Unit 5/Week 2

Title: Franklin R. Chang-Diaz

Suggested Time: 5 days (45 minutes per day)

Common Core ELA Standards: RL 6.1-6.5, 6.7, 6.10, RI 6.1-6.6, 6.10, W 6.2, 6.4, 6.9, 6.10, SL 6.1, 6.4, L 6.1-6.4, 6.6

Teacher Instructions

*Refer to the Introduction for further details.*

**Before Teaching**

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers, about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

With determination and perseverance, people can make their dreams come true.

Synopsis

Franklin R. Chang-Diaz is an immigrant from Costa Rica who began thinking about space at age seven when the Soviet Union launched the first satellite into space. He read science fiction as a child and dreamed of becoming a “space explorer” as astronauts did not exist yet. After the first man went into space, Chang-Diaz became more interested in space and collected articles, built a cardboard rocket, and even wrote a letter to NASA expressing his interest in becoming an astronaut. After receiving an answer that he needed to study science, he made plans to leave Costa Rica and move to the United States. He lived with relatives in Connecticut and struggled in school while he was learning English. While his English and grades improved, astronauts walked on the moon for the first time. After high school, he was awarded a scholarship to the University of Connecticut, but when he arrived to register, they realized that he was not a U.S. citizen and could not receive the scholarship. He pleaded with school officials who approached the legislature. The legislature changed the law, and Chang-Diaz was allowed to attend. He held part-time jobs through college, graduated with a Ph.D., and got a job as a mechanical-engineer scientist. Throughout this time he worked on obtaining his citizenship as it was required to become an astronaut. The first time he applied for NASA, he was not accepted. The second time, he was chosen and became “the first Hispanic to be in the space program for the long run”. In 1981 he was officially given the title “astronaut” and flew into space in 1986.

1. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
2. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

**During Teaching**

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along. (Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)
3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

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| **Text Dependent Questions** | **Answers** |
| Why was Chang-Diaz so excited? How could you tell he was ex cited? (p. 575) | He received an unexpected phone call from NASA telling him that he had been selected to become an astronaut. He was so excited that he crossed a busy street without looking and was almost killed. |
| Why was 1957 an important year for Chang-Diaz? (p. 575) | The Soviet Union launched the first satellite into space. He became fascinated with the idea that a man made machine was now a new “star” in the sky. He used to try to find in at night. He never found it, but fell in love with outer space. |
| What information did the author include in the captions and illustrations on this page? How does this information help you understand Chang-Diaz’s story better? (p. 576) | A wood engraving from the book *From the Earth to the Moon*, a picture of the first satellite in space, and a picture of the first man who went into space. These were all important events and things that led Chang-Diaz to fall in love with outer space and want to become a space explorer. They give the reader more information about the details that inspired him. |
| What is the next important event that happens during the space race in 1961? How does Chang-Diaz react to this event? (p. 577) | The first man went into space, Yuri Gagarin. He didn’t know any English, but he clipped every article in magazines and newspapers to gather information. He continued dreaming of becoming an astronaut, even building a cardboard spaceship and pretending to fly into space. |
| What letter does Chang-Diaz write? Why does he write this letter? What happens as a result? (p. 577) | He writes a letter to a scientist at NASA asking how to become an astronaut. He received a response letter telling him to study science. He decided to leave Costa Rica and move to the United States to study science so that he could become an astronaut. |
| How did Chang-Diaz get to the United States? (p. 578) | After he graduated from high school, he got a job at a bank to save money to move to the United States. After earning $50, he bought a one-way ticket. |
| Why does Chang-Diaz say that he owes the Zuniga family a lot? (p. 578) | They welcomed him into their home in Connecticut. They were a low income family with ten people in their family, but still helped him moved to this country. |
| Why did Chang-Diaz go back to high school in the United States when he had already graduated in Costa Rica? What problems did he have in high school? How did he overcome those problems? (p. 578) | He needed to learn English, and it could lead to a scholarship. He understood very little of his new language and was sent to a special class. He spoke Spanish to the other students all the time. He persuaded the principal and the counselor to let him take regular classes. His grades were poor, but after three months he began to understand English better and his grades improved. He was in the top portion of his class. |
| What was the next important space event? How does Chang-Diaz react to this event? (p. 579) | U.S. astronauts landed on the moon in 1969. That was the same year that Chang-Diaz graduated from high school in the U.S. He remembers exactly where he was when they landed on the moon. He got chills and told himself that one day he’d do something like that. |
| Why do school officials recommend Chang-Diaz for a scholarship? (p. 580) | They were impressed with his progress. They weren’t interested in his grades, but with his effort and change from the very bottom to very high. |
| Describe what happened when Chang-Diaz went to the University of Connecticut to receive his scholarship. (p. 580-581) | They couldn’t accept him. They couldn’t give him the scholarship because he was not a U.S. citizen. He went to discuss the matter with school officials. The officials spoke with the state legislature to get the law changed. They made an exception and gave him the scholarship. |
| Why did Chang-Diaz decide to work while he was in college? (p. 581) | He wanted to leave the Zunigas and provide for himself. He didn’t want to be a burden on their family. |
| What did Chang-Diaz study while in college? What degrees did he receive? What job did he get after he graduated? (p. 582)    Why does Chang-Diaz think that he wasn’t accepted into the space program the first time he applied? How does he react to his not being accepted? (p. 582-583) | He studied physics and mechanical engineering and then plasma physics. He received a bachelor of science degree and his Ph.D. Then he got a job as a mechanical engineering scientist at Charles Stark Draper Laboratory which had designed navigational and control systems used in NASA’s Apollo program.  He was not a U.S. citizen yet. He decided not to give up after just one try. He decided to keep working at the lab and wait for another opportunity. |
| What happens to Chang-Diaz in 1979? Why does he think he was accepted this time out of all of the people who applied? (p. 584) | He applied to become an astronaut again. This time he was accepted. He thinks that although everyone else was also an adventurer and a highly qualified scientist, he was the only Spanish-speaking person born in another country. He became the first Hispanic to be in the space program for the long run. |
| Look on page 585. Why are the two paragraphs written in a different font? | It is an excerpt from NASA documents. The author did not write this, she used writing from NASA documents to explain what Chang-Diaz did during his early years at NASA. |
| Describe what happened after Chang-Diaz was accepted into the space program. (p. 584-586) | He called his dad to tell him the news. He moved to Houston, Texas with his family to become an astronaut in training. He was officially named an astronaut in 1981. He flew into space for the first time in 1986. |

Vocabulary

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|  | **KEY WORDS ESSENTIAL TO UNDERSTANDING** | **WORDS WORTH KNOWING**  General teaching suggestions are provided in the Introduction |
| **TEACHER PROVIDES DEFINITION**  not enough contextual clues provided in the text | scholarship p. 580  permanent p. 580  resident p. 580  citizenship p. 580  temporary p. 580  exception p. 581  receded p. 582  soliciting p. 582 | employment p. 576  reminiscences p. 577  makeshift p. 577  embark p. 577  impressed p. 580  aerospace engineering p. 581  mechanical engineering p. 581  bachelor of science degree p. 582  Ph.D. p. 582  dormant p. 582 |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | fascinated p. 575  astronaut p. 577  cosmonaut p. 577  capsule p. 577  simulate p. 577  methodically p. 578 | officials p. 581  foreign p. 581  futuristic p. 582  qualified p. 584 |

Culminating Task

* Re-Read, Think, Discuss, Write (choose one)
* *The author states on page 575, “Franklin Chang-Diaz has demonstrated time and again that he has what it takes to be an astronaut”. Cite evidence from the text to support this statement.*

Answers should include:

* + He began studying space when he was a child by reading science fiction books, and following news stories about space programs.
  + He was fascinated by outer space and determined to become an astronaut
  + He wrote a letter to NASA to find out how to become an astronaut
  + He saved money to move to the U.S. to become an astronaut
  + He persevered in high school to learn English and improve his grades
  + He did not give up when he was not admitted into college and got a law changed to let him in
  + He received his bachelor’s degree in mechanical engineering and aerospace engineering and a Ph.D. in plasma physics
  + He got a job at a laboratory where they developed navigational and control systems for NASA’s Apollo program
  + He obtained his U.S. citizenships
  + He applied to the NASA program again after he was turned down the first time
* *Which word would best describe Franklin Chang-Diaz: smart, lucky, determined, hard-working, or some other word? Cite examples from the text to support your opinion.*

Example: Franklin Chang-Diaz is determined. He never gave up on his dream to become an astronaut. As a little boy in Costa Rica, he would stare out into space dreaming of a time when he could become a “space explorer” even before there were any astronauts. He read stories about outer space and collected news articles about the first space events like the Soviet Union’s satellite, the first man in space, and the first man on the moon. He wrote a letter to NASA to find out how to become an astronaut. He saved money to move to the United States to pursue his dream. Even though he did not know English, he pushed himself in high school to learn the language and do well in his classes. He impressed his principal and counselor so much that they gave him a scholarship to the University of Connecticut. When the University would not let him in because he was not a United States citizen, he pleaded with school officials to let him in. He studied mechanical engineering and aerospace engineering and earned a bachelor’s degree. He then got his Ph.D. in plasma physics. He applied to NASA but was turned down. He thought that it was because he was still not officially a U.S. citizen, so he completed his application and became a citizen. He applied to NASA again, and this time became the first Hispanic to be in the space program for the long run.

Additional Tasks

Create a timeline of Franklin Chang-Diaz’s life. Include all of his important accomplishments as well as the important space events happening in the world.

Note to Teacher

This story has some nonfiction text features that are worth noting such as: captions, illustrations, text boxes, changes in font, and quotes.

Supports for English Language Learners (ELLs)

to use with Basal Alignment Project Lessons

When teaching any lesson, it is important to make sure you are including supports to help all students. We have prepared some examples of different types of supports that you can use in conjunction with our Basal Alignment Project Lessons to help support your ELLs. They are grouped by when they would best fit in a lesson. While these supports reflect research in how to support ELLs, these activities can help ALL students engage more deeply with these lessons. Note that some strategies should be used at multiple points within a lesson; we’ll point these out. It is also important to understand that these scaffolds represent options for teachers to select based on students’ needs; it is not the intention that teachers should do *all* of these things at every lesson.

**Before the reading:**

* Read passages, sing songs, watch videos, view photographs, discuss topics (e.g., using the [four corners strategy](http://www.theteachertoolkit.com/index.php/tool/four-corners)), or research topics that help provide context for what your students will be reading. This is especially true if the setting (e.g., 18th Century England) or topic (e.g., boats) is one that is unfamiliar to the students.
* Provide instruction, using multiple modalities, on selected vocabulary words that are *central to understanding the text*. When looking at the lesson plan, you should note the Tier 2 words, particularly those words with high conceptual complexity (i.e., they are difficult to visualize, learn from context clues, or are abstract), and consider introducing them ahead of reading. For more information on selecting such words, go [here](https://achievethecore.org/page/3167/selecting-and-using-academic-vocabulary-in-instruction). **You should plan to continue to reinforce these words, and additional vocabulary, in the context of reading and working with the text. (See additional activities in the During Reading and After Reading sections.)**

**Examples of Activities:**

* Provide students with the definition of the words and then have students work together to create [Frayer models](http://www.theteachertoolkit.com/index.php/tool/frayer-model) or other kinds of word maps for the words.
* When a word contains a prefix or suffix that has been introduced before, highlight how the word part can be used to help determine word meaning.
* Keep a word wall or word bank where these new words can be added and that students can access later.
* Have students create visual glossaries for whenever they encounter new words. Then have your students add these words to their visual glossaries.
* Create pictures using the word. These can even be added to your word wall!
* Create lists of synonyms and antonyms for the word.
* Have students practice using the words in conversation. For newcomers, consider providing them with [sentence frames](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion) to ensure they can participate in the conversation.
  + Practice spelling the words using different spelling practice strategies and decoding strategies. Students could take turns spelling with a partner.
* Use graphic organizers to help introduce content.

**Examples of Activities:**

* Have students fill in a [KWL chart](http://www.nea.org/tools/k-w-l-know-want-to-know-learned.html) about what they will be reading about.
* Have students research setting or topic using a pre-approved website and fill in a chart about it. You could even have students work in groups where each group is assigned part of the topic.
* Have students fill in a bubble map where they write down anything that they find interesting about the topic while watching a video or reading a short passage about the topic. Then students can discuss why they picked the information.

**During reading:**

* Read the text aloud first so that ELLs can hear the passage read by a fluent reader before working with the text themselves.
* Allow ELLs to collaborate in their home languages to process content before participating in whole class discussions in English. Consider giving them the discussion questions to look over in advance (perhaps during the first read) and having them work with a partner to prepare.
* Encourage students to create sketch-notes or to storyboard the passage when they are reading it individually or with a partner. This will help show if they understand what they are reading as they are reading it.
* Ask questions related to the who, what, when, why, and how of the passage. For students that may need a little more help, provide them with [sentence stems](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion).
* Continue to draw attention to and discuss the words that you introduced before the reading.

**Examples of Activities:**

* Have students include the example from the text in their glossary that they created.
* Create or find pictures that represent how the word was used in the passage.
* Practice creating sentences using the word in the way it was using in the passage.
* Have students discuss the author’s word choice.
* Use graphic organizers to help organize content and thinking.

**Examples of Activities:**

* Have students fill in a chart to keep track of their 5ws while they read to help them summarize later and figure out the central idea of a passage.
* It may again be beneficial to have somewhere for students to store new words that they encounter while reading the text. Students could use a chart to keep track of these new words and their meanings as they read.
* If you had students fill in a KWL, have them fill in the “L” section as they read the passage.
* Utilize any illustrations or text features that come with the story or passage to better understand the reading.
* Compare/contrast the passage with what the illustrations convey about the passage. Have students consider if the illustrations look the way they visualized the passage in their own minds or if the passage matches their predictions based on the illustrations.
* Identify any text features such as captions and discuss how they contribute to meaning.

**After reading:**

* Present directions for any post-reading assignments orally and visually; repeat often; and ask English Language Learners to rephrase.
* Allow ELLs to use English language that is still under development. Students should not be scored lower because of incorrect spelling or grammar (unless the goal of the assignment is to assess spelling or grammar skills specifically). When grading, be sure to focus on scoring your students only for the objective(s) that were shared with students.
* Scaffold questions for discussions so that questioning sequences include a mix of factual and inferential questions and a mix of shorter and more extended responses. Questions should build on each other and toward inferential and higher-order-thinking questions. There are not many factual questions already listed in the lesson instructions, so you will need to build some in as you see fit. More information on this strategy can be found [here](https://achievethecore.org/aligned/creating-sequencing-text-dependent-questions-support-english-language-learners/).
* Reinforce new vocabulary using multiple modalities

**Examples of activities:**

* Using the words that you had students work with before reading, have students write sentences in reference to the passage that you just finished reading.
* Require students to include the words introduced before reading in the culminating writing task.
* For newcomers, print out pictures that represent the words that you focused on and have students match the words to the pictures.
* Based on different features of the words, have the students sort them into different categories and explain their choices. For example, the students could sort the words by prefixes, suffixes, connotation, etc.
* After reading the passage, continue to examine important sentences (1–2) in the text that contribute to the overall meaning of the text. Guide students to break apart these sentences, analyze different elements, and determine meaning. More information on how to do this, including models of sentence deconstruction, can be found [here](https://achievethecore.org/page/3160/juicy-sentence-protocol).
* Provide differentiated scaffolds for writing assignments based on students’ English language proficiency levels.

**Examples of Activities:**

* For all students, go over the prompt in detail, making sure to break down what the prompt means before having the students get to work. Then have the students explain the directions back to you.
* Have students create an evidence tracking chart during reading, then direct them to look back over their evidence chart and work with a group to see if their evidence matches what the rest of the class wrote down. If some of the chart does not match, students should have a discussion about why.
* For students who need more support, model the proper writing format for your students and provide them with a properly formatted example for reference.
* For newcomers, you may consider creating sentence or paragraph frames to help them to write out their ideas.
* To further discussion about the passage, have students create their own who, what, when, where, why, and how questions related to the passage to ask each other and have students pair up and practice asking each other the questions. If available, pair students of the same home language to support the use of language still under development.