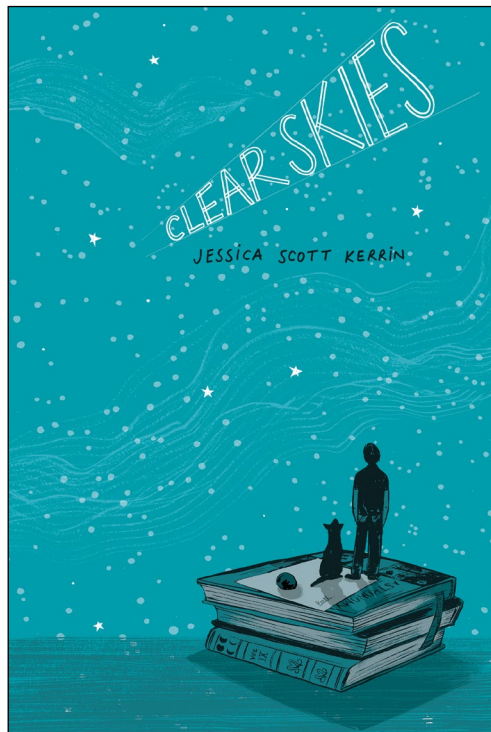




# GROUNDWOOD STUDY GUIDES

## Clear Skies

*Written by Jessica Scott Kerrin*



**As the US/Soviet Space Race heats up in 1961, eleven-year-old Arno finds his dreams of becoming an astronomer exploding like an extragalactic supernova.**

### **CURRICULUM CONNECTIONS**

Ages 8 to 11 / Grades 3 to 6

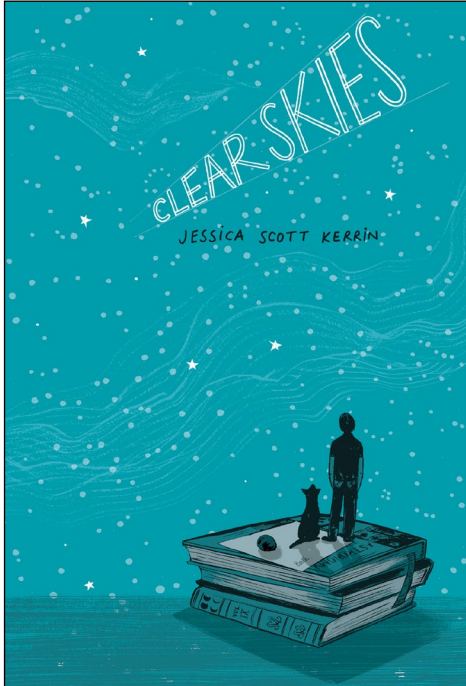
JUVENILE FICTION / Historical / Exploration & Discovery

Technology / Astronauts & Space

10 black-and-white illustrations / 5 x 7.5 / 184 pages

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## BOOK DESCRIPTION

*Clear Skies* takes place during the very hot summer of 1961 when the Space Race was well underway but no one had yet stepped onto the Moon. Eleven-year-old Arno Creelman asks all kinds of big questions about the universe. He is sure that being an astronomer will be his life's work. Arno's friends like the idea of space, too. His friend Buddy wants to be an astronaut, and Mindy down the street thinks about science experiments all the time.

When the novel begins, Arno is dealing with claustrophobia. He is also trying to win a contest that will get him an invitation to the opening of a new observatory. When a new boy, Robert, moves in just a few houses away, he tells Arno something that makes Arno realize that his claustrophobia may even compromise his dream of being an astronomer.

At the heart of this story is Arno's struggle to deal with his overwhelming fear of small places. But it is Arno's passion for the wonders of the universe, his relationships with his friends, his family and his dog, along with the general excitement about the Space Race and everyday details of life in the early 1960s, that bring the story vividly to life.

## THE AREAS OF FOCUS IN THIS STUDY GUIDE ARE:

- Arno's compelling passions: space, the solar system and the Space Race
- Arno's claustrophobia, the narrative center of the story
- the early 1960s, the time in which Arno is growing up

These areas of focus are not comprehensive. While it is hoped that the particular activities and directions of inquiry outlined in the guide are helpful, one of the best outcomes of any reading experience are the questions and responses that arise, particular to each reader. As the reading process unfolds, teachers are strongly encouraged to leave plenty of room for their own ideas and the ideas of their students to bubble up and re-direct the learning process in new and creative directions.

## BEFORE STUDENTS READ THE BOOK

1. Find a good map of the night sky and the solar system for your classroom. It should be as large, detailed and eye-catching as possible.
2. If you live in a city with a planetarium, book a field trip there.
3. Explore the resources of your local library or school library. Look for information about space and about the historical setting of the book. Use this research as the basis for a classroom display. Content of the display should be chosen to catch your students' attention and imagination rather than simply to convey information.
4. As you introduce the book to your class, have some initial discussion about how the book is set in a time when many of the students' grandparents were young. Offer any personal perspectives you might have on the 1960s as well as some concrete examples of differences and similarities between then and now.
5. Talk about Arno as a young scientist. Ask your students to consider how much imagination-teasing and thought-provoking science there is in *Clear Skies*.
6. Find out what your students already know about the Space Race and the first Moon landing.
7. As a creative prompt you might read or tell a myth about the constellations to emphasize how people have always been intrigued by what they see in the sky. (See additional resources for sources.)

## AFTER STUDENTS HAVE READ THE BOOK

Have an open-ended discussion with students and ask them to share their thoughts on what the book is about and what stood out for them. As the discussion unfolds, direct students to focus on the particular areas of inquiry you want them to pursue.

## THE UNIVERSE, THE SOLAR SYSTEM AND ARNO'S DEEP THOUGHTS

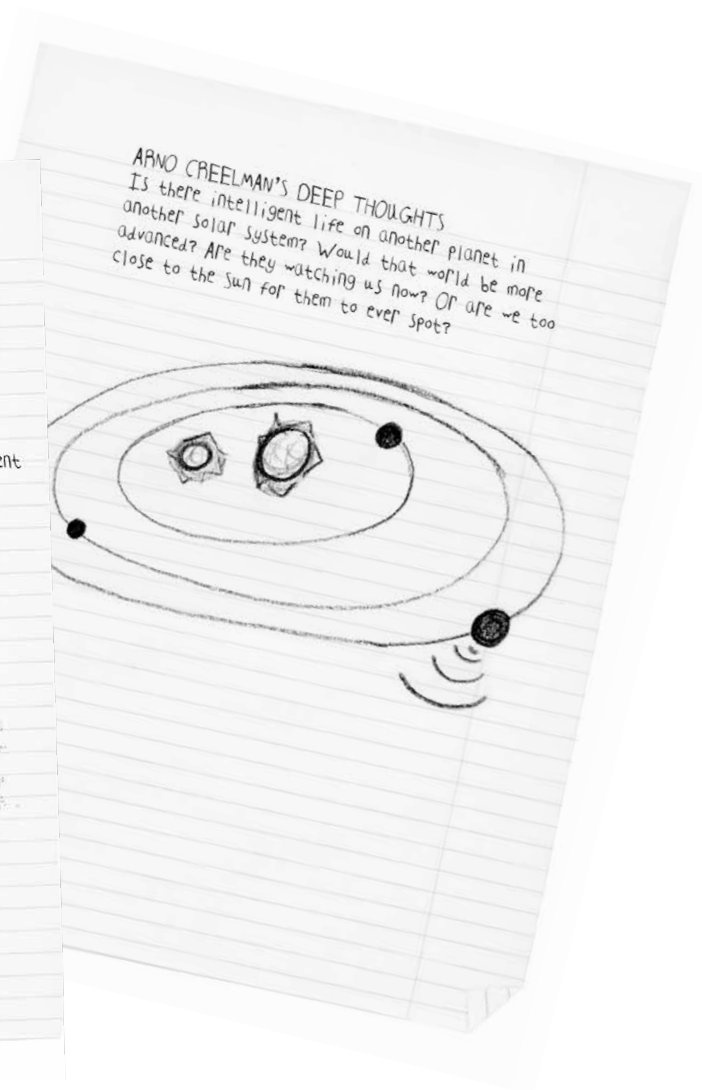
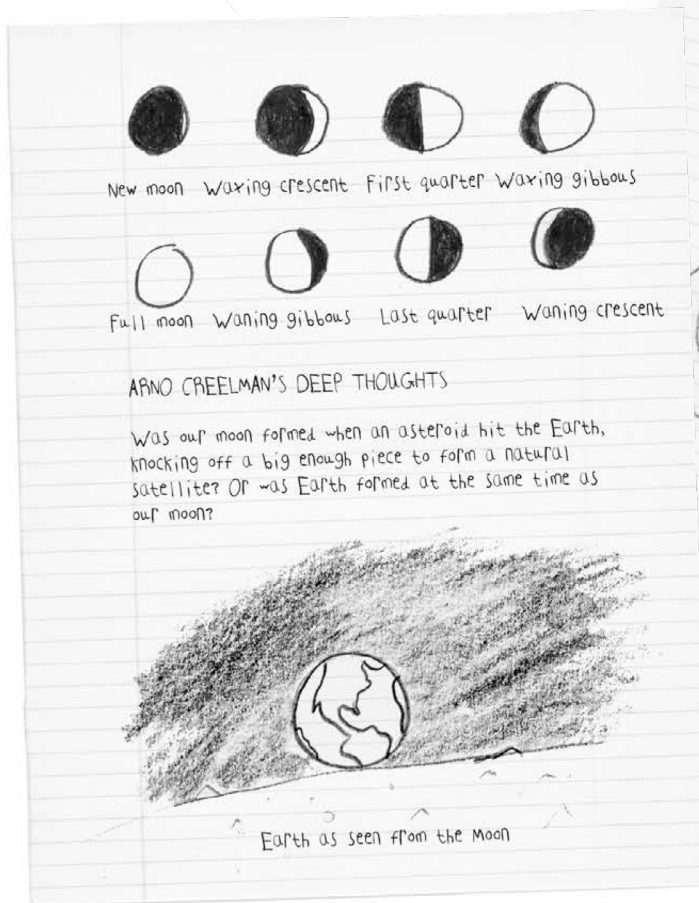
### DISCUSSION PROMPTS

Arno's passion for space, his "Deep Thoughts" and the fun facts scattered throughout the book are excellent creative prompts for engaging student interest in learning about space and its impact on human history.

1. Encourage students to pay attention to Arno's "Deep Thoughts" and the accompanying images. Remember, these ideas are very complex and it will take time for your students to achieve a full understanding of them.
2. Discuss what these journal entries tell the reader about Arno as well as what they tell the reader about science.
3. "When we finally get to see what Earth looks like from the Moon, I imagine that our perspective will change forever. Only then will we understand just how small and fragile our planet is and that each of us need to do our part to protect it" (138).
  - Make sure you have the images "The Blue Marble" and "Earth Rise" available in your classroom. "The Blue Marble" was taken on the way to the Moon in 1972. "Earth Rise" is the photograph taken from the Moon in 1968.
  - After showing these images to students, have them discuss what "The Blue Marble," taken in 1972 when Arno would have been twenty-two, might mean to him.
  - Have students discuss what makes them want to be part of looking after the planet.

## STUDENTS' OWN DEEP THOUGHTS

1. Ask each student to write down a BIG thought/question/idea/observation they have in relation to the universe, the solar system and our place within it.
2. Direct students to make a drawing to illustrate what they wrote down.
3. Organize students to work in small groups to share and discuss their “Deep Thoughts.”
4. Instruct students to do research on the issue or issues they are concerned about and share information with other students to compare interests.



## STANDARDS USED IN THIS GUIDE ~ GRADES 5, 6, 7 GRADE 5

### READING

#### *Key Ideas and Details*

Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Determine a theme of a story, drama or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

Compare and contrast two or more characters, settings or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

#### *Craft and Structure*

Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

Explain how a series of chapters, scenes or stanzas fits together to provide the overall structure of a particular story, drama or poem.

Describe how a narrator's or speaker's point of view influences how events are described.

### WRITING

#### *Text Types and Purposes*

Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

- Introduce a topic or text clearly, state an opinion and create an organizational structure in which ideas are logically grouped to support the writer's purpose.
- Provide logically ordered reasons that are supported by facts and details.

- Link opinion and reasons using words, phrases and clauses (e.g., consequently, specifically).
- Provide a concluding statement or section related to the opinion presented.

Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- Introduce a topic clearly, provide a general observation and focus and group related information logically; include formatting (e.g., headings), illustrations and multimedia when useful to aiding comprehension.
- Develop the topic with facts, definitions, concrete details, quotations or other information and examples related to the topic.
- Link ideas within and across categories of information using words, phrases and clauses (e.g., in contrast, especially).
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Provide a concluding statement or section related to the information or explanation presented.

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details and clear event sequences.

- Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use narrative techniques, such as dialogue, description and pacing to develop experiences and events or show the responses of characters to situations.
- Use a variety of transitional words, phrases and clauses to manage the sequence of events.
- Use concrete words and phrases and sensory details to convey experiences and events precisely.
- Provide a conclusion that follows from the narrated experiences or events.

### *Production and Distribution of Writing*

Produce clear and coherent writing in which the development and organization are appropriate to task, purpose and audience.

With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.

With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

### *Research to Build and Present Knowledge*

Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work and provide a list of sources.

### *Range of Writing*

Write routinely over extended time frames (time for research, reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

## **SPEAKING AND LISTENING**

### *Comprehension and Collaboration*

Engage effectively in a range of collaborative discussions (one-on-one, in groups and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

- Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

- Follow agreed-upon rules for discussions and carry out assigned roles.
- Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
- Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions

## LANGUAGE

### *Vocabulary Acquisition and Use*

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

- Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.
- Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., photograph, photosynthesis).
- Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

## GRADE 6

## READING

### *Key Ideas and Details*

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Determine a theme or 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.

Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.

## CRAFT AND STRUCTURE

Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.

Analyze how a particular sentence, chapter, scene or stanza fits into the overall structure of a text and contributes to the development of the theme, setting or plot.

Explain how an author develops the point of view of the narrator or speaker in a text.

## WRITING

### *Text Types and Purposes*

Write arguments to support claims with clear reasons and relevant evidence.

- Introduce claim(s) and organize the reasons and evidence clearly.
- Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
- Use words, phrases and clauses to clarify the relationships among claim(s) and reasons.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from the argument presented.

Write informative/explanatory texts to examine a topic and convey ideas, concepts and information through the selection, organization and analysis of relevant content.

- Introduce a topic; organize ideas, concepts and information, using strategies such as definition, classification, comparison/contrast and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables) and multimedia when useful to aiding comprehension.
- Develop the topic with relevant facts, definitions, concrete details, quotations or other information and examples.

- Use appropriate transitions to clarify the relationships among ideas and concepts.
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from the information or explanation presented.

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

- Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
- Use narrative techniques, such as dialogue, pacing and description to develop experiences, events and/or characters.
- Use a variety of transition words, phrases and clauses to convey sequence and signal shifts from one time frame or setting to another.
- Use precise words and phrases, relevant descriptive details and sensory language to convey experiences and events.
- Provide a conclusion that follows from the narrated experiences or events.

## PRODUCTION AND DISTRIBUTION OF WRITING

Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.

Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

## RESEARCH TO BUILD AND PRESENT KNOWLEDGE

Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

## RANGE OF WRITING

Write routinely over extended time frames (time for research, reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

## SPEAKING AND LISTENING

### *Comprehension and Collaboration*

Engage effectively in a range of collaborative discussions (one-on-one, in groups and teacher-led) with diverse partners on grade 6 topics, texts and issues, building on others' ideas and expressing their own clearly.

- Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text or issue to probe and reflect on ideas under discussion.
- Follow rules for collegial discussions, set specific goals and deadlines and define individual roles as needed.
- Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text or issue under discussion.
- Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

## LANGUAGE

### *Vocabulary Acquisition and Use*

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.

- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
- Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).
- Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
- Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

## GRADE 7

## READING

### *Key Ideas and Details*

Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text

Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).

## CRAFT AND STRUCTURE

Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.

Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.

Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

## WRITING

### *Text Types and Purposes*

Write arguments to support claims with clear reasons and relevant evidence.

- Introduce claim(s), acknowledge alternate or opposing claims and organize the reasons and evidence logically.
- Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
- Use words, phrases and clauses to create cohesion and clarify the relationships among claim(s), reasons and evidence.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the argument presented.

Write informative/explanatory texts to examine a topic and convey ideas, concepts and information through the selection, organization and analysis of relevant content.

- Introduce a topic clearly, previewing what is to follow; organize ideas, concepts and information, using strategies such as definition, classification, comparison/contrast and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables) and multimedia when useful to aiding comprehension.

- Develop the topic with relevant facts, definitions, concrete details, quotations or other information and examples.
- Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the information or explanation presented.

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

- Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
- Use narrative techniques, such as dialogue, pacing and description, to develop experiences, events and/or characters.
- Use a variety of transition words, phrases and clauses to convey sequence and signal shifts from one time frame or setting to another.
- Use precise words and phrases, relevant descriptive details and sensory language to capture the action and convey experiences and events.
- Provide a conclusion that follows from and reflects on the narrated experiences or events.

## PRODUCTION AND DISTRIBUTION OF WRITING

Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach, focusing on how well purpose and audience have been addressed.

Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.

## RESEARCH TO BUILD AND PRESENT KNOWLEDGE

Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

## RANGE OF WRITING

Write routinely over extended time frames (time for research, reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

## SPEAKING AND LISTENING

### *Comprehension and Collaboration*

Engage effectively in a range of collaborative discussions (one-on-one, in groups and teacher-led) with diverse partners on grade 7 topics, texts and issues, building on others' ideas and expressing their own clearly.

- Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text or issue to probe and reflect on ideas under discussion.
- Follow rules for collegial discussions, track progress toward specific goals and deadlines and define individual roles as needed.
- Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
- Acknowledge new information expressed by others and, when warranted, modify their own views.

## LANGUAGE

### *Vocabulary Acquisition and Use*

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.

- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
- Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel).
- Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
- Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

## GRADES 6-8

## WRITING FOR LITERACY IN HISTORY/SOCIAL STUDIES, SCIENCE AND TECHNICAL SUBJECTS

### *Text Types and Purposes*

Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments or technical processes.

- Introduce a topic clearly, previewing what is to follow; organize ideas, concepts and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables) and multimedia when useful to aiding comprehension.
- Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations or other information and examples.
- Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
- Use precise language and domain-specific vocabulary to inform about or explain the topic.

- Establish and maintain a formal style and objective tone.
- Provide a concluding statement or section that follows from and supports the information or explanation presented.

## **PRODUCTION AND DISTRIBUTION OF WRITING**

Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.

With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach, focusing on how well purpose and audience have been addressed.

Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

## **RESEARCH TO BUILD AND PRESENT KNOWLEDGE**

Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Draw evidence from informational texts to support analysis reflection and research.

## **RANGE OF WRITING**

Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

## AUTHOR BIOGRAPHY



**Jessica Scott Kerrin** is a writer of fiction for children. Her work includes: the eight-book series *Martin Bridges*; the trilogy *The Lobster Chronicles*; two mysteries titled *The Spotted Dog Last Seen* and *The Missing Dog is Spotted*; the adventure novel *The Things Owen Wrote*; and the picture book *The Better Tree Fort*.

Jessica's work has been nominated for prestigious awards nationally and internationally including the New York Public Libraries list of Top 100 Books for Children and the Association of Canadian Publishers' list of Top Grade Canlit for Classrooms.

Now that astronaut John Glenn has signed one of Jessica's books, her big wishes are to see one of her books come alive on stage and to meet a published young writer who was inspired during one of her presentations. Jessica lives in Halifax, Nova Scotia.