Oversight Process *(Use of rules, data, and collaboration)*	Plan **thoroughly explains** how data would be used, what rules apply, and how collaboration would happen.	Explains most steps of oversight with **minor gaps or limited detail**.	Plan shows **some understanding**, but lacks clarity or misses key elements.	Oversight plan is **underdeveloped or inaccurate**; key steps are missing.	**Applying, Analyzing**	**-W.6–8.2.B/C** – Develop topic with facts, examples, and organized structure
Use of Logical Reasoning *(Justification for actions and choices)*	Provides **clear, well-supported reasoning** for choices using facts, examples, or hypothetical data.	Reasoning is **mostly clear**, but may rely on generalizations or lack full support.	Provides **basic logic**, but with limited support or explanation.	**Little or no reasoning** given; ideas are unsupported or unclear.	**Evaluating, Creating**	**-CCR.R.8** – Evaluate argument and claims **-W.6–8.2.E** – Use logical progression of ideas
Completeness & Writing Quality *(Addresses all guiding questions and organizes ideas)*	Addresses **all guiding questions** thoroughly with clear, well-organized writing.	Answers most guiding questions; writing is **organized with minor clarity issues**.	Plan is **partially complete** or somewhat disorganized.	Writing is **incomplete, unclear**, or missing key components.	**Creating, Synthesizing**	**-W.6–8.2.F** – Maintain formal style and coherence **-CCR.W.2** – Convey ideas clearly through explanation

Summary of Learning Goals Assessed:

- Synthesizes knowledge of aviation safety and inspection protocols.

- Applies reasoning and planning to **real-world hypothetical scenarios**.
- Develops **informative writing** with clear structure and logical flow.

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3. **Video Title:** Oversight: Rules in the National Airspace System

Learning Outcome:
By the end of the lesson, students will be able to:

1. **Discuss** the importance of rules in everyday life and in the National Airspace System (NAS).
2. **Identify** the central idea and key supporting details about why rules are necessary for safety in the NAS.
3. **Write** a clear, evidence-based summary explaining the role of rules in keeping the NAS safe.
4. **Collaborate** to create and present a visual representation (poster or digital) that links NAS activities with their corresponding safety rules.

Lesson Plan: Why Rules Are Necessary in the National Airspace System (NAS)

Duration: 45-60 minutes

Standards:

- **Career and College Readiness (CCR) Standard:**

CCR Anchor Standard 1 — Read closely to determine what the text says explicitly and make logical inferences; cite specific textual evidence when writing or speaking to support conclusions.

- **Reading Standard (ELA 6-8):**

RI.6-8.2 — Determine the central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

Video Link:
https://www.youtube.com/watch?v=NNjjoKhnJro&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=3

Vocabulary

Video Title: Oversight: Rules in the National Airspace System

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
rules	Instructions for how to behave or do things	activities	Things that people do	National Airspace System (NAS)	The sky area controlled for safe flying
drone	A small flying machine controlled remotely	necessary	Needed or required	participate	To take part in something
parachute	Device used to float safely to the ground	communities	Groups of people living in the same place	witness (as a verb)	To see something happen
dirigible	A type of airship that can be steered	virtual	Something done or seen on a computer or internet	procedure	A set way to do something
flight	The act of flying	internet	A network for sharing information worldwide	safety risk management	Planning to avoid dangers

Grade Levels: 6th, 7th, and 8th

W-Warm-up

Start with a discussion:

- Ask students: "What kinds of rules do we have in our schools or homes? Why are rules important?"
- Show a short clip or image collage from the video highlighting activities in the NAS (planes, parachutes, drones).
- Prompt: "What kinds of rules do you think might exist for these activities?"

I - Introduction

- Watch the FAA video or read the transcript together.
- Students jot down reasons why rules are necessary in the National Airspace System (NAS) as presented in the video.

P - Presentation

- Teacher models how to identify the central idea: "Rules keep people safe and help aviation professionals do their jobs."
- Highlight supporting details from the video/transcript (examples of activities with rules, safety reasons).
- Show students how to write a brief summary of the video's main points.

P - Practice

- Students write a 4-5 sentence summary answering:
  "Why are rules necessary in the National Airspace System?"
- Encourage them to cite specific reasons from the video.

E - Evaluation

- Collect summaries for assessment using the rubric below.
- Conduct a brief exit ticket asking students to name one activity in the NAS that requires rules and explain why.

A - Application

- Students work in small groups to create a poster or digital presentation showing at least three NAS activities and their related safety rules.

- Groups share their posters with the class, explaining how rules help keep everyone safe.

Materials

- FAA video or printed transcript
- Graphic organizer or note-taking sheets
- Writing paper or digital device for summaries
- Poster paper, markers, or digital presentation tools

Teacher Instructions

- Prepare to show the video or print the transcript.
- Facilitate discussion and note-taking during the video.
- Model how to identify central ideas and supporting details.
- Guide students through writing summaries and group work.
- Use exit tickets for quick formative assessment.

Assessment

- **Written Summary:** Students write a clear summary citing reasons rules are necessary in NAS.
- **Exit Ticket:** One NAS activity and explanation of why rules are needed.

Video-Based Activities for Understanding Rules in the NAS

Activity 1: Understanding the Importance of Rules

Skills Practiced: Comprehension and Textual Evidence

Objective: Students will identify reasons why rules are necessary in the National Airspace System by citing evidence from the video.

Aligned Standards:

- CCR Anchor Standard 1: Cite specific textual evidence to support analysis of text.
- RI.6-8.2: Determine the central ideas and summarize key supporting details.

Materials:

- Video segment or transcript excerpt (intro and explanation of rules)
- Graphic organizer with columns: "Reason for Rules" and "Evidence from Video"
- Writing materials or digital devices

Instructions:

1. Watch or read the section describing why rules are necessary in the NAS.
2. Fill in the graphic organizer with reasons (e.g., safety of aviation professionals, safety of people on the ground) and support with exact text or spoken phrases.
3. Share answers in pairs or small groups.

Assessment:

- Completed graphic organizer with accurate reasons and textual evidence.

Rubric (8 pts total): Understanding the Importance of Rules (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
Identification of Reasons *(Understanding of rule*	Identifies **multiple accurate and relevant**	Identifies **one or two relevant reasons**,	Identifies a reason, but it may be **vague,**	**Reason not clearly stated** or off-topic.	**Understanding, Analyzing**	**RI.6–8.2** – Determine central ideas and key details**CCR.R.1** –

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
purpose in the NAS)	**reasons** why rules are necessary in the NAS.	mostly accurate.	**incomplete, or partially accurate**.			Cite evidence to support analysis
Use of Textual or Video Evidence *(Support for reasons from transcript or video)*	Cites **specific, accurate phrases** or examples directly from the video/transcript.	Cites **some relevant evidence**, but may be general or partially paraphrased.	Uses **limited or vague evidence** with unclear source reference.	**No clear evidence cited** or irrelevant information used.	**Understanding, Evaluating**	**RI.6–8.1** – Cite specific textual evidence**CCR.R.1** – Support conclusions with evidence
Graphic Organizer Completion *(Organization and clarity of ideas)*	Organizer is **fully completed**, with clear separation between reasons and evidence.	Organizer is **mostly complete**, with only minor omissions.	Organizer is **partially filled** or somewhat disorganized.	Organizer is **incomplete or difficult to interpret**.	**Applying, Organizing**	**W.6–8.2.A/B** – Organize and support information clearly
Collaboration & Discussion *(Sharing and reflecting on ideas in pairs/groups)*	**Actively contributes** thoughtful insights and listens/responds respectfully to others.	Participates and shares, with **minor lapses in clarity or engagement**.	Shares **limited or unclear contributions** during discussion.	**Does not participate** or contributes off-topic comments.	**Applying, Communicating**	**SL.6–8.1** – Participate effectively in discussions**CCR.SL.1** – Engage in collaborative conversations

Summary of Learning Goals Assessed:

- Comprehends **why rules are essential** in the NAS.
- Supports ideas with **evidence from multimedia or text**.
- Encourages **discussion and shared understanding** of aviation safety concepts.

Activity 2: Visualizing NAS Activities

Skills Practiced: Analysis of Visual and Textual Information

Objective: Students will analyze the different activities shown in the video and explain the need for rules in each.

Aligned Standards:

- CCR Anchor Standard 7: Integrate information presented visually and textually to understand the topic.
- RI.6-8.7: Integrate visual information with text in a text to understand content.

Materials:

- Still images or screenshots from the video showing activities (airplane, parachute jumper, drone, dirigible)
- Worksheet with spaces for activity description and rule explanation
- Markers or digital annotation tools

Instructions:

1. Review images of activities shown in the video.
2. For each image, write a short description of the activity and explain why rules are necessary for safety.
3. Discuss findings as a class.

Assessment:

- Worksheet with accurate descriptions and thoughtful explanations for each activity.

Rubric (8 pts total): Visualizing NAS Activities (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
Activity Description Accuracy *(Interpretation*	Provides **clear, accurate, and complete**	Describes most activities with **minor inaccuracies**	Descriptions are **partially correct or overly general**.	Descriptions are **incomplete, vague, or incorrect**.	**Understanding, Analyzing**	**-RI.6–8.7** – Interpret visual information **-CCR.R.7** – Understand ideas across media

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
of visual content)	**descriptions** of all activities shown in the images.	**or missing detail**.				
Explanation of Safety Rules *(Purpose and relevance of regulation)*	Clearly explains **why rules are needed** for each activity, with accurate and thoughtful reasoning.	Offers **mostly accurate and relevant explanations** for most activities.	Explanations are **partially correct**, with general or unclear logic.	Explanations are **missing or inaccurate**; lacks connection to safety.	**Evaluating, Applying**	**-RI.6–8.7** – Integrate visual and textual understanding**CCR.-R.7** – Analyze visual-text relationships
Use of Visual/Textual Evidence *(Support for analysis)*	Uses **specific visual features and relevant text/video references** to support analysis.	Includes **some visual or textual details**; support may be limited or uneven.	Evidence is **general or inconsistently used** across activities.	**Little or no evidence** from visuals or text is cited.	**Understanding, Evaluating**	**-CCR.R.7** – Integrate and evaluate content in different formats
Worksheet Completion & Clarity *(Organization and completeness of responses)*	Worksheet is **fully complete, organized**, and written clearly with well-separated sections.	Worksheet is **mostly complete** with minor issues in organization or clarity.	Worksheet is **partially filled** or shows **limited clarity**.	Worksheet is **incomplete or disorganized**.	**Applying, Organizing**	**-W.6–8.2.A** – Organize ideas clearly **-CCR.W.2** – Convey understanding of complex ideas

Summary of Learning Goals Assessed:

- Strengthens **visual-literacy and textual analysis** skills.
- Promotes understanding of **regulatory roles** in aviation safety.
- Encourages integration of **visual evidence and explanatory writing**.

Activity 3: Summarizing the Video's Main Idea

Skills Practiced: Summarization, Central Idea Identification

Objective: Students will write a summary identifying the central idea of the video and supporting details.

Aligned Standards:

- CCR Anchor Standard 1: Determine central ideas and summarize key details.
- RI.6-8.2: Summarize texts accurately.

Materials:

- Transcript or video
- Summary writing template
- Writing paper or digital tool

Instructions:

1. After watching the entire video or reading the transcript, write a 5-sentence summary that includes:
    - The main idea about rules in the NAS
    - Two or three supporting reasons or examples from the video
2. Exchange summaries with a partner for peer review.

Assessment:

- Written summary assessed for central idea clarity and supporting details.

Rubric (12 pts total): Summarizing the Video's Main Idea (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Central Idea Clarity *(Statement of*	States the **main idea clearly and accurately**,	States the main idea with **minor**	Main idea is **partially accurate or too broad/narrow**.	**Main idea is missing or incorrect**.	**Understanding, Analyzing**	**-RI.6–8.2** – Determine central ideas

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
the main message)	capturing the video's core message about rules in the NAS.	**wording or clarity issues**.				**-CCR.R.1** – Read closely to determine meaning
Supporting Details *(Relevant examples or evidence from the video)*	Includes **2–3 accurate and relevant supporting details** or examples that clearly support the main idea.	Includes **1–2 mostly relevant details**; some may be too general or weakly connected.	Includes **limited or vague support**; relevance may be unclear.	**No clear supporting details** included or irrelevant examples.	**Analyzing, Explaining**	**-RI.6–8.2** – Summarize supporting details **-CCR.R.1** – Cite textual evidence
Summary Structure & Organization *(Flow and logical order of ideas)*	Summary is **well-structured**, flows logically, and follows the 5-sentence format clearly.	Mostly well-organized; **minor errors in structure or transitions**.	**Some disorganization** or unclear connections between ideas.	Summary is **unclear, incomplete, or disorganized**.	**Applying, Organizing**	**-W.6–8.2.A** – Organize ideas clearly **-CCR.W.2** – Convey understanding through structure
Language & Conventions (Grammar, spelling, sentence clarity)	Writing is **clear, concise**, and uses correct grammar, punctuation, and spelling.	Mostly clear with **minor errors** that do not hinder meaning.	**Several errors** that distract or slightly affect clarity.	**Frequent errors** that make the summary hard to understand.	Applying, Creating	**-W.6–8.2.E** – Use precise language **-CCR.L.1–2** – Command of language conventions

Summary of Learning Goals Assessed:

- Reinforces **close reading and video comprehension**.
- Builds skills in **central idea identification and summarizing**.
- Supports **peer review and revision** for clarity and evidence.

Activity 4: Designing Rules for a New NAS Activity

Skills Practiced: Application, Critical Thinking, Writing

Objective: Students will create rules for a hypothetical new activity in the NAS, applying understanding of why rules are important.

Aligned Standards:

- CCR Anchor Standard 8: Delineate and evaluate arguments and claims in a text.
- W.6-8.2: Write informative/explanatory texts clearly conveying ideas.

Materials:

- Worksheet with guiding questions:
  - What is the new activity?
  - What risks does it involve?
  - What rules could help keep people safe?
- Writing paper or digital device

Instructions:

1. Imagine a new activity in the NAS (e.g., personal drones, hot air balloons).
2. Use the worksheet to brainstorm risks and safety rules.
3. Write a paragraph explaining your proposed rules and why they are necessary.
4. Share and discuss with the class.

Assessment:

- Written paragraph explaining rules with logical reasoning based on video concepts.

Rubric (12 pts total): Designing Rules for a New NAS Activity (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
New NAS Activity Description *(Clarity and relevance of*	Clearly describes a **realistic, original**	Activity is described clearly but **may lack full**	Activity is **vague or underdeveloped**, with unclear purpose.	Activity is **missing, unrealistic, or off-topic**.	**Understanding, Creating**	**-W.6–8.2.A** – Introduce a topic clearly**CCR.-R.8** – Evaluate

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
the proposed activity)	**activity** and its role in the NAS.	**relevance or creativity**.				claims in context
Identification of Risks *(Awareness of safety considerations)*	Identifies **multiple, relevant risks** associated with the activity and explains them clearly.	Identifies **one or two risks**, with basic explanation.	Risks are **partially identified** or lack clarity.	Risks are **not addressed** or do not relate to activity.	**Analyzing, Applying**	**-W.6–8.2.B** – Develop topic with facts and examples
Rule Design & Justification *(Effectiveness and reasoning behind rules)*	Proposes **thoughtful, logical safety rules** and clearly justifies why each rule is necessary.	Proposes reasonable rules with **some explanation** or minor gaps in logic.	Rules are **basic or underdeveloped**; justification is vague.	Rules are **unclear, missing**, or unjustified.	**Evaluating, Creating**	**-CCR.R.8** – Support claims with reasoning **-W.6–8.2.C/D** – Use transitions and precise language
Writing Quality *(Organization, clarity, conventions)*	Paragraph is **well-structured**, clear, and free of major grammar/spelling errors.	Mostly well-written with **minor grammar or clarity issues**.	Writing has **noticeable issues** affecting clarity or structure.	Writing is **disorganized or unclear**, with frequent errors.	**Applying, Organizing**	**-W.6–8.2.E/F** – Maintain clarity and formal style **-CCR.L.1–2** – Language conventions

Summary of Learning Goals Assessed:

- Encourages **application of safety concepts** to new scenarios.
- Reinforces **argument development** and logical reasoning.
- Strengthens **informative writing** with clear structure and evidence-based thinking.

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4. **Video Title:** Oversight: Safety Risk Management

Learning Outcome:
By the end of the lesson, students will be able to:

1. **Explain** the concept of risk management and provide everyday examples of reducing dangers.
2. **Outline** the five steps of the D.I.A.A.T. Safety Risk Management model based on the FAA video.
3. **Apply** each step of the model by completing a graphic organizer with explanations and examples.
4. **Develop and present** a risk management plan using the D.I.A.A.T. process for a real-world safety scenario.

Lesson Plan: Understanding Safety Risk Management in the National Airspace System (NAS)

Duration: 45-60 minutes

Standards:

- **Career and College Readiness (CCR) Standard:**
  CCR Anchor Standard 1 — Read closely to determine what the text says explicitly and make logical inferences; cite specific textual evidence when writing or speaking to support conclusions.

- **Reading Standard (ELA 6-8):**
  RI.6-8.3 — Analyze how a text presents information and how key concepts are introduced, illustrated, and elaborated.

Video Link:

https://www.youtube.com/watch?v=OAMhsrzMRZ8&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=4

Vocabulary

Video Title: Oversight: Safety Risk Management

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
hazard	Something dangerous or risky	analyze	To carefully study or examine	assess (risk)	To decide how serious or likely a risk is
accident	Something bad that happens unexpectedly	environment	The surroundings or place	severity	How serious something is
prevent	To stop something from happening	identify	To find or point out	treat (risk)	To fix or lower a risk
traffic lights	Colored lights that control cars and people	outcomes	The results of actions	barrier	Something that stops or slows danger
crosswalk	A safe place for people to walk across a street	measure	A way to check or control something	eliminate	To completely remove something
risk	The chance of danger or harm	describe	To explain or tell about	process	A series of steps to do something

Grade Levels: 6th, 7th, and 8th

W - Warm-up:

- Begin by asking students:
  "What does it mean to manage risk in everyday life? Can you think of examples where people try to reduce dangers around them?"
- Briefly discuss and relate examples to safety (crosswalks, helmets, warning signs).
- Introduce the video topic: Safety Risk Management in aviation.

I – Introduction:

- Watch the FAA video or read the transcript excerpt about the D.I.A.A.T. model (Describe, Identify, Analyze, Assess, Treat).
- Have students take notes focusing on each step of the model and examples given.

P - Presentation:

- Teacher models how to create an outline summarizing the five steps in the Safety Risk Management process.
- Highlight how the video explains and elaborates each step, including examples (e.g., pedestrians crossing, adding traffic lights).

P - Practice:

- Students complete a graphic organizer or chart with two columns:
  1. **Step of D.I.A.A.T.** (Describe, Identify, Analyze, Assess, Treat)
  2. **Explanation & Example** (students write in their own words what each step means and give an example from the video or a new example they think of).

E - Evaluation:

- Collect graphic organizers to assess understanding.
- Have students write a short paragraph explaining how Safety Risk Management helps keep the National Airspace System safe, citing at least two steps from the model.

A - Application:

- In small groups, students select a real-world scenario (e.g., school hallway safety, playground safety, bike riding on roads) and apply the D.I.A.A.T. steps to that scenario.
- Groups present their risk management plan to the class.

Materials:

- FAA Safety Risk Management video or printed transcript
- Graphic organizer/chart template for D.I.A.A.T. steps
- Writing paper or digital devices for notes and paragraphs
- Materials for group presentations (poster paper, markers, or digital tools)

Teacher Instructions:

- Prepare video or transcript for class viewing/reading.
- Lead the initial discussion and note-taking during the video.
- Model summarizing and note-taking skills.
- Guide students through the graphic organizer.
- Support groups in creating and presenting real-world applications.

Assessment:

- **Graphic Organizer:** Completeness and accuracy in explaining each D.I.A.A.T. step with examples.
- **Written Paragraph:** Clear explanation of how Safety Risk Management protects the NAS, citing specific steps.
- **Group Presentation:** Application of the model to a new scenario demonstrating understanding of each step.

Video-Based Activities for Safety Risk Management

Activity 1: Breaking Down the D.I.A.A.T. Model

Skills Practiced: Comprehension and Note-Taking

Objective: Students will identify and summarize the five steps of the D.I.A.A.T. Safety Risk Management model.

Aligned Standards:

- CCR Anchor Standard 1: Cite specific textual evidence to support analysis.
- RI.6-8.3: Analyze how a text presents information and elaborates key concepts.

Materials:

- Video or transcript excerpt describing D.I.A.A.T.
- Note-taking graphic organizer listing D.I.A.A.T.
- Writing materials or digital device

Instructions:

1. Watch or read the part of the video where inspectors explain each step of the D.I.A.A.T. model.
2. Fill in the graphic organizer by summarizing each step in your own words.
3. Include one example for each step from the video or create your own example.

Assessment:

- Completed graphic organizer with accurate and clear summaries and examples.

Rubric (12 pts total): Breaking Down the D.I.A.A.T. Model (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Step Summaries *(Clarity and accuracy of*	Provides **clear, complete, and accurate summaries** of all five	Summarizes most steps with **minor inaccuracies**	**Several summaries are unclear** or copied directly;	Steps are **incomplete or mostly inaccurate**.	**Understanding, Explaining**	**-RI.6–8.3** – Analyze how key steps are explained

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
each step in D.I.A.A.T.)	D.I.A.A.T. steps in own words.	**or partial rephrasing**.	understanding is limited.			**-CCR.R.1** – Cite and interpret information
Example for Each Step *(Video-based or original examples)*	Includes **relevant, specific examples** for all five steps, based on video or creative application.	Includes **examples for most steps**; some may be vague or incomplete.	Includes **some examples**, but several are **unclear or loosely related**.	**Few or no examples provided**, or most are irrelevant.	**Applying, Creating**	**-RI.6–8.3** – Explain elaboration of concepts **-CCR.R.1** – Support understanding with details
Use of Evidence or Paraphrasing *(Demonstrates comprehension of source content)*	Demonstrates strong comprehension by **accurately paraphrasing** video content or using well-selected evidence.	Mostly paraphrases well with **some reliance on direct phrases** or limited analysis.	Evidence or wording shows **limited understanding** or shallow interpretation.	Wording is **inaccurate, copied, or lacks connection** to the model.	**Analyzing, Understanding**	**-CCR.R.1** – Cite and analyze textual evidence
Completion & Organization *(Neatness, clarity, and completion of organizer)*	Organizer is **fully completed**, clearly formatted, and easy to read.	Organizer is **mostly complete** with minor formatting or clarity issues.	Organizer is **partially complete** or somewhat disorganized.	Organizer is **incomplete or difficult to follow**.	**Organizing, Applying**	**-W.6–8.2.A/B** – Organize and develop content **-CCR.W.2** – Convey understanding through structure

Summary of Learning Goals Assessed:

- Builds **understanding of risk assessment frameworks** (D.I.A.A.T.).
- Strengthens ability to **summarize technical content** in own words.
- Encourages **transfer of learning** through examples.

Activity 2: Hazard Hunt — Identifying Risks

Skills Practiced: Analysis and Critical Thinking

Objective: Students will identify potential hazards in a given scenario using the "Identify Hazards" step of the model.

Aligned Standards:

- CCR Anchor Standard 8: Evaluate arguments and claims.
- RI.6-8.3: Analyze text and how key concepts are presented.

Materials:

- Scenario description or image of a busy street or school hallway
- Hazard identification worksheet
- Writing materials

Instructions:

1. Present students with a scenario (e.g., pedestrians crossing a busy street, kids playing near bike racks).
2. Students list all possible hazards they observe or can infer.
3. Discuss as a class which hazards are most serious and why.

Assessment:

- Completed worksheet listing hazards with brief explanations.

Rubric (8 pts total): Hazard Hunt — Identifying Risks (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Hazard Identification *(Number and clarity of hazards listed)*	Identifies **multiple, clearly stated, and relevant hazards** based on scenario/image.	Identifies **several valid hazards** with minor gaps or unclear phrasing.	Identifies **some hazards**, but some are **incomplete, vague, or less relevant**.	Lists **few or unrelated hazards**; lacks clarity or completeness.	**Analyzing, Understanding**	**-RI.6–8.3** – Analyze how key concepts are presented **-CCR.R.8** – Evaluate

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
						claims and reasoning
Reasoning and Explanation *(Why each hazard is a risk)*	Provides **thoughtful, logical explanations** for each identified hazard.	Gives **basic but mostly accurate explanations** for most hazards.	Provides **minimal or unclear justification** for some listed risks.	**No reasoning provided** or explanations are inaccurate.	**Evaluating, Explaining**	**-CCR.R.8** – Evaluate evidence and logic**RI.6–8.3** – Understand elaboration of ideas
Inference of Hidden/Implied Hazards *(Risk awareness beyond the obvious)*	Accurately infers **less visible or indirect hazards** and explains them clearly.	Infers **at least one hidden hazard**, but may be partially explained.	Shows **limited inference**, focusing only on obvious risks.	**No inferred hazards** included; only surface-level detail.	**Analyzing, Inferring**	**-RI.6–8.3** – Analyze elaboration and relationships in text
Worksheet Completion & Clarity *(Organization and thoroughness)*	Worksheet is **fully completed**, neatly organized, and easy to read.	Worksheet is **mostly complete** with minor gaps in formatting or clarity.	Worksheet is **partially filled** or inconsistently structured.	Worksheet is **incomplete or hard to follow**.	**Applying, Organizing**	**-W.6–8.2.A/B** – Organize and develop content **-CCR.W.2** – Convey ideas clearly

Summary of Learning Goals Assessed:

- Reinforces **core concepts of risk identification** from the D.I.A.A.T. model.
- Strengthens **analytical thinking and real-world application**.
- Encourages **evidence-based reasoning** in student discussion.

Activity 3: Risk Analysis and Assessment Chart

Skills Practiced: Analysis and Evaluation

Objective: Students will analyze and assess risks by considering severity and likelihood.

Aligned Standards:

- CCR Anchor Standard 7: Integrate information to understand concepts.
- RI.6-8.3: Analyze how concepts are elaborated in a text.

Materials:

- Risk Analysis Chart template with columns: Hazard, Severity (High/Medium/Low), Likelihood (High/Medium/Low), Risk Level (Severity x Likelihood)
- Sample hazards from video or scenarios
- Writing materials

Instructions:

1. Provide students with a list of hazards (e.g., pedestrian crossing without crosswalk, equipment failure). OR use class to identify hazards in their environment.
2. For each hazard, students assess severity and likelihood.
3. Calculate a risk level and prioritize which hazards need more attention.
4. Discuss results in small groups.

Assessment:

- Completed chart with appropriate assessments and justifications.

Rubric (8 pts total): Risk Analysis and Assessment Chart (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Hazard Identification *(Clarity and relevance of listed hazards)*	Lists **clear, relevant hazards** accurately reflecting	Lists **mostly relevant hazards** with some minor clarity issues.	Lists **some hazards**, but a few are vague or off-topic.	Lists **few or unclear hazards**, lacking relevance to scenario.	**Understanding, Analyzing**	**-RI.6–8.3** – Analyze elaboration of key concepts **-CCR.R.7** – Integrate visual

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
	scenario content.					and text-based info
Severity and Likelihood Ratings *(Judgment of each hazard's impact and probability)*	Assigns **accurate and logical ratings** for severity and likelihood, based on evidence or reasoning.	Ratings are **mostly appropriate**, with small inconsistencies.	Ratings are **partially accurate**; some may seem unsupported.	Ratings are **mostly inaccurate, missing, or unsupported**.	**Evaluating, Analyzing**	**-CCR.R.7** – Use data to understand concept**RI.6–8.3** – Analyze relationships between ideas
Risk Level Calculation *(Combines severity × likelihood to determine risk level)*	Risk levels are **correctly calculated and clearly prioritized**.	Risk levels are mostly correct with **minor calculation errors**.	Risk levels include **some incorrect or inconsistent entries**.	Risk levels are **incorrect or missing** for most hazards.	**Applying, Evaluating**	**-W.6–8.2** – Develop ideas with clear logic **-CCR.R.7** – Integrate info for conclusions
Justification of Assessment *(Reasoning behind risk rating and prioritization)*	Provides **clear, logical explanations** for why hazards are rated and prioritized.	Provides **basic reasoning** with some supporting logic.	Reasoning is **incomplete or weakly connected** to ratings.	**Little or no justification** is given for decisions.	**Evaluating, Explaining**	**-CCR.R.8** – Support claims with reasoning **-RI.6–8.3** – Understand how concepts are developed
Chart Completion and Clarity *(Neatness, accuracy, and completeness)*	Chart is **fully completed**, easy to read, and logically organized.	Chart is mostly complete with **minor clarity or formatting issues**.	Chart is **partially completed** or uneven in organization.	Chart is **incomplete or confusing**.	**Applying, Organizing**	**-W.6–8.2.A/B** – Organize info clearly **-CCR.W.2** – Convey understanding effectively

Summary of Learning Goals Assessed:

- Develops students' understanding of **risk assessment frameworks**.
- Encourages application of **critical thinking and real-world judgment**.

- Integrates visual, mathematical, and textual reasoning.

Activity 4: Creating a Risk Treatment Plan

Skills Practiced: Application of strategy and Communication

Objective: Students will design solutions to reduce or eliminate risks using the "Treat the Risk" step.

Aligned Standards:

- CCR Anchor Standard 8: Evaluate and apply information to solve problems.
- W.6-8.2: Write informative/explanatory texts.

Materials:

- Worksheet with scenario and space to describe risk treatment measures
- Writing materials or digital devices
- Optional: Poster materials for presentations

Instructions:

1. Provide a hazard scenario (e.g., unsafe pedestrian crossing).
2. Students write a treatment plan describing ways to reduce the risk (e.g., adding traffic lights, crosswalks).
3. Include an explanation of why the treatment will improve safety.
4. Present treatment plans to the class or in small groups.

Assessment:

- Written treatment plan that includes practical solutions and reasoning.

Rubric (12 pts total): Creating a Risk Treatment Plan (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
Treatment Plan Design	Proposes **clear, realistic, and**	Proposes **generally**	Proposes **basic or**	Proposes **unclear,**	**Creating, Applying**	**-CCR.R.8** – Apply

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
(Effectiveness and relevance of solutions)	**well-targeted solutions** to reduce or eliminate the risk.	**appropriate solutions** with minor gaps in relevance or detail.	**somewhat vague solutions** that may not fully address the risk.	**impractical, or unrelated solutions**.		information to solve problems **-W.6–8.2.B** – Develop topic with relevant details
Explanation of Impact *(Clarity and depth of reasoning)*	Provides a **clear, logical explanation** of how and why the solution would improve safety.	Explains the solution with **some clarity and logical reasoning**.	Provides **minimal or unclear explanation** of impact.	**Explanation is missing or not related** to solution.	**Evaluating, Explaining**	**-CCR.R.8** – Support ideas with reasoning **-W.6–8.2.D** – Use precise language and clear ideas
Use of Scenario Details *(Integration of context from prompt)*	Treatment plan is **clearly based on scenario**, showing understanding of specific risks.	Plan is mostly appropriate but **may overlook some scenario details**.	Plan is **partially aligned** with scenario but may be vague or generalized.	Plan **does not align with the scenario** or lacks context.	**Analyzing, Applying**	**-RI.6–8.3** – Analyze how ideas are elaborated **-W.6–8.2.A** – Introduce and frame topic
Written Communication *(Clarity, organization, and conventions)*	Writing is **organized, clear, and free of major errors**; plan is easy to follow.	Writing is mostly clear with **minor issues in grammar or structure**.	Writing is **somewhat unclear or disorganized**; errors may distract.	Writing is **unclear, incomplete, or hard to follow**.	**Applying, Organizing**	**-W.6–8.2.E/F** – Maintain formal style and clarity **-CCR.L.1–2** – Use standard English conventions
Presentation (Optional) *(Clarity and engagement during oral share-out)*	Presentation is **clear, confident, and effectively communicates the plan**.	Presentation is **mostly clear** with minor lapses in clarity or engagement.	Presentation is **uneven or lacks detail**, but main ideas are present.	**Presentation is unclear**, incomplete, or not delivered.	**Communicating, Applying**	**-SL.6–8.4** – Present ideas clearly and logically

Summary of Learning Goals Assessed:

- Encourages students to **apply risk management thinking** to real-world scenarios.
- Reinforces **evidence-based problem-solving**.
- Builds **informational writing** and **communication** skills.

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5. **Video Title:** AOV Credentialing Program

Learning Outcome:
By the end of the lesson, students will be able to:

1. **Define** what it means to be credentialed or certified and explain why credentialing is important for jobs related to public safety.
2. **Identify** the key roles and responsibilities of FAA AOV credential holders and their importance in maintaining National Airspace System (NAS) safety.
3. **Organize** information about credentialing roles into a structured chart, describing job titles, duties, and safety significance.
4. **Research and present** on credentialing in other professions, explaining how certification supports safety and effectiveness in those careers.

Lesson Plan: Exploring Careers and Credentialing in the National Airspace System (NAS)

Duration: 45-60 minutes

Standards:

- **Career and College Readiness Standard:**

CCR Anchor Standard 1 — Read closely to determine what the text says explicitly and make logical inferences; cite specific textual evidence when writing or speaking to support conclusions.

- **Reading Standard (ELA 6-8):**

RI.6-8.3 — Analyze how a text presents information and how key concepts are introduced, illustrated, and elaborated.

Video Link:
https://www.youtube.com/watch?v=VaGRugJ7bNQ&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=5

Vocabulary

Video Title: AOV Credentialing Program

Grade 6 Word/Phrase	**Simplified Definition**	**Grade 7 Word/Phrase**	**Simplified Definition**	**Grade 8 Word/Phrase**	**Simplified Definition**
test	A way to check how well someone knows or can do something	skill	The ability to do something well	credential	Official proof that someone can do a job
safety	Being free from harm or danger	maintain	To keep something working well	proficiency	A high level of skill or ability
employee	A person who works for a company or group	responsibility	A duty or job to do	designated examiner	A person who checks if others have the right skills
record	A written note of what happened or was done	comply	To follow rules or orders	examiner	A person who gives tests or checks skills
security	Protection from danger or harm	proficiency manager	Someone who makes sure workers keep their skills	administration	The act of managing or running something
capability	Ability or skill to do something	submit	To give something (like a form or test) to a person in charge	direct safety-related services	Jobs that directly keep people safe

Grade Levels: 6th, 7th, and 8th

W - Warm-up:

- Ask students:
  "What do you think it means to be 'credentialed' or certified for a job? Why might that be important in jobs that affect public safety?"
- Lead a short discussion to connect to the idea of specialized jobs that require certain skills and certifications.
- Introduce today's topic: How the FAA's AOV Credentialing Program helps keep the National Airspace System safe through skilled professionals.

I – Introduction:

- Show the video or read aloud the transcript about AOV Credentialing and the roles of different credential holders (Designated Examiner, Control Tower Operator Examiner, Proficiency Manager).
- Have students take notes identifying the key duties of each role mentioned.

P - Presentation:

- Teacher models organizing information by creating a chart or graphic organizer with the following columns:
  1. Job Title
  2. Role Description
  3. Importance for NAS Safety
- Populate the first row together based on the Designated Examiner description to demonstrate.

P – Practice:

- Students complete the chart for the remaining two roles (Control Tower Operator Examiner, Proficiency Manager) using their notes from the video/transcript.
- Afterward, have students write 2–3 sentences explaining why credentialing programs are important for public safety.

E – Evaluation:

- Collect the charts and written explanations to assess understanding.
- Have a short quiz or discussion where students cite evidence from the video to explain the connection between credentialing and NAS safety.

A – Application:

- In pairs or small groups, students research or brainstorm another profession (e.g., firefighter, nurse, pilot) that requires credentialing/certification.
- Each group creates a mini-presentation explaining the credentialing process and why it matters for safety or effectiveness in that career.
- Present to the class or submit a summary.

Materials:

- FAA AOV Credentialing video or printed transcript
- Graphic organizer/chart template
- Writing paper or digital devices
- Research materials (optional) or access to internet for extension activity

Teacher Instructions:

- Prepare video or transcript for viewing/reading.
- Lead engagement discussion and model note-taking/chart creation.
- Guide students through note-taking and chart completion.
- Facilitate writing and small group application activity.
- Assess comprehension through written work and discussion.

Assessment:

- Completed graphic organizer/chart with accurate role descriptions and importance.
- Written explanation of credentialing importance citing video evidence.
- Participation in group application activity and presentation.

Video-Based Activities for AOV Credentialing Program

Activity 1: Understanding Job Roles

Skills Practiced: Comprehension and Summarizing

Objective: Students will identify and summarize the duties of three AOV Credential holders.

Aligned Standards:

- CCR Anchor Standard 1: Cite specific textual evidence to support analysis.
- RI.6-8.2: Determine the central ideas and details in a text.

Materials:

- Video/transcript excerpt describing the three roles
- Role Summary worksheet (columns: Job Title, Duties, Importance)
- Writing materials or devices

Instructions:

1. Watch or read the section where the Designated Examiner, Control Tower Operator Examiner, and Proficiency Manager describe their jobs.
2. Complete the Role Summary worksheet by writing down the duties and explaining why each role is important for NAS safety.
3. Share summaries with a partner for peer feedback.

Assessment:

- Completed worksheet with accurate, clear role descriptions and explanations.

Rubric (12 pts total): Understanding Job Roles (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Job Duties Summary *(Clarity and*	Clearly and accurately summarizes	Summarizes **most roles accurately**;	Summaries are **incomplete or unclear** for	**Few or no roles are**	**Understanding, Summarizing**	**-RI.6–8.2** – Determine and

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
accuracy of each role's responsibilities)	**all three roles** using own words.	minor omissions or unclear phrasing.	one or more roles.	**summarized** accurately.		summarize central ideas **-CCR.R.1** – Cite evidence to support comprehension
Explanation of Role Importance *(Why the role matters for safety or operations)*	Provides a **thoughtful, accurate explanation** of each role's importance to NAS safety.	Explains importance for most roles with **minor gaps or generalizations**.	Importance is **partially addressed** or vague for several roles.	Importance is **unclear or missing** for most roles.	**Explaining, Analyzing**	**-RI.6–8.2** – Explain supporting details **-CCR.R.1** – Support conclusions with text-based evidence
Use of Textual Evidence *(Connection to video or transcript)*	Uses **specific, relevant information** from transcript or video to support each summary.	Includes **some textual references** with minor inaccuracies or vague phrasing.	Evidence is **limited or general**; not clearly tied to each role.	**Lacks supporting evidence** or includes irrelevant content.	**Analyzing, Citing**	**-CCR.R.1** – Cite specific evidence **-RI.6–8.1** – Support analysis with text
Worksheet Completion and Clarity *(Organization, neatness, and thoroughness)*	Worksheet is **fully completed**, neatly organized, and easy to understand.	Worksheet is **mostly complete**, with few formatting or clarity issues.	Worksheet is **partially complete** or inconsistently organized.	Worksheet is **incomplete or unclear**.	**Applying, Organizing**	**-W.6–8.2.A/B** – Organize ideas clearly **-CCR.W.2** – Convey informative content logically

Summary of Learning Goals Assessed:

- Supports understanding of **aviation credentialing and safety roles**.
- Encourages summarization and evidence-based analysis.

- Reinforces **real-world comprehension** of job duties in technical fields.

Activity 2: Vocabulary Detective — What is Credentialing?

Skills Practiced: Vocabulary Development and Context Clues

Objective: Students will define and explain the term "credentialing" using context from the video.

Aligned Standards:

- CCR Anchor Standard 4: Interpret words and phrases as they are used in a text.
- RI.6-8.4: Determine the meaning of words and phrases in a text.

Materials:

- Transcript excerpt highlighting "credential" and "credentialing"
- Vocabulary worksheet with sentence context and definition space
- Dictionary or digital devices

Instructions:

1. Review the sentences where "credential" and "credentialing" are used.
2. Use context clues to infer the meaning of the words.
3. Write definitions in own words and illustrate with an example.
4. Compare with dictionary definitions and discuss differences.

Assessment:

- Completed worksheet with accurate definitions and examples.

Rubric (4 pts total): Vocabulary Detective — What is Credentialing? (Grades 6–8)

Criteria	**4 – Excellent**	**3 – Good**	**2 – Fair**	**1 – Needs Improvement**	**Bloom's Level(s)**	**CCR/ELA Standard Alignment**
Definition Accuracy *(Definition of*	Provides **clear, accurate,**	Definitions are mostly accurate with **minor**	Definitions show **partial understanding**;	Definitions are **inaccurate,**	**Understanding, Interpreting**	**-RI.6–8.4** – Determine word

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
"credential" and "credentialing" in own words)	**and complete definitions** using context clues and dictionary info.	**omissions or wording issues**.	some inaccuracies present.	**incomplete, or missing**.		meanings using context **-CCR.R.4** – Interpret words and phrases
Use of Context Clues *(Evidence from text used to infer meaning)*	Effectively uses **multiple context clues** from transcript to support definitions.	Uses some context clues but may rely on limited or unclear evidence.	Shows minimal use of context clues or uses them inaccurately.	Does not use or incorrectly uses context clues.	**Analyzing, Inferring**	**-RI.6–8.4** – Use context to understand vocabulary
Example Provided *(Relevant and clear example illustrating the term)*	Provides a **clear, relevant example** that demonstrates understanding of the term.	Provides an example that is mostly relevant and understandable.	Example is vague, unclear, or somewhat unrelated.	No example or irrelevant example given.	**Applying, Explaining**	**-CCR.W.2** – Use examples to support explanation
Comparison with Dictionary *(Recognizing similarities and differences)*	Clearly compares own definition with dictionary, noting **important similarities and differences**.	Makes a basic comparison with some insight into similarities/differences.	Comparison is vague or incomplete.	No comparison or inaccurate comparison.	**Analyzing, Evaluating**	**-CCR.R.4** – Interpret and analyze word usage
Worksheet Completion and Clarity *(Organizatio*	Worksheet is **completely and neatly filled out**,	Mostly complete and clear with minor	Partially complete or somewhat disorganized.	Incomplete or unclear worksheet.	**Applying, Organizing**	**-W.6–8.2.A** – Organize ideas clearly

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
n and neatness)	easy to follow.	organizational issues.				

Summary of Learning Goals Assessed:

- Develops vocabulary skills using **contextual reading strategies**.
- Encourages comparison and deeper understanding of technical terms.
- Connects dictionary definitions with student-generated meanings.

Activity 3: Analyze the Credentialing Program's Importance

Skills Practiced: Critical Thinking and Text Analysis

Objective: Students will analyze how the Credentialing Program helps maintain safety in the NAS.

Aligned Standards:

- CCR Anchor Standard 8: Evaluate arguments and claims.
- RI.6-8.3: Analyze how a text presents information.

Materials:

- Transcript excerpt on Credentialing Program description
- Analysis worksheet with guided questions
- Writing materials

Instructions:

1. Read the transcript section explaining the Credentialing Program.
2. Answer guided questions: Why is credentialing important? How does it maintain public trust?
3. Write a short paragraph summarizing the analysis.

Assessment:

- Completed worksheet and paragraph demonstrating understanding.

Rubric (12 pts total): Analyze the Credentialing Program's Importance (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Understanding Credentialing Importance *(Explains why credentialing matters for NAS safety)*	Provides a **clear, insightful explanation** of credentialing's role in safety with specific references to the text.	Explains the importance with some clarity and relevant text support.	Explanation is vague or partially accurate with limited text support.	Explanation is missing, unclear, or inaccurate.	**Analyzing, Evaluating**	**-RI.6-8.3** – Analyze text information **-CCR.R.8** – Evaluate claims
Use of Textual Evidence *(Supports answers using evidence from transcript)*	Cites **specific and relevant textual evidence** effectively to support analysis.	Cites some textual evidence; mostly relevant but may lack detail.	Uses minimal or somewhat irrelevant evidence.	Does not cite evidence or evidence is incorrect.	**Analyzing, Applying**	**-CCR.R.8** – Use evidence to support claims
Connection to Public Trust *(Explains how credentialing maintains trust)*	Thoroughly explains the connection between credentialing and maintaining public trust with supporting details.	Provides a basic explanation with some support.	Explanation is unclear or incomplete.	No explanation or explanation is incorrect.	**Evaluating, Explaining**	**-CCR.R.8** – Evaluate claims and their implications
Paragraph Organization and Clarity *(Clear, logical writing with correct grammar)*	Well-organized paragraph with clear sentences and strong grammar/spelling.	Organized paragraph with minor clarity or grammar issues.	Paragraph is somewhat disorganized or unclear with several errors.	Paragraph is poorly organized or very unclear with many errors.	**Applying, Creating**	**-W.6-8.2** – Write clear, coherent texts
Worksheet Completion *(All questions answered thoughtfully)*	All questions answered completely and thoughtfully.	Most questions answered with reasonable effort.	Some questions answered superficially or partially.	Few or no questions answered.	**Applying**	**-CCR.R.8** – Evaluate arguments

Summary of Learning Goals Assessed:

- Develops critical thinking by evaluating the Credentialing Program's impact.

- Uses textual evidence to support reasoning.
- Demonstrates clear writing and understanding of complex ideas.

Activity 4: Create Your Own Safety Role

Skills Practiced: Application and Creative Thinking

Objective: Students will design a new NAS safety role inspired by the video and explain its duties and importance.

Aligned Standards:

- CCR Anchor Standard 7: Integrate information to solve problems.
- W.6-8.2: Write informative/explanatory texts.

Materials:

- Drawing paper or digital design tool
- Role Description worksheet (Name, Duties, Importance)
- Writing materials

Instructions:

1. Review the roles in the video.
2. Invent a new job role related to NAS safety, describing its duties.
3. Explain how this role helps keep the NAS safe.
4. Draw or visually represent the role if desired.
5. Share with the class or in small groups.

Assessment:

- Completed role description with clear duties and safety impact explanation.

Rubric (4 pts total): Create Your Own Safety Role (Grades 6–8)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Role Description & Duties *(Clear, detailed explanation of the*	Provides a **thorough, detailed description** of the role and duties, showing strong	Provides a clear description with most	Description is basic or lacks detail in duties.	Description is unclear, incomplete, or missing key duties.	**Applying, Creating**	**-CCR.R.7** – Integrate information

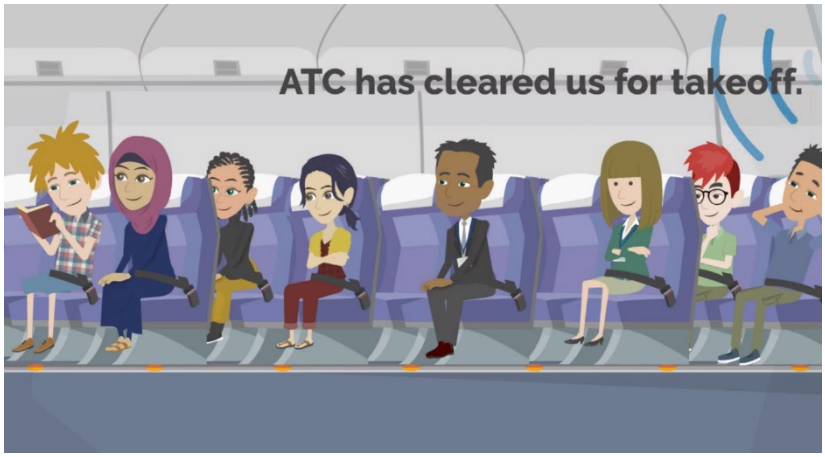
Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
new safety role and responsibilities)	understanding of NAS safety needs.	duties explained.				**-W.6-8.2** – Informative writing
Explanation of Safety Impact *(Explains how the role supports NAS safety)*	Insightfully explains how the role enhances NAS safety with specific, logical reasoning.	Explains the safety impact clearly with some reasoning.	Provides a vague or partial explanation of safety impact.	Does not explain or explanation is inaccurate.	**Analyzing, Evaluating**	**-CCR.R.7** – Integrate information **-W.6-8.2** – Clear explanations
Use of Textual/Video Information *(Connects role to concepts learned in the video)*	Thoughtfully integrates video information or concepts to support the role design.	Makes some connection to video content.	Minimal connection to video or concepts.	No connection made.	**Applying, Analyzing**	**-CCR.R.7** – Integrate multimedia information
Visual Representation (Optional) *(Drawings or visuals that support the role description)*	Visual is detailed, clear, and enhances understanding of the role.	Visual is clear and relates to the role.	Visual is present but unclear or only loosely related.	No visual or visual unrelated.	**Creating**	**-W.6-8.2** – Support writing with visuals
Clarity and Organization *(Writing is clear, well-organized, and free of major errors)*	Writing is well-organized with clear, grammatically correct sentences.	Mostly clear writing with minor errors or organization issues.	Somewhat unclear or disorganized writing; multiple errors.	Writing is unclear, disorganized, or contains many errors.	**Applying, Creating**	**-W.6-8.2** – Write coherent texts

Summary of Learning Goals Assessed:

- Encourages creative application of knowledge.
- Integrates information from the video to create a plausible role.
- Supports reasoning with clear, structured writing.
- Optional visual element fosters creativity and comprehension.

Video Transcripts

1. **Air Traffic Safety Oversight Service (AOV) STEM Careers in the National Airspace System.**



Video Link:
https://www.youtube.com/watch?v=05PBNgYc0Q8&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=1

Transcript:
Narrator:
Hello, and thank you for your interest in learning about STEM careers in the **Federal Aviation Administration (FAA)**.
Today, we'll review two exciting careers within the **Air Traffic Safety Oversight Service (AOV).**

Narrator:
Employees in AOV have often served as **Air Traffic Controllers (ATC)**.
They guide pilots from taxi to takeoff, through the air, and back safely on the ground.

Narrator:
We also have **Airway Transportation Systems Specialists (ATSS)**.
These technicians maintain and repair the equipment used by aviation professionals.

Narrator:
AOV specialists work closely with employees in the **Air Traffic Organization (ATO)** to ensure all safety aspects of air traffic equipment and procedures are upheld.

Narrator:
- Runway lights must be in working order.

- **ATSS technicians** ensure that equipment is functioning properly.
- **ATCs** help pilots follow standardized flight procedures.
- Pilots line up and prepare for takeoff, then follow landing procedures precisely.

Narrator:
Now, let's follow a middle school class on a field trip to **Orlando, Florida** to see how these aviation professionals help keep travelers safe.

Scene: Field Trip to Orlando **[Visual: Middle school students boarding a flight]**

Tech Ops Alert:
"We've lost power at the radio tower."
Response:
"Okay, I'll send a technician to fix it."

Narrator:
AOV specialists monitor and review information related to **disruptions in air traffic services**.
To ensure safety procedures are followed during disruptions, AOV specialists:

- Meet with ATO employees
- Collect safety procedure data
- Analyze whether all protocols were followed correctly

Narrator:
There are numerous procedures that **Air Traffic Controllers** and **Pilots** must follow to maintain the safety of the **national airspace**.

Scene: Back at the Airport
ATC:
"Cleared to taxi to the runway."
ATC:
"Cleared for takeoff."
[Visual: Plane takes off; ATC monitors radar]
ATC:
"Cleared for landing."

Narrator:
AOV specialists make **periodic visits** to observe air traffic control procedures in action.
To ensure passengers arrive safely, AOV specialists:

- Work closely with the **Air Traffic Organization**
- Ensure all equipment is properly maintained
- Respond quickly when repairs are needed
- Follow strict safety guidelines and procedures

Narrator:
Want to learn more about STEM careers in aviation?
Visit www.faa.gov or follow the FAA on social media.

2. **Oversight: Think Like a Safety Inspector**

Video link:
https://www.youtube.com/watch?v=nxpmSrobqO0&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=2

Transcript:
Narrator:
Hello and thank you for your interest in learning about STEM careers in the Federal Aviation Administration, or FAA.
We are the Air Traffic Safety Oversight Service—also known as AOV.
Our virtual field trip will cover how Air Traffic Safety Inspectors review oversight rules in the National Airspace System, or NAS for short.
Continue watching to the end to earn the **Rules Part 2** digital Jr. AOV badge.
Be sure to watch our video titled *Oversight Rules in the National Airspace* to earn your **Rules Part 1** badge, if you haven't already.

Narrator:
Junior AOVers, during today's field trip, we will meet with a few Air Traffic Safety Inspectors to hear how they apply their thinking skills when conducting oversight of the NAS.

Inspector 1:
Thank you for joining us, Jr. AOVers.
Before I arrived in AOV, I worked as a pilot for the United States Air Force.

Inspector 2:
I worked as an Airway Transportation Systems Specialist, maintaining and repairing equipment used by aviation professionals.

Inspector 3:
I was an aerospace engineer for an airline carrier.

Narrator:
Here in AOV, we apply the knowledge we gained from our aviation careers to our oversight work.
That means we collect information about how people are doing their jobs, evaluate that information using aviation rules, and work with the Air Traffic Organization to make sure those rules are followed daily—to keep everyone safe.

Inspector (continued):
Many years ago, our team reviewed a report about parachute operation incidents over a three-year period.
When an Air Traffic Safety Inspector analyzes information, they're thinking critically about the relevant facts.
This data showed an increase in corrective action requests over time.

Narrator:
Our team of safety inspectors believed AOV's oversight services could help reduce future incidents.
We reviewed the rules that ensure parachute operations are safe and shared that information with the Air Traffic Organization, or ATO.
Together, AOV and ATO created a plan to add parachute jumping operations to aeronautical charts.
Think of aeronautical charts like Google Maps for the national airspace.

Narrator:
Team AOV followed up for a year and confirmed that parachute jumping operations were successfully added to the aeronautical charts.

Closing:
Thank you for watching to the end!
You've earned a digital Jr. AOV Badge for learning how to think like an Air Traffic Safety Inspector to help keep everyone safe in the NAS.
Learn more about STEM careers by visiting us at www.faa.gov or on our social media pages.

3. **Oversight: Rules in the National Airspace System**

Video Link:
https://www.youtube.com/watch?v=NNjjoKhnJro&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=3

Transcript:
Narrator:

Hello and thank you for your interest in learning about STEM careers in the Federal Aviation Administration, or FAA.

We are the Air Traffic Safety Oversight Service—also known as AOV.

Our virtual field trip will cover some activities that require rules in the National Airspace System, or NAS for short.

Continue watching to the end to earn your **Rules Part 1** digital Jr. AOV badge.

Rules are all around us.
We have rules in our homes, our schools, and our communities.

There are also rules in the NAS.
Let's take a look at some activities that have rules to follow.

Music playing

Airplane flying low over a farm, a parachute jumper gliding through the air, a young lady flying a drone, a dirigible flying over a stadium

You may have witnessed these activities in person, on television, or the internet.
Now you know these activities have rules—just like in our homes, schools, and communities.

Pause this video to think about the activities you just saw… and why rules are necessary in the National Airspace System, or NAS.

On-screen text/question:
"Why are rules necessary in the National Airspace System?"

There are many reasons rules are necessary in the NAS.

One of them is to help aviation professionals do their jobs safely.
Another is to keep the people on the ground safe as well.

Thank you for participating in this virtual field trip to the Air Traffic Safety Oversight Service.

Well done!
You've stayed to the end of the video and earned a digital **Jr. AOV Badge** for learning why rules are necessary in the NAS.

Learn more about STEM careers at www.faa.gov or on our social media pages.

4. **Oversight: Safety Risk Management**

Video Link:
https://www.youtube.com/watch?v=OAMhsrzMRZ8&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=4

Transcript:
Narrator:
Hello and thank you for your interest in learning about STEM careers in the Federal Aviation Administration, or FAA.
We are the Air Traffic Safety Oversight Service—also known as AOV.
Our virtual field trip will cover how Air Traffic Safety Inspectors conduct **Safety Risk Management** of the National Airspace System, or NAS for short.
Continue watching to the end to earn a **digital Jr. AOV badge**.

Narrator:
Welcome to the Air Traffic Safety Oversight Service—AOV.
Our panel of Air Traffic Safety Inspectors will explain how AOV conducts Safety Risk Management.

Host:
Hello Air Traffic Safety Inspectors.
Your question today is: **How do you handle Safety Risk Management?**

Inspector:

We use a process called the **D.I.A.A.T. model**.

- The **"D"** stands for **Describe the system**.
  This is where we describe and understand what needs to be done to prevent an accident.
  It's about understanding the environment where a change occurs.
- The **"I"** stands for **Identify hazards**.
  This is where we identify what can go wrong.

For example, pedestrians need to cross the street.
We must think about what dangers or actions could lead to an accident or injury.

- The **"A"** stands for **Analyze risk**.
  After identifying the potential risks, we analyze each one.

If a pedestrian crosses without using a crosswalk, we consider all the possible outcomes.

- The second **"A"** stands for **Assess risk**.
  This means evaluating each hazard based on **severity** and **likelihood**.

Host:
So far, we've covered:

- Describe the system
- Identify hazards
- Analyze risk
- Assess risk

The last part is **Treating the risk**.
Would you describe that for us?

Inspector:
Treating the risk means we look for ways to eliminate or reduce the effects of hazards when they are present.
For example, we could add traffic lights with crosswalks to give pedestrians a safe place to cross.
This is one way to add an additional measure or barrier to reduce risk.

Narrator:
Thank you, Air Traffic Safety Inspectors, for that informative explanation of how AOV handles Safety Risk Management.

Closing:
Well done!
You've stayed to the end of the video and earned a **digital Jr. AOV Badge** for learning how Air Traffic Safety Inspectors conduct Safety Risk Management of the National Airspace System.

Learn more about STEM careers at www.faa.gov or by following us on social media.

5. **AOV Credentialing Program**

Video Link:
https://www.youtube.com/watch?v=VaGRugJ7bNQ&list=PL5vHkqHi51DQQKvujrzGD60bhWC4RMDfV&index=5

Transcript:
Narrator:
Hello, and thank you for your interest in learning about STEM careers in the Federal Aviation Administration—or FAA.
We are the Air Traffic Safety Oversight Service, also known as **AOV**.
Our virtual field trip today will cover the **jobs that require an AOV Credential** in the National Airspace System—or **NAS**, for short.
Continue watching to earn your **digital Jr. AOV badge**.

Narrator:
Junior AOVers, during today's field trip, we will meet with a few members of the **Air Traffic Organization**, or **ATO**, who hold an AOV Credential in the NAS.
They will explain how they perform their duties to maintain the safety of the National Airspace System.

Designated Examiner
Speaker:
Junior AOVers, an AOV credential confirms that the holder has met—and continues to maintain—the skills needed to perform **direct safety-related services**.

AOV's Credentialing Program is a key safety initiative that ensures every ATO employee has the capabilities required to maintain **public trust** in our safety systems.
As a **Designated Examiner**, I'm responsible for verifying that employees comply with proficiency training requirements.

Control Tower Operator Examiner
Speaker:
As a **Control Tower Operator Examiner**, I help maintain the **security of our tests**.
I also administer the **Control Tower Operator practical examinations**.
My duties include completing forms and submitting test results and official records.

Proficiency Manager
Speaker:
As a **Proficiency Manager**, I'm responsible for making sure **Designated Examiners** and **Control Tower Operators** meet the requirements of AOV's Credentialing Program.
I monitor the activities of Control Tower Operator Examiners assigned to specific facilities in my area of responsibility, and I assist Designated Examiners in resolving any problem areas.

Narrator:
Today, you learned how AOV Credential holders perform their duties to **maintain the safety** of the National Airspace System.
Thank you for participating!
You've earned a **digital Jr. AOV Badge** for learning about AOV's **Credentialing Program** in the NAS.
Learn more about STEM careers by visiting us at www.faa.gov or on our social media pages.

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