Federal Aviation Administration

Aviation, Animation & ELA

with FAA's Aviation Career Video Series

Teacher Guide for Grades: 6-8

Lesson 1 of 5

Contents

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 1-5: 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:

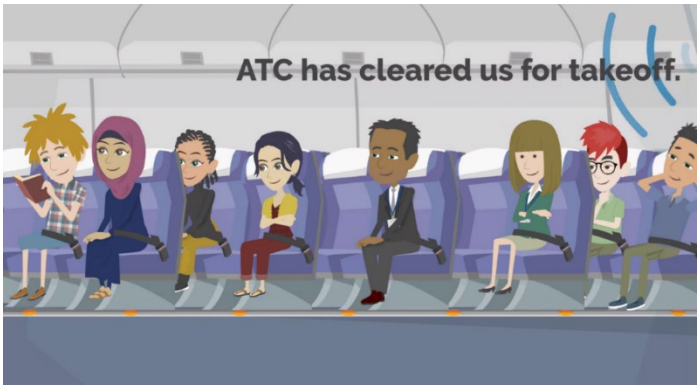
1. **Identify** the main ideas and key roles of Air Traffic Controllers and Airway Transportation Systems Specialists from segmented video content.
2. **Analyze** how visuals in the video support and enhance understanding of the narrated information about aviation careers.
3. **Collaborate** with peers 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

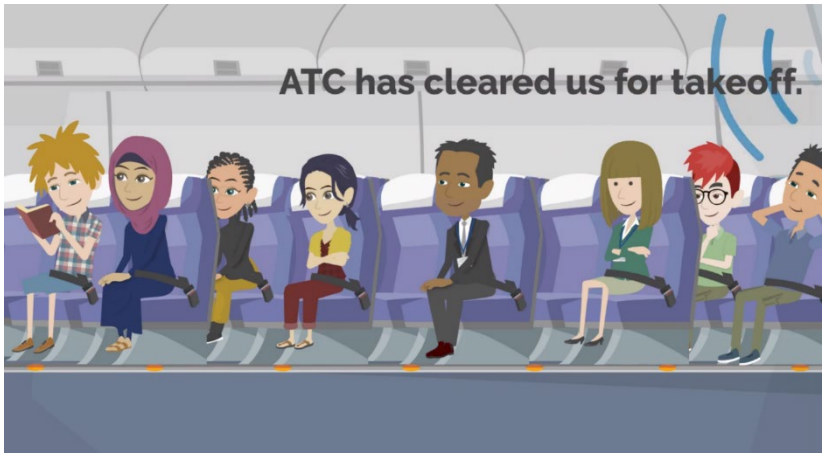
Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement	Bloom's Level(s)	CCR/ELA Standard Alignment
Quality *(Delivery or completion)*	**engaging** (if applicable); written/digital submission is complete and well-formatted.	with **minor issues** in clarity or completion.	is **partially complete** 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.

Video Transcript

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.