


TEXT SET TOPIC: Disrupting Apollo 11

Grade Level Recommendation: Grade 1

Key Focus Areas for Design:

Counternarratives **Current Events** **Identity** Language¹ Perspectives Social Justice

Topic: This text set is about the Black, female scientists and mathematicians who contributed to the Apollo 11 moon landing. It also connects to space research and travel today, including the many different people who work in this field.

Curriculum Connection:  This text set can be done as is but is also suggested as a companion resource for [Core Knowledge Language Arts - Grade 1, Domain 6 - Astronomy](#). See additional curriculum-specific reflections below.

Context/Rationale/Reflections: In this unit, students build their knowledge of astronomy, including the history of the study of space and the Apollo 11 moon landing. The provided materials focus on white, male astronauts and space staff (in particular around the Apollo 11 moon landing), ignoring contributions of many other people. Provided lessons also do not connect to astronomers today or highlight more inclusive representation of the field.

Important teacher notes for this text set

- Consider using an essential question to frame these resources: *Who and what makes space exploration possible?* You might also use an interactive anchor chart of all of the people and roles explored throughout this text set and unit.



Resources to build teacher background knowledge:

[Women of Apollo: Meet the human computers, engineers and scientists who made the moon landing a reality](#), by Jessica Q. Chen and Robert Meeks: This interactive website from the LA Times explores the many (often ignored) contributions of women to the Apollo 11 space landing.

[NASA wants to land Americans back on the moon. These women are making it happen](#), Today show: Highlighting the “women behind the Artemis program”—NASA’s new space program to explore the moon by 2024.



A note for multilingual students:



Text Sets are meant to support knowledge building! Support opportunities for student [translanguaging](#) while using this text set by encouraging students to write, discuss, and present in their home language(s), English, or a combination while they are learning.

¹ While language was not a central focus of this text set design, an interview conducted in Spanish and English is included as a resource.

Note: This text set contains two complimentary sections of resources, labeled in the table below: 1) Disrupting Apollo 11 and 2) Space Study and Astronauts Today.

Text/ Resource	Author/ Creator	Brief Description/Notes	Why use this resource?	Considerations for using this resource
Disrupting Apollo 11: Resources in this section focus on expanding the narratives around the first moon landing.				
Five Women Who Made the Moon Landing Possible PHOTOS	New York Times	Features photographs of: <ul style="list-style-type: none"> • JoAnn Morgan, launch controller • Margaret Hamilton, computer scientist • Mary Jackson, aeronautical engineer • Katherine Johnson, aerospace technologist • Judy Sullivan, biomedical engineer 	Offers representation of the women who contributed to the Apollo 11 moon landing. Opportunity for students to reflect on the perspectives included in the unit.	Consider comparing these images to the images included in the anchor text (which depict white men) and completing a Notice-Wonder chart.
Hidden Figures READ-ALOUD (VIDEO) 980 Lexile	Harper Kids from Home	Tells the story of four Black, female mathematicians (Dorothy Vaughan, Mary Jackson, Katherine Johnson, and Christine Darden) and their role at NASA during the Space Race.	Provides a counternarrative to the dominant story of the Apollo 11 mission told in the anchor text from the provided materials.	
NASA Trailblazer: Katherine Johnson VIDEO	National Geographic	Katherine Johnson was a mathematician and worked at NASA to support teams of astronauts going to space and to the moon.	Dives deeper into the perspective of one Black, female mathematician featured in the <i>Hidden Figures</i> text above.	

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Katherine Johnson JUICY SENTENCE	National Geographic Kids	Sentence to deconstruct and reconstruct with students about Katherine Johnson: <i>“One of her biggest accomplishments at NASA was helping calculate the trajectory, or path, of the country’s first human spaceflight in 1961, making sure astronaut Alan B. Shepard, Jr., had a safe trip.”</i>	Expands on the narrative told about Alan B. Shepard Jr. in the anchor text from the provided materials.	Learn more about juicy sentences here .
Space Study and Astronauts Today: Resources in this section focus on connecting to current events and people studying space.				
What is the Artemis Program? TEXT	NASA	Short text about Artemis, the new space program to explore the moon by 2024 that will land the first woman and person of color on the moon.	Connects to space travel, astronomy, astronomers, and space scientists today.	Student excerpt: After reading together, excerpt the “What Will Artemis Astronauts Do on the Moon?” section for students to read and reread (e.g., echo, choral, partner and independent practice). Additional activity: Select an Artemis Team astronaut to learn about (each astronaut includes a short biography video).
Forward to the Moon and on to Mars (pages 11–12) TEXT	NASA	Brief informational text and diagram about the NASA Space Launch System that will be used in the Artemis mission.	Connects to space travel, astronomy, astronomers, and space scientists today.	

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Joe Acaba at ISS talks to students in Puerto Rico VIDEO	NASA TV, Posted by Zachary and Betsy Jones	Interview with Joe Acaba, Puerto Rican astronaut, from the International Space Station.	Interview conducted in Spanish and English , including translanguaging.	Consider using the guiding questions underneath the video to engage in discussion.
Schuyler Borges Research Interests WEBSITE/PHOTOS	500 Queer Scientists, Schuyler Borges' Weebly	Schuyler Borges brief biography. Explore the photos on Schuyler Borges' website to learn more about why they study Antarctica to learn more about life in space.	Provides representation of nonbinary astronomy student and connection to understanding that there are many roles that support the study and exploration of space (not just astronauts).	Biographies on 500 Queer Scientists are “individual, self-submitted bios and stories intended to boost the recognition and awareness of queer scientists.” Introduce Schuyler Borges’ pronouns (they/them). For support discussing pronouns, see here or here .
Artemis I Patch Apollo 11 Patch IMAGES	NASA	NASA mission patches for the Apollo 11 and the Artemis I missions.	Offers opportunity to engage with graphic design and imagery related to this content.	See option for a related culminating experience below.

Options for culminating experiences:

- Invite students to design a “refreshed” Apollo 11 or Artemis patch and/or hashtag with a description, based on all that they have learned throughout the text set.
- Engage in a class discussion about the essential question: *Who and what makes space exploration possible?* Then, ask students to select an astronaut/astronomy scientist from the text set to write/draw about as part of a class book.
- Connect with astronomers from 500 Queer Scientists or local community members with a connection to astronomy. If possible, students can plan questions, conduct an interview, and summarize learnings.