Improving Adolescent Literacy Across Content Areas | Skinny PLC Packet

Participant Guide



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Improving Adolescent Literacy Across Content Areas

Teacher-Facing PLC Packet | Skinny PLC

Grades 4–12 • ELA, Science, Social Studies • ~60 Minutes

★ Today's Outcome

You will leave with a draft lesson plan and a ready-to-use literacy strategy you can implement immediately in your content-area classroom.

Why This Matters

Many students can decode text but still struggle to make meaning from complex academic reading. Content-area teachers play a critical role in helping students:

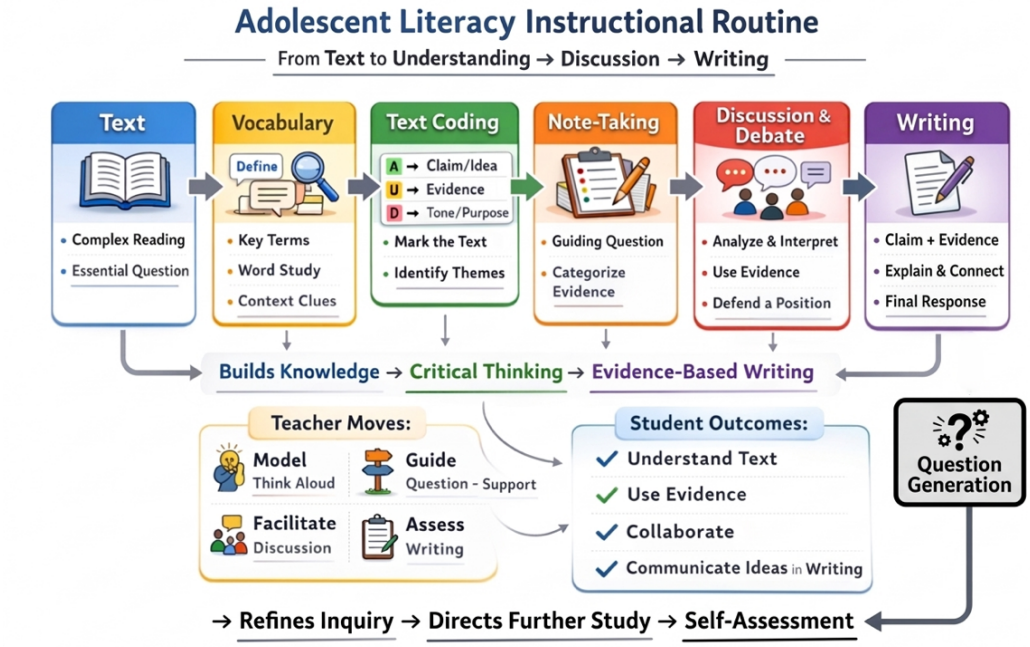
- Understand discipline-specific vocabulary
- Use strategies to comprehend complex texts
- Discuss ideas using evidence
- Stay engaged and motivated as readers

This PLC focuses on embedding literacy into content instruction—not adding something extra.

PLC Learning Targets

By the end of this PLC, you will:

- Identify high-impact adolescent literacy practices
- Experience a literacy strategy as a learner
- Apply the strategy by drafting a lesson from your own content



Skinny PLC Recommended Schedule

Session 1 — Understanding the Practices (~60 minutes)

- Part 1: Evidence-Based Literacy Practices (15 min)
- Part 2: Video — Seeing the Practices in Action (24 min)
- Part 3: Directed Note-Taking — Teacher Experience (15 min)
- Wrap-up and preview of Session 2 (6 min)

Session 2 — Seeing the Model in Action (~60 minutes)

- Debrief from Session 1 (5 min)
- Part 4: Sample Lesson Walk-Through and Review (45 min)
- Preview of Session 3 (10 min)

Session 3 — Planning for Your Classroom (~60 minutes)

- Debrief from Session 2 (5 min)
- Part 5: Draft Your Own Lesson (45 min)
- Part 6: Reflection & Commitment (10 min)

Part 1: Evidence-Based Literacy Practices

Review the Adolescent Literacy Infographic for your content area (Social Studies, ELA, or Science). Most, but not all, of the steps in the instructional sequence are included in the infographics. Subsequent sessions will introduce participants to all steps in the instructional sequence.

Content Area	Link	QR code
Social Studies	https://bit.ly/3N83hPB	
English/Language Arts	https://bit.ly/41y0Vgi	
Science	https://bit.ly/4crB6Yh	

In this model, students move from identifying evidence in text, to organizing that evidence, to defending a position using that evidence in discussion and writing.

The four practices highlighted are:

1	Explicit Vocabulary Instruction
2	Explicit Comprehension Strategy Instruction
3	Extended Discussion of Text Meaning
4	Student Motivation and Engagement

Reflection	Growth Area
Which practice feels strongest in your current instruction?	Which practice do you want to strengthen?

Part 2: Video – Seeing the Practices in Action

Improving Adolescent Literacy (Mississippi Public Broadcasting – 24 minutes)

Video link: https://www.youtube.com/watch?v=_rzc8ZO7wpc

As you watch, consider:

"What do teachers do that helps students actively make meaning from text?"

Part 3: Directed Note-Taking – Teacher Experience

You will now experience the same strategy your students will use. Take notes as you watch the video, organized by the categories below.

Guiding Question: How do effective content teachers help students make meaning from complex texts?

Paragraph Number	Notes	Vocabulary Instruction	Comprehension Strategy	Discussion Structure

This is the same type of tool students use to organize evidence from a text. You just experienced it as a learner.

End of Session 1 *Before Session 2, participants should review their notes from the video and be prepared to share one observation about how teachers supported student comprehension.*

Session 2 — Seeing the Model in Action (~60 minutes)

- Debrief from Session 1 (5 min)
- Part 4: Sample Lesson Walk-Through and Review (45 min)
- Preview of Session 3 (10 min)

Part 4: Sample Lesson Walk-Through and Review

Review the completed sample lesson. As you read, notice:

- Where vocabulary is explicitly taught
- Where students use comprehension strategies
- How discussion is structured
- How students are engaged before and during reading

> ✓ **Lesson Quality Check**
>
> As you review the lesson, consider:
>
> - Do the note-taking categories lead to a meaningful debate?
> - Does the discussion question align with the final writing task?
> - Are students required to use evidence to support their thinking?

Sample Lesson: FDR — Day of Infamy Speech | Social Studies / ELA | Grades 8–12

Step 1: Hook Question (Motivation & Engagement)

Purpose: Increase student motivation and engagement. (Recommendation 4)

Engage students in the text by connecting it to real-world situations or prior knowledge.

Teacher Guidance:

- Craft a question or scenario that is relevant to students' lives.
- Ask the question **pre-reading** and model thinking aloud.
- Encourage students to make predictions or share experiences related to the text.

Hook Question: Imagine your community has just faced a sudden attack or disaster. What are the responsibilities of leaders during times like these?

Step 2: Predictive Writing

Purpose: Explicit comprehension strategy instruction. (Recommendation 2)

Activate prior knowledge and set a purpose for reading.

Teacher Guidance:

- Model predicting content based on headings, images, or prior knowledge.
- Have students record predictions in a journal or graphic organizer.
- Emphasize connection to the text's structure and purpose.

Predict: How do you think a president would try to persuade Americans to act after an unexpected attack?

Step 3: Vocabulary Instruction

Purpose: Develop students' academic vocabulary to support comprehension. (Recommendation 1)

Teacher Guidance:

- Identify key words for each lesson; include word parts, definitions, and context clues.
- Model how to use strategies like word roots, prefixes/suffixes, and context to determine meaning.
- Encourage students to annotate or create vocabulary cards.
- Include accessibility guidance for students using assistive technology (e.g., screen readers).

Paragraph Number	Vocabulary Word	Word Parts / Context Clue
3	**Infamy**	Latin root infamis = "of bad reputation" — Word parts
12	**Premeditated**	From praemeditari: prae- (before) + meditari (to ponder). Paragraph 5 confirms the attack was "deliberately planned" — Word parts and context
16	**Dastardly**	"...unprovoked and dastardly attack" — Since the attack was not provoked, dastardly likely means horrible or despicable — Context

Step 4: Text Coding

Purpose: Teach students to identify and categorize key ideas, evidence, and questions in the text.

Similar to students showing their work in math class, text coding shows how students are thinking.

Teacher Guidance:

- Demonstrate coding symbols or colors and their meaning.
- Provide examples with guided practice; think aloud during coding.
- Ensure screen-reader accessibility for coding lines and symbols.
- Have students apply coding independently or in pairs.

Text Codes:	**Teacher Tip:**
• A = Anger / Outrage • U = Unity / Shared Identity • D = Determination / Resolve	*Choose codes that are slightly ambiguous. Students should be able to defend their coding choices during discussion.*

Step 5: First Written Response

Purpose: Integrate reading and writing

After reading and coding the speech, respond: How does FDR use emotion to persuade Americans to support a declaration of war? Use examples from the text.

Step 6: Directed Note-Taking

Purpose: Build comprehension by connecting coding to structured notes. (Recommendation 2)

Teacher Guidance:

- Provide a template with guiding questions aligned to comprehension strategy instruction.
- Model how to summarize, paraphrase, and record key evidence from the text.
- Highlight connections to final discussion or writing tasks.
- Encourage students to reference their notes during discussions.

Guiding Question: How does FDR address the nation after the attacks of December 7, 1941?

Paragraph Number	Notes	Anger / Outrage	Unity	Determination

Step 7: Extended Text Discussion

Purpose: Promote higher-order thinking and application of comprehension strategies. (Recommendation 3)

Teacher Guidance:

- Facilitate discussion using pre-prepared questions linked to text coding and notes.
- Encourage students to provide evidence from the text to support ideas.
- Highlight academic language and discourse practices.

Discussion Question: Was FDR's speech more effective in uniting Americans through emotion or through factual evidence? Use text evidence to support your position.

Step 8: Question Generation

Purpose: Deepen comprehension through questioning

Guiding Question: How does FDR address the nation after the attacks of December 7, 1941?

Paragraph Number	Question	Anger / Outrage	Unity	Determination	Other
3	Why did FDR begin with outrage rather than a call for action?	X			
	If Pearl Harbor did not happen, would the US have gone to war?				X

Step 9: Final Written Response

Purpose: Synthesize comprehension, vocabulary, and discussion learning into written responses.

Teacher Guidance:

- Model how to transform notes and discussion points into structured writing.
- Connect writing prompts explicitly to prior coding and vocabulary instruction.
- Provide feedback on content, evidence use, and language.

Final Response: Was FDR's speech more effective in uniting Americans through emotion or through factual evidence? Take a position and support it with evidence from the text.

End of Session 2 *Before Session 3, review the sample lesson and identify one element you want to incorporate into your own lesson plan.*

Session 3 — Planning for Your Classroom (~60 minutes)

- Debrief from Session 2 (5 min)
- Part 5: Draft Your Own Lesson (45 min)
- Part 6: Reflection & Commitment (10 min)

Part 5: Draft Your Own Lesson

Use the template below to plan a lesson from your own content area. Focus on clarity and usability, not perfection.

> **Your note-taking categories should lead directly to your discussion question and final writing task.**

Mini PLC Lesson Plan Template | Improving Adolescent Literacy Across Content Areas

Content Area:	**Grade Level(s):**	**Lesson Length:**
☐ ELA ☐ Science ☐ Social Studies ☐ Other: _____	_____	☐ 1 period ☐ 2 periods ☐ Other_____

Text / Material Title:

_____

Guiding / Essential Question

This question should require students to analyze, interpret, or evaluate information from the text.

_____

_____

_____

Student Motivation & Engagement

Hook Question (world-relevant, pre-reading):

This question should be world-relevant and asked prior to students reading the text to increase student motivation and engagement. This conversation should not last longer than 5 minutes.

_____

_____

_____

Explicit Vocabulary Instruction

List 4–8 academic or discipline-specific words critical to understanding the text. Include word parts, context, and definitions to support comprehension.

Paragraph Number	Vocabulary Word	Strategy (Word parts, context, or both)	Definition / Context

Comprehension Strategy Instruction

Select at least one comprehension strategy to model. Plan teacher modeling before releasing students to work independently.

Strategy Selected:	**Teacher Modeling Plan:**
☐ Text Coding ☐ Directed Note-Taking ☐ Question Generation ☐ Summarizing / Paraphrasing ☐ Graphic Organizer ☐ Other: _____	*How will you model this strategy before releasing students?*

Note-Taking Categories (if using Directed Note-Taking):

Guiding Question: *(Your guiding question here)*

Paragraph Number	Notes	Category 1	Category 2	Category 3

Extended Text Discussion

The discussion question should align to your guiding question and note-taking categories.

Discussion Structure:	**Teacher Role During Discussion:**
☐ Small-group discussion ☐ Whole-group discussion ☐ Structured debate ☐ Socratic-style	☐ Ask probing questions ☐ Press for evidence ☐ Encourage multiple interpretations ☐ Facilitate rebuttal or elaboration

Final Student Task

Select one final student task. Make sure that students use notes, coded text, and vocabulary understanding to develop a response that answers the guiding question and includes evidence from the text.

Task Type:	**Final Writing Prompt:**
☐ Written response ☐ Explanation or argument ☐ Short constructed response ☐ Other: _____	

Part 6: Reflection & Commitment

One literacy practice I am committed to trying in my classroom is…

What felt most doable today?	What support would help you implement this?

★ **Key Takeaway**

Literacy instruction is not separate from content learning.

When students are taught how to read, think, and talk about texts, they learn content more deeply—and more independently.

Appendix A: Skinny PLC Full Lesson Plan Template

Improving Adolescent Literacy Across Content Areas

Lesson Overview

Content Area:	Grade Level(s):	Lesson Length:
☐ ELA ☐ Science ☐ Social Studies ☐ Other: _____	_____	☐ 1 period ☐ 2 periods ☐ Other_____

Text / Material Title:

Standards & Learning Focus

Relevant Content Standard(s)

List the primary standard(s) this lesson addresses.

Literacy Focus

Check all that apply.

- ☐ Vocabulary development
- ☐ Comprehension strategies
- ☐ Evidence-based discussion
- ☐ Argumentation / explanation
- ☐ Student engagement & motivation

Essential / Guiding Question

This question should require students to analyze, interpret, or evaluate information from the text.

Increase Student Motivation and Engagement

Hook Question (world-relevant, pre-reading):

This question should be world-relevant and asked prior to students reading the text to increase student motivation and engagement.

Student Options (if applicable):	**Teacher Expectations:**
☐ Open-ended ☐ Choose between positions ☐ Agree / Disagree / Depends *Example options:*	*What do students need to do when responding?* ☐ Explain reasoning ☐ Reference personal experience ☐ Listen and respond to others

Provide Explicit Vocabulary Instruction

Key Vocabulary

List 4–8 academic or discipline-specific words critical to understanding the text.

Vocabulary Word	Strategy	Definition / Context

Vocabulary Activity

Select one vocabulary strategy to model.

- ☐ Linear Array
- ☐ Frayer Model
- ☐ Word Study / Morphology
- ☐ Other: _____

If using a Linear Array:

Anchor Words: _____ → _____

Intermediate Words (student- or teacher-generated):

Selected Comprehension Strategy

Select one comprehension strategy to model. Plan teacher modeling before releasing students to work independently.

- ☐ Text coding
- ☐ Directed note-taking
- ☐ Question generation
- ☐ Summarizing / paraphrasing
- ☐ Graphic organizer
- ☐ Other: _____

Text Codes (if using Text Coding)

*Create codes that are **aligned with the text** and the learning goals.*
*Choose a **symbol, color, or annotation** that students will use consistently to mark the text.*
*Align codes with **key concepts, themes, or strategies** that you want students to explore.*
*Distribute codes **evenly throughout the text**, ensuring all sections provide opportunities for coding.*
*Keep the number of codes **manageable (2–4 per passage)** to avoid overwhelming students.*
*Consider **how codes will support discussion and writing**, so each code has a clear purpose.*

_____ = _____
_____ = _____
_____ = _____
_____ = _____

Directed Note-Taking (if applicable)

Note-Taking Categories: _____

Guiding Question: *(Your guiding question here)*

Paragraph Number	Notes	Category 1	Category 2	Category 3

Teacher Modeling Notes

How will you model this strategy before releasing students?

Discussion Question

This should align directly to the guiding question and note-taking categories.

Discussion Structure:	Teacher Role During Discussion:
☐ Small-group discussion ☐ Whole-group discussion ☐ Structured debate ☐ Socratic-style	☐ Ask probing questions ☐ Press for evidence ☐ Encourage multiple interpretations ☐ Facilitate rebuttal or elaboration

Student Task

- Review notes and text evidence
- Take a position or develop an interpretation
- Prepare to justify thinking with evidence

Directed Note-Taking and Question Generation Templates

Directions: Record notes containing the most important information relevant to the guiding question and record any questions that you still have after completing the lesson below your notes.

Title: _____

Guiding Question: _____

Paragraph Number	Notes and Questions	Category 1	Category 2	Category 3

Appendix B: Adolescent Content Area Lesson Plan Rubric

Use this rubric to review your draft lesson plan and identify areas for revision.

For each component, check whether the criteria are met. You may note suggested revisions in the margin or in discussion with colleagues.

Component	Criteria Met	Criteria Not Met	✓
Hook Question	• Relevant for students • Generates discussion • Relates generally to the topic the students will read about	• Not relevant for students • Does not generate discussion • Does not relate to the topic students will read about	☐
Writing Prompts	• Provides opportunities for students to predict, respond to reading, and elaborate after reading and discussion • Has a continuum from the first to the second to the final written response • Final writing prompt is also the question that will serve as the discussion question. It must require students to take a position.	• Does not provide opportunities to predict, respond, and elaborate • Does not have a continuum from the first to the second to the final written response • Final writing prompt does not require students to take a position	☐
Vocabulary	• Are words that students may not know • Are words that are critical to understanding the text or are general academic words • Are words that may lend themselves to modeling use of context clues, morphology, or punctuation to determine meaning	• Words students likely already know • Words not critical to understanding the text or general academic vocabulary • Words that do not lend themselves to strategy modeling	☐
Text Coding	• Are related to important ideas or concepts in the text • There is enough information in the text for those codes • May be somewhat ambiguous (students may code the same information differently) to promote discussion • Require students to think as they read	• Not related to important ideas or concepts in the text • Insufficient information in the text for those codes • Too obvious — students will all code identically, limiting discussion • Do not require active thinking during reading	☐

Component	Criteria Met	Criteria Not Met	✓
Directed Note-Taking	• Categories are related to important ideas or concepts in the text • Categories can be debated in a discussion • There is enough information in the text for each category • There is a guiding question for note-taking that will lead students toward the debate	• Categories not related to important ideas in the text • Categories cannot be meaningfully debated • Insufficient text evidence to support the categories • No guiding question to focus note-taking toward the discussion	☐
Extended Text Discussion	• The discussion question demonstrates the following: there is enough evidence in the text on aspects addressed in the question to conduct a debate • The question is the same as the final written writing prompt	• Insufficient text evidence to sustain a debate on the question • The discussion question and the final writing prompt are not aligned	☐
Student Question Generation	• There is an opportunity for students to generate questions and record them on a graphic organizer so the lesson can be extended	• No opportunity for students to generate and record questions for extended inquiry	☐

Notes / Suggested Revisions:

This rubric is aligned to the What Works Clearinghouse Practice Guide: Improving Adolescent Literacy and materials developed by the Florida Center for Reading Research with funding provided by the Hardin Foundation.

Appendix C: Sample Facilitation Lessons

FDR – Day of Infamy | GWB – September 11 Address | The Celebrated Jumping Frog | NASA Journey to Mars

Note: Full texts for each lesson are provided in Appendix D.

Lesson 1: FDR — Day of Infamy Speech | Social Studies / ELA | Grades 8–12

Materials: Text of FDR's December 8, 1941 address (see Appendix D), sticky notes, chart paper, markers, student copies of: Directed Note-Taking graphic organizer, Question Generation graphic organizer, Shaping Your Written Response sheet.

Preparation:

- Number paragraphs of the speech
- Prepare example notes for Directed Note-Taking
- Prepare example questions for Question Generation

Step 1: Hook Question

Purpose: Recommendation 4 (Student Motivation & Engagement)

Small Group Facilitator for Hook Question: _____

Hook Question: Imagine your community has just faced a sudden attack or disaster. What are the responsibilities of leaders during times like these?

Step 2: Predictive Writing

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Writing Prompts: _____

Predict: How do you think a president would try to persuade Americans to act after an unexpected attack?

Step 3: Vocabulary Instruction

Purpose: Recommendation 1 (Explicit Vocabulary Instruction)

Small Group Facilitator for Vocabulary: _____

Paragraph Number	Vocabulary Word	Word Parts / Context Clue
3	**Infamy**	Latin root infamis = "of bad reputation" — Word parts
12	**Premeditated**	From praemeditari: prae- (before) + meditari (to ponder). Paragraph 5 confirms the attack was "deliberately planned" — Word parts and context
16	**Dastardly**	"...unprovoked and dastardly attack" — Since the attack was not provoked, dastardly likely means horrible or despicable — Context

Step 4: Text Coding

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Text Coding: _____

Teacher models coding the first portion of the speech. Students code independently, then compare with a partner.

Text Codes:	**Teacher Tip:**
• A = Anger / Outrage • U = Unity / Shared Identity • D = Determination / Resolve	*Choose codes that are slightly ambiguous. Students should be able to defend their coding choices during discussion.*

Step 5: First Written Response

Purpose: Integrate reading and writing

Small Group Facilitator for Writing Prompts: _____

After reading and coding the speech, respond: How does FDR use emotion to persuade Americans to support a declaration of war? Use examples from the text.

Step 6: Directed Note-Taking

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Directed Note-Taking: _____

Guiding Question: How does FDR address the nation after the attacks of December 7, 1941?

Paragraph Number	Notes	Anger / Outrage	Unity	Determination
1	"Yesterday, December 7, 1941—a date which will live in infamy..."	**X**		

Step 7: Extended Text Discussion

Purpose: Recommendation 3 (Extended Discussion of Text Meaning)

Small Group Facilitator for Discussion: _____

Discussion Question: Was FDR's speech more effective in uniting Americans through emotion or through factual evidence? Use text evidence to support your position.

Step 8: Student Question Generation

Purpose: Deepen comprehension through questioning

Small Group Facilitator for Question Generation: _____

Teacher models generating a question from the text. Students generate their own questions.

Step 9: Final Written Response

Small Group Facilitator for Writing Prompts: _____

Final Response: Was FDR's speech more effective in uniting Americans through emotion or through factual evidence? Take a position and support it with evidence from the text.

Lesson 2: President George W. Bush — Address to the Nation, September 11, 2001 | Social Studies / ELA | Grades 8–12

Materials: Text of Bush's September 11 Address (see Appendix D), sticky notes, chart paper, markers, student copies of: Directed Note-Taking graphic organizer, Question Generation graphic organizer, Shaping Your Written Response sheet.

Preparation:

- Number paragraphs of the speech
- Prepare example notes for Directed Note-Taking
- Prepare example questions for Question Generation

Step 1: Hook Question

Purpose: Recommendation 4 (Student Motivation & Engagement)

Small Group Facilitator for Hook Question: _____

Teacher explains that students will read a speech delivered by President George W. Bush on the evening of September 11, 2001, after terrorist attacks on the United States.

Hook Question: Imagine your country has just experienced a devastating attack that has shocked the entire nation. What responsibilities do leaders have when speaking to the public during a national crisis?

Step 2: Predictive Writing

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Writing Prompts: _____

Predict: How do you think a president might try to reassure and unite the nation after a traumatic national event?

Step 3: Vocabulary Instruction

Purpose: Recommendation 1 (Explicit Vocabulary Instruction)

Small Group Facilitator for Vocabulary: _____

Paragraph Number	Vocabulary Word	Word Parts / Context Clue
1	**Deliberate**	Suggests intentional planning — Context
2	**Chaos**	Extreme disorder or confusion — Context
3	**Resolve**	Firm determination — Context
9	**Harbor**	To provide shelter or support — Context
11	**Condolences**	Expressions of sympathy — Context

Step 4: Text Coding

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Teacher models coding the first portion of the speech. Students code independently, then compare with a partner.

Small Group Facilitator for Text Coding: _____

Text Codes:	**Teacher Tip:**
• G = Grief / Emotional Response • U = Unity / Shared National Identity • R = Resolve / Determination to Respond	*Some passages may reasonably be coded multiple ways. Use this ambiguity to drive discussion.*

Step 5: First Written Response

Purpose: Integrate reading and writing

Small Group Facilitator for Writing Prompts: _____

After reading and coding the speech, respond: How does President Bush use emotion and national identity to respond to the attacks of September 11? Use evidence from the text.

Step 6: Directed Note-Taking

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Directed Note-Taking: _____

Guiding Question: How does President Bush address the nation after the September 11 attacks?

Paragraph Number	Notes	Grief	Unity	Resolve
1	"Thousands of lives were suddenly ended by evil, despicable acts of terror."	**X**		

Step 7: Extended Text Discussion

Purpose: Recommendation 3 (Extended Discussion of Text Meaning)

Small Group Facilitator for Discussion: _____

Discussion Question: Which aspect of the speech is most important to its message—grief, unity, or resolve? Use text evidence to support your argument.

Students come to consensus within small groups, then present their position to the whole group. Record how many groups chose each category before and after discussion.

Step 8: Student Question Generation

Purpose: Deepen comprehension through questioning

Small Group Facilitator for Question Generation: _____

Teacher models generating a question from the text. Example: Why does Bush emphasize unity before discussing retaliation?

Step 9: Final Written Response

Small Group Facilitator for Writing Prompts: _____

Final Response: Which aspect of Bush's speech—grief, unity, or resolve—was most important to conveying his message to the nation? State a claim, cite evidence, and explain your reasoning.

Lesson 3: The Celebrated Jumping Frog of Calaveras County | ELA | Grades 6–10

Materials: Adapted text (see Appendix D), sticky notes, chart paper, markers, student copies of: Directed Note-Taking graphic organizer, Question Generation graphic organizer, Shaping Your Written Response sheet.

Preparation:

- Number paragraphs of the text
- Develop and display the Essential Question at the start of the lesson
- Select a small text segment and preplan coding examples to model
- Preplan note-taking examples and a model question for Question Generation

Step 1: Hook Question

Purpose: Recommendation 4 (Student Motivation & Engagement)

Small Group Facilitator for Hook Question: _____

Hook Question: Have you ever heard a story that sounded too strange to be true?

Step 2: Predictive Writing

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Writing Prompts: _____

Predict: What reasons do people have to tell stories to each other?

Step 3: Vocabulary Instruction

Purpose: Recommendation 1 (Explicit Vocabulary Instruction)

Small Group Facilitator for Vocabulary: _____

Paragraph Number	Vocabulary Word	Word Parts / Context Clue
1	**Remarkable**	Root: *mark* (sign, notable). Paragraph 1 says "Smiley was known for some remarkable and humorous stories," meaning that his stories were worthy of attention — Word parts and context
2	**Mining camp**	Compound: mine (excavate minerals) + camp (temporary settlement) = a temporary settlement established for workers involved in mining — Word parts
8	**Exaggerated**	Paragraph 8 tells us Smiley claimed the frog "could jump higher and farther than any frog in the entire country." Exaggerated most likely means greater, more extreme, or more dramatic than is true — Context
9	**Extraordinary**	Prefix: *extra-* (beyond) + Root: *ordinary* (normal, usual) = beyond usual or very unusual, exceptional — Word parts

Step 4: Text Coding

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Text Coding: _____

Teacher models coding by reading aloud. Students follow along, then code independently. Students share markings with a partner and defend differences.

Text Codes:	**Teacher Tip:**
• Trick — someone is being deceived • Truth — a lesson or honest observation • Entertain — humor or exaggeration for effect	*The same passage may be coded as both Trick and Entertain—encourage students to defend their reasoning.*

Step 5: First Written Response

Purpose: Integrate reading and writing

Small Group Facilitator for Writing Prompts: _____

After reading and coding the story, respond: Based on examples in this text, what is the purpose of storytelling?

Step 6: Directed Note-Taking

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Directed Note-Taking: _____

Guiding Question: Based on examples in this text, what is the purpose of storytelling?

Paragraph Number	Notes	Truth / Lesson	Entertain	Trick / Challenge
10	"...the stranger picked up Daniel Webster and quietly poured a handful of lead pellets down his throat."			**X**

Step 7: Extended Text Discussion

Purpose: Recommendation 3

Small Group Facilitator for Discussion: _____

Discussion Question: What is the most essential point of storytelling based on examples from this text? Use evidence to defend your position.

Students reach consensus within small groups and present to the whole group. Record group positions before and after discussion. Individual votes may also be recorded.

Step 8: Question Generation

Purpose: Deepen comprehension through questioning

Small Group Facilitator for Question Generation: _____

Teacher models generating a question from the text. Example: What other authors were famous for writing exaggerated (tall) tales like this during Mark Twain's time?

Students re-read and generate their own questions. Share common and significant questions whole-class.

Step 9: Final Written Response

Small Group Facilitator for Writing Prompts: _____

Final Response: Based on examples from this text and extended text discussion, what is the most essential point of storytelling?

Lesson 4: NASA Releases Plan Outlining Next Steps in the Journey to Mars | Science / Social Studies | Grades 7–12

Materials: NASA article (see Appendix D), sticky notes, chart paper, markers, student copies of: Directed Note-Taking graphic organizer, Question Generation graphic organizer, Shaping Your Written Response sheet.

Preparation:

- Number paragraphs of the article
- Develop and display the Essential Question at the start of the lesson
- Select a small text segment and preplan coding examples to model
- Preplan note-taking examples and a model question for Question Generation

Step 1: Hook Question

Purpose: Recommendation 4 (Student Motivation & Engagement)

Small Group Facilitator for Hook Question: _____

Hook Question: What are the benefits and risks of space exploration?

Step 2: Predictive Writing

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Writing Prompts: _____

Predict: Should humanity invest in manned space exploration?

Step 3: Vocabulary Instruction

Purpose: Recommendation 1 (Explicit Vocabulary Instruction)

Small Group Facilitator for Vocabulary: _____

Paragraph Number	Vocabulary Word	Word Parts / Context Clue
4	**Microgravity**	Micro- (very small) + gravity — Word part and context
5	**Cislunar**	Cis- (on this side of) + lunar (moon) — Word part and context
6	**Sustainable**	Sustain + -able (capable of being maintained) — Word part and context
12	**In-situ**	Latin: “in place” — context suggests using local Mars resources rather than bringing from Earth — Word part and context

Step 4: Text Coding

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Text Coding: _____

Teacher models coding by reading aloud. Students follow along, then code independently. Students share markings with a partner and defend differences.

Text Codes:	**Teacher Tip:**
• B = Biological Challenge • T = Technological Solution • C = Collaborative Effort	*Some passages address both biology and technology simultaneously—use this as a discussion point about how challenges and solutions interact.*

Step 5: First Written Response

Purpose: Integrate reading and writing

Small Group Facilitator for Writing Prompts: _____

After reading and coding the article, respond: What is the most essential factor in NASA’s plan to successfully send humans to Mars? Use evidence from the text.

Step 6: Directed Note-Taking

Purpose: Recommendation 2 (Comprehension Strategy Instruction)

Small Group Facilitator for Directed Note-Taking: _____

Guiding Question: What is the most essential factor in NASA's plan to successfully send humans to Mars?

Paragraph Number	Notes	Biology	Technology	Collaboration
4	Microgravity research on ISS tests human health for deep space missions	**X**		

Step 7: Extended Text Discussion

Purpose: Recommendation 3

Small Group Facilitator for Discussion: _____

Discussion Question: What is the most essential factor in NASA's plan to successfully send humans to Mars—addressing biological challenges, developing technology, or building collaborative partnerships? Use text evidence to defend your position.

Students reach consensus within small groups and present to the whole group. Record group positions before and after discussion.

Step 8: Question Generation

Purpose: Deepen comprehension through questioning

Small Group Facilitator for Question Generation: _____

Teacher models generating a complex question. Example: How would gravity cause changes in human function on Mars?

Students re-read and generate their own questions. Share common and significant questions whole-class.

Step 9: Final Written Response

Small Group Facilitator for Writing Prompts: _____

Final Response: According to the text and extended text discussion, what is the most essential factor in NASA's plan to successfully send humans to Mars?

Appendix D: Full Texts for Sample Facilitation Lessons

FDR – Day of Infamy | GWB – September 11 Address | The Celebrated Jumping Frog | NASA Journey to Mars

Lesson 1 Text: FDR — Day of Infamy Speech

"December 7, 1941 A Date Which Will Live in Infamy" Address to the Congress Asking That a State of War Be Declared Between the United States and Japan. December 8, 1941

Mr. Vice President, and Mr. Speaker, and Members of the Senate and House of Representatives:

YESTERDAY, December 7, 1941 a date which will live in infamy the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan.

The United States was at peace with that Nation and, at the solicitation of Japan, was still in conversation with its Government and its Emperor looking toward the maintenance of peace in the Pacific. Indeed, one hour after Japanese air squadrons had commenced bombing in the American Island of Oahu, the Japanese Ambassador to the United States and his colleague delivered to our Secretary of State a formal reply to a recent American message. And while this reply stated that it seemed useless to continue the existing diplomatic negotiations, it contained no threat or hint of war or of armed attack. It will be recorded that the distance of Hawaii from Japan makes it obvious that the attack was deliberately planned many days or even weeks ago. During the intervening time the Japanese Government has deliberately sought to deceive the United States by false statements and expressions of hope for continued peace. The attack yesterday on the Hawaiian Islands has caused severe damage to American naval and military forces. I regret to tell you that very many American lives have been lost. In addition American ships have been reported torpedoed on the high seas between San Francisco and Honolulu.

Yesterday the Japanese Government also launched an attack against Malaya. Last night Japanese forces attacked Hong Kong: Last night Japanese forces attacked Guam. Last night Japanese forces attacked the Philippine Islands. Last night the Japanese attacked Wake Island. And this morning the Japanese attacked Midway Island. Japan has, therefore, undertaken a surprise offensive extending throughout the Pacific area. The facts of yesterday and today speak for themselves. The people of the United States have already formed their opinions and well understand the implications to the very life and safety of our Nation.

As Commander in Chief of the Army and Navy I have directed that all measures be taken for our defense.

But always will our whole Nation remember the character of the onslaught against us. No matter how long it may take us to overcome this premeditated invasion, the American people in their righteous might will win through to absolute victory. I believe that I interpret the will of the Congress and of the people when I assert that we will not only defend ourselves to the uttermost but will make it very certain that this form of treachery shall never again endanger us.

Hostilities exist. There is no blinking at the fact that our people, our territory, and our interests are in grave danger.

With confidence in our armed forces with the unbounding determination of our people we will gain the inevitable triumph so help us God.

I ask that the Congress declare that since the unprovoked and dastardly attack by Japan on Sunday, December 7, 1941, a state of war has existed between the United States and the Japanese Empire.

Library of Congress

The President Requests War Declaration

Speech by Franklin D. Roosevelt, New York (Transcription)
http://www.loc.gov/resource/afc1986022.afc1986022_ms2201

Lesson 2 Text: President George W. Bush — Address to the Nation, September 11, 2001

8:30 P.M. EDT September 11, 2001

THE PRESIDENT: Good evening. Today, our fellow citizens, our way of life, our very freedom came under attack in a series of deliberate and deadly terrorist acts. The victims were in airplanes, or in their offices; secretaries, businessmen and women, military and federal workers; moms and dads, friends and neighbors. Thousands of lives were suddenly ended by evil, despicable acts of terror.

The pictures of airplanes flying into buildings, fires burning, huge structures collapsing, have filled us with disbelief, terrible sadness, and a quiet, unyielding anger. These acts of mass murder were intended to frighten our nation into chaos and retreat. But they have failed; our country is strong.

A great people has been moved to defend a great nation. Terrorist attacks can shake the foundations of our biggest buildings, but they cannot touch the foundation of America. These acts shattered steel, but they cannot dent the steel of American resolve.

America was targeted for attack because we're the brightest beacon for freedom and opportunity in the world. And no one will keep that light from shining.

Today, our nation saw evil, the very worst of human nature. And we responded with the best of America -- with the daring of our rescue workers, with the caring for strangers and neighbors who came to give blood and help in any way they could.

Immediately following the first attack, I implemented our government's emergency response plans. Our military is powerful, and it's prepared. Our emergency teams are working in New York City and Washington, D.C. to help with local rescue efforts.

Our first priority is to get help to those who have been injured, and to take every precaution to protect our citizens at home and around the world from further attacks.

The functions of our government continue without interruption. Federal agencies in Washington which had to be evacuated today are reopening for essential personnel tonight, and will be open for business tomorrow. Our financial institutions remain strong, and the American economy will be open for business, as well.

The search is underway for those who are behind these evil acts. I've directed the full resources of our intelligence and law enforcement communities to find those responsible and to bring them to justice. We will make no distinction between the terrorists who committed these acts and those who harbor them.

I appreciate so very much the members of Congress who have joined me in strongly condemning these attacks. And on behalf of the American people, I thank the many world leaders who have called to offer their condolences and assistance.

America and our friends and allies join with all those who want peace and security in the world, and we stand together to win the war against terrorism. Tonight, I ask for your prayers for all those who grieve, for the children whose worlds have been shattered, for all whose sense of safety and security has been threatened. And I pray they will be comforted by a power greater than any of us, spoken through the ages in Psalm 23: "Even though I walk through the valley of the shadow of death, I fear no evil, for You are with me."

This is a day when all Americans from every walk of life unite in our resolve for justice and peace. America has stood down enemies before, and we will do so this time. None of us will ever forget this day. Yet, we go forward to defend freedom and all that is good and just in our world.

Thank you. Good night, and God bless America.

END 8:35 P.M. EDT

Lesson 3 Text: The Celebrated Jumping Frog of Calaveras County

Adapted and Elevated from the Original by Mark Twain (Public Domain)

A young man traveled to a small town in California called Calaveras County. He was looking for a man named Leonidas W. Smiley, because a friend had told him that Smiley was known for some remarkable and humorous stories.

When the young man arrived, he found an old man named Simon Wheeler, who was sitting comfortably in a chair at the back of a quiet mining camp. Wheeler spoke in a slow, steady voice and didn't seem to be in a hurry about anything.

"I'm trying to find someone named Leonidas Smiley," the young man said politely.

Simon Wheeler's eyes lit up. "Smiley?" he said. "Well now, I can't say I know any Leonidas, but I did once know a Jim Smiley—and he was the most dedicated betting man you ever met."

The young man tried to clarify, but Wheeler had already launched into a long story.

"That Jim Smiley would bet on anything," Wheeler said. "If there were two birds sitting on a fence, he'd bet on which one would fly away first. He once placed a wager on a sick horse—and somehow, it won! He had a dog that looked too lazy to fight, and yet he still made money off of it."

The young man nodded, unsure whether to interrupt.

"But the most exaggerated tale," Wheeler continued, "was about his frog. Smiley caught a frog and trained it for three whole months. He claimed it could jump higher and farther than any frog in the entire county. He even named it Daniel Webster, after the famous American speaker."

Wheeler chuckled softly and leaned back in his chair. "Smiley used to say that frog was extraordinary. One day, a stranger came to town, and Smiley couldn't help but brag about Daniel Webster. The stranger didn't have a frog of his own, so Smiley kindly offered to lend him one and said, 'I'll go catch us a frog to make things fair.'"

"But while Smiley was gone, the stranger picked up Daniel Webster and quietly poured a handful of lead pellets down his throat."

The young man's eyes widened. "Seriously? What happened?"

"Well," Wheeler said, grinning, "Smiley came back with another frog, and they set them down to race. The stranger's frog jumped once. Daniel Webster didn't budge. He just sat there, heavy as a rock. Smiley couldn't believe it. The stranger collected the money and walked off without a word."

"What did Smiley do?" the young man asked.

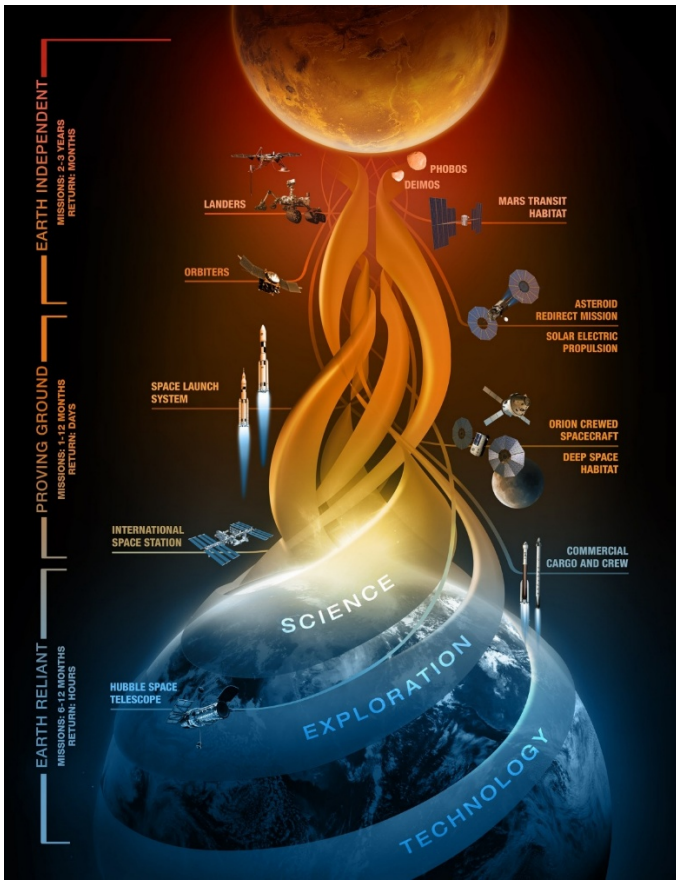
"He picked up Daniel Webster and said, 'What in the world is wrong with you?' Then he turned him upside down—and out spilled all those lead pellets. Smiley was furious, but by then the stranger was long gone."

Simon Wheeler leaned back again, smiling like he'd just shared the best story ever told. The young man stood there, unsure how to respond.

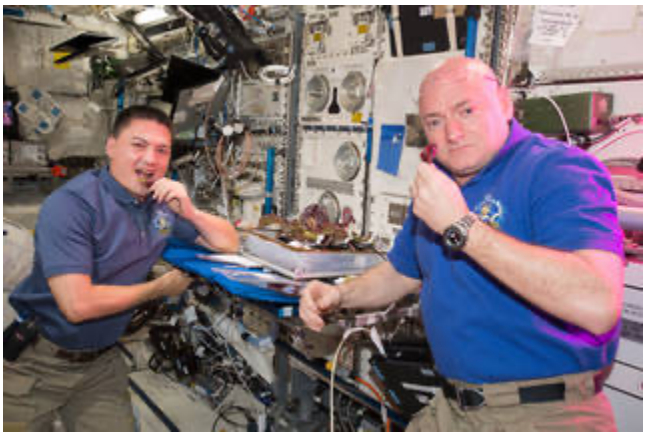
"Well, I reckon that's all," Wheeler said. "Unless you'd like to hear about the one-eyed cow Jim Smiley used to race on Sundays."

The young man quickly thanked him and left. He never did find Leonidas Smiley—but he certainly found a story worth remembering.

Lesson 4 Text: NASA Releases Plan Outlining Next Steps in the Journey to Mars



Journey to Mars art showing capability development leading to human missions to Mars.



NASA astronauts Kjell Lindgren, left, and Scott Kelly harvest the first red lettuce grown on the International Space Station

Selected Critical Time Frames and Decisions

DECISIONS MADE & IMPLEMENTATION UNDERWAY	DECISIONS FOR THE NEXT FEW YEARS, IN WORK NOW	DECISIONS UNDER STUDY NOW TO BE MADE IN THE NEXT DECADE
• Extend ISS operations to at least 2024 • Pursue an evolvable SLS via Exploration Upper Stage before advanced solid rocket boosters • Select an ARM baseline mission to return an asteroidal boulder to lunar orbit for subsequent crew rendezvous • Predeploy cargo and infrastructure through split missions	• Develop an exploration EVA suit for use on Orion missions • Define initial deep-space habitation capability • Select in-space transportation systems • Identify future Mars robotic precursor missions beyond Mars 2020 • Further define potential future exploration missions in cislunar space	• Select initial human missions beyond the Proving Ground • Identify the role of ISRU in the overall logistics strategy • Design Mars surface habitats • Develop Mars surface power generation

A table showing high-level, near-, and far-term decisions that must be made to continue on the journey to Mars.

Erin Mahoney **Oct 08, 2015** **RELEASE15-206**

NASA is leading our nation and the world on a journey to Mars, and Thursday the agency released a detailed outline of that plan in its report, “NASA’s Journey to Mars: Pioneering Next Steps in Space Exploration.”

“NASA is closer to sending American astronauts to Mars than at any point in our history,” said NASA Administrator Charles Bolden. “Today, we are publishing additional details about our journey to Mars plan and how we are aligning all of our work in support of this goal. In the coming weeks, I look forward to continuing to discuss the details of our plan with members of Congress, as well as our commercial and our international and partners, many of whom will be attending the International Astronautical Congress next week.”

The journey to Mars crosses three thresholds, each with increasing challenges as humans move farther from Earth. NASA is managing these challenges by developing and demonstrating capabilities in incremental steps:

Earth Reliant exploration is focused on research aboard the International Space Station. From this world-class microgravity laboratory, we are testing technologies and advancing human health and performance research that will enable deep space, long duration missions.

In the **Proving Ground**, NASA will learn to conduct complex operations in a deep space environment that allows crews to return to Earth in a matter of days. Primarily operating in cislunar space—the volume of space around the moon featuring multiple possible stable staging orbits for future deep space missions—NASA will advance and validate capabilities required for humans to live and work at distances much farther away from our home planet, such as at Mars.

Earth Independent activities build on what we learn on the space station and in deep space to enable human missions to the Mars vicinity, possibly to low-Mars orbit or one of the Martian moons, and eventually the Martian surface. Future Mars missions will represent a collaborative effort between NASA and its partners—a global achievement that marks a transition in humanity’s expansion as we go to Mars to seek the potential for sustainable life beyond Earth.

“NASA’s strategy connects near-term activities and capability development to the journey to Mars and a future with a sustainable human presence in deep space,” said William Gerstenmaier, associate administrator for Human Exploration and Operations at NASA Headquarters. “This strategy charts a course toward horizon goals, while delivering near-term benefits, and defining a resilient architecture that can accommodate budgetary changes, political priorities, new scientific discoveries, technological breakthroughs, and evolving partnerships.”

NASA is charting new territory, and we will adapt to new scientific discoveries and new opportunities. Our current efforts are focused on pieces of the architecture that we know are needed. In parallel, we continue to refine an evolving architecture for the capabilities that require further investigation. These efforts will define the next two decades on the journey to Mars.

CHALLENGES FOR SPACE PIONEERS

Living and working in space require accepting risks—and the journey to Mars is worth the risks. A new and powerful space transportation system is key to the journey, but NASA also will need to learn new ways of operating in space, based on self-reliance and increased system reliability. We will use proving ground missions to validate transportation and habitation capabilities as well as new operational approaches to stay productive in space while reducing reliance on Earth.

We identify the technological and operational challenges in three categories: *transportation*, sending humans and cargo through space efficiently, safely, and reliably; working in space, enabling productive operations for crew and robotic systems; and staying healthy, developing habitation systems that provide safe, healthy, and sustainable human exploration. Bridging these three categories are the overarching logistical challenges facing crewed missions lasting up to 1,100 days and exploration campaigns that span decades.

STRATEGIC INVESTMENTS TO ADDRESS PIONEERING CHALLENGES

NASA is investing in powerful capabilities and state-of-the-art technologies that benefit both NASA and our industry partners while minimizing overall costs through innovative partnerships. Through our evolvable transportation infrastructure, ongoing spaceflight architecture studies, and rapid prototyping activities, we are developing resilient architecture concepts that focus on critical capabilities across a range of potential missions. We are investing in technologies that provide large returns, and maximizing flexibility and adaptability through commonality, modularity, and reusability.

On the space station, we are advancing human health and behavioral research for Mars-class missions. We are pushing the state-of-the-art life support systems, printing 3-D parts, and analyzing material handling techniques for *in-situ* resource utilization. The upcoming eighth SpaceX commercial resupply services mission will launch the Bigelow Expandable Activity Module, a capability demonstration for inflatable space habitats.

With the Space Launch System, Orion crewed spacecraft, and revitalized space launch complex, we are developing core transportation capabilities for the journey to Mars and ensuring continued access for our commercial crew and cargo partners to maintain operations and stimulate new economic activity in low-Earth orbit. This secured U.S. commercial access to low-Earth orbit allows NASA to continue leveraging the station as a microgravity test bed while preparing for missions in the proving ground of deep space and beyond.

Through the Asteroid Redirect Mission (ARM), we will demonstrate an advanced solar electric propulsion capability that will be a critical component of our journey to Mars. ARM will also provide an unprecedented opportunity for us to validate new spacewalk and sample handling techniques as astronauts investigate several tons of an asteroid boulder – potentially opening new scientific discoveries about the formation of our solar system and beginning of life on Earth

We are managing and directing the ground-based facilities and services provided by the Deep Space Network (DSN), Near Earth Network (NEN), and Space Network (SN) – critical communications capabilities that we continue to advance for human and robotic communication throughout the solar system.

Through our robotic emissaries, we have already been on and around Mars for 40 years, taking nearly every opportunity to send orbiters, landers, and rovers with increasingly complex experiments and sensing systems. These orbiters and rovers have returned vital data about the Martian environment, helping us understand what challenges we may face and resources we may encounter. The revolutionary Curiosity sky crane placed nearly one metric ton – about the size of a small car – safely on the surface of Mars, but we need to be able to land at least 10 times that weight with humans – and then be able to get them off the surface.

These challenges are solvable, and NASA and its partners are working on the solutions every day so we can answer some of humanity's fundamental questions about life beyond Earth: Was Mars home to microbial life? Is it today? Could it be a safe home for humans one day? What can it teach us about life elsewhere in the cosmos or how life began on Earth? What can it teach us about Earth's past, present and future?

The journey to Mars is an historic pioneering endeavor—a journey made possible by a sustained effort of science and exploration missions beyond low-Earth orbit with successively more capable technologies and partnerships.

To learn more about NASA's journey to Mars, including the agency's latest scientific exploration of the Red Planet, visit:

https://www.nasa.gov/topics/journeytomars/index.html

-end-

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https://www.nasa.gov/news-release/nasa-releases-plan-outlining-next-steps-in-the-journey-to-mars/