2018 Summer Assignments-Grade 9

IRVINGTON PUBLIC SCHOOLS

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Irvington, NJ 07111
Office of Curriculum and Instruction
Ms. April Adams
Secondary ELA Supervisor

June 15, 2018

Dear Irvington Parents,

The purpose of summer reading is to help your child to continue to grow as a reader. It is a good time to help your child to relax and enjoy a good book. Reading, especially during the summer, is the best way to help your child build stamina as a reader, which will help to prepare your child for the next school year. It is important that you encourage your child to read daily for at least twenty minutes.

To help you and your child select summer reading books, attached is a list of authors and titles from the following:

- Association for Library Service to Children (grades 9-12)
- Scholastic Summer Reading Challenge (grades 6-8)

Two summer reading tasks are required for grades 6-11:

- Select a novel and write a book review
  - -Introduce the book
  - -Summarize the plot
  - -Explain why you would or would not recommend the book
- One Reading and Writing Task (see attached text with questions and prompt)

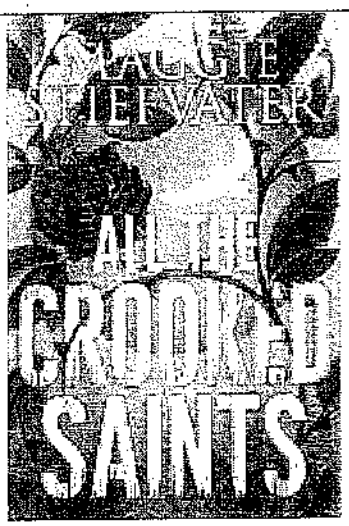
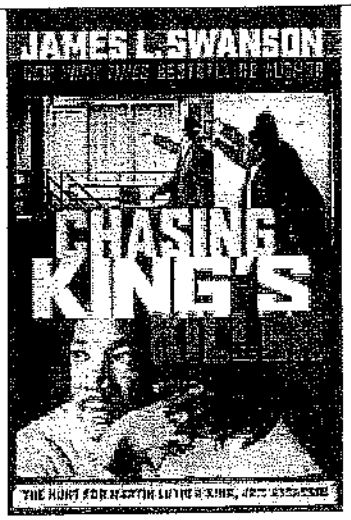
Both summer reading tasks will count as a grade for cycle one in September for the 2018-2019 school year. Book reviews are expected to be typed or handwritten in 12 pt. font size and 1.5-2 pages in length.

Please visit The Irvington Public Library, where you can get assistance from the librarian and relax while you read in the refreshing cool air!

Ms. Adams
ELA Secondary Supervisor
X2119

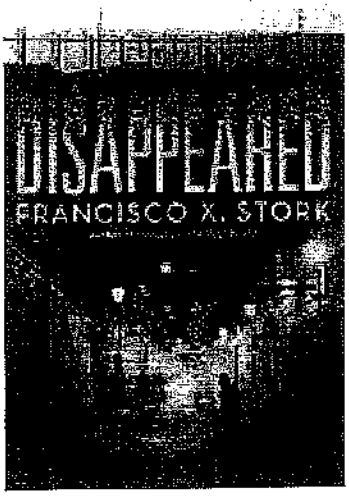
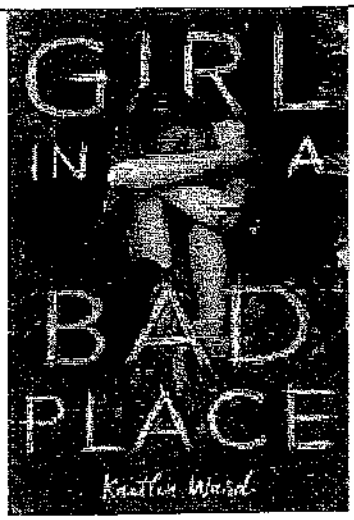
From Scholastic Summer Challenge Reading List

2018 Grades 9-12

	All the Crooked Saints By Maggie Stiefvater
	Chasing King's Killer By James L. Swanson

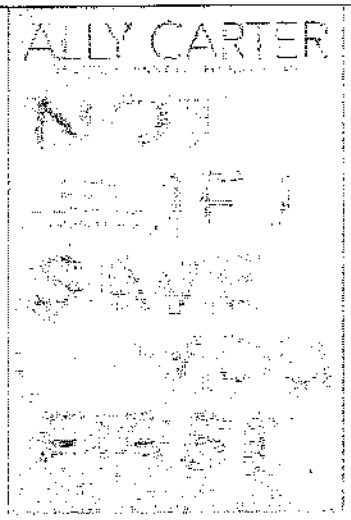
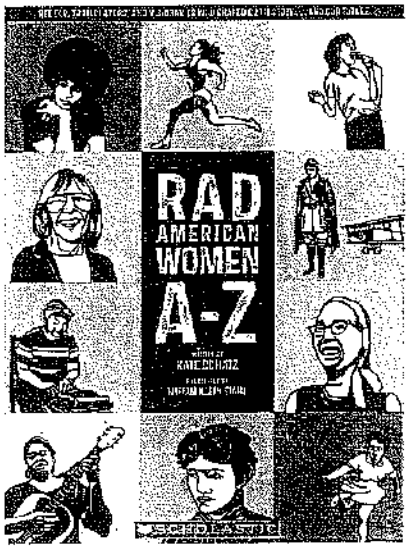
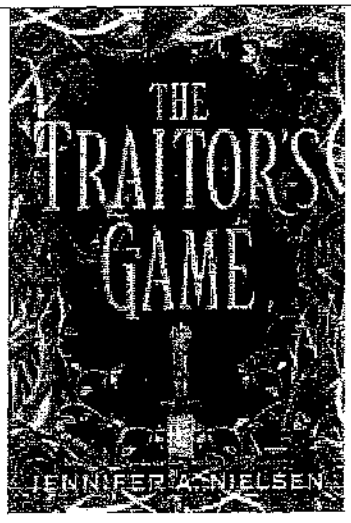
From Scholastic Summer Challenge Reading List

2018 Grades 9-12

	Disappeared By Francisco X. Stork
	Don't Cosplay with My Heart By Cecil Castellucci
	Girl in a Bad Place By Kaitlin Ward

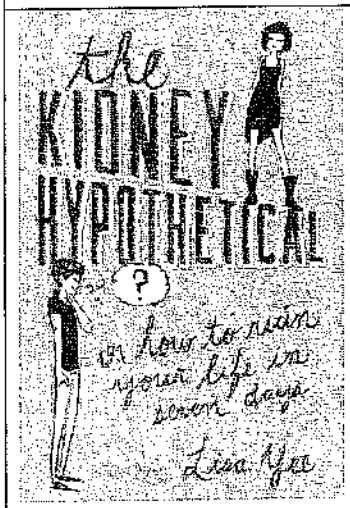
From Scholastic Summer Challenge Reading List

2018 Grades 9-12

	Not If I Save You First By Ally Carter
	Rad American Women A-Z By Kate Schatz, Miriam Klein Stahl
	The Traitor's Game By Jennifer A. Nielsen

From Scholastic Summer Challenge Reading List

2018 Grades 9-12

	Same but Different By RJ Peete, Holly Robinson Peete, Ryan Elizabeth Peet
	The Kidney Hypothetical By Lisa Yee

Grade 9 Mini-Assessment

"A Big Surprise from the Edge of the Solar System"

Today you will read an article and watch a video about a recent discovery made by NASA (National Aeronautics and Space Administration). You will then answer several questions based on the text and the video. I will be happy to answer questions about the directions, but I will not help you with the answers to any questions. You will notice as you answer the questions that some of the questions have two parts. You need to answer Part A of the question before you answer Part B, but you may return to Part A if needed.

Take as long as you need to read and answer the questions. It is likely that it will take you at least a class period to finish the questions, not including the essay. If you do not finish, we will discuss ways to secure some extra time to complete.

Now read the passage and answer the questions. I encourage you to write notes in the margin as you read the passages.

A Big Surprise from the Edge of the Solar System

by Dr. Tony Phillips of NASA's Goddard Space Flight Center

1 NASA's Voyager probes are truly going where no one has gone before. Gliding silently toward the stars, 9 billion miles from Earth, they are beaming back news from the most distant, unexplored reaches of the solar system.

2 Mission scientists say the probes have just sent back some very big news indeed.

3 It's bubbly out there.

4 According to computer models, the bubbles are large, about 100 million miles wide, so it would take the speedy probes weeks to cross just one of them. Voyager 1 entered the "foam-zone" around 2007, and Voyager 2 followed about a year later. At first researchers didn't understand what the Voyagers were sensing--but now they have a good idea.

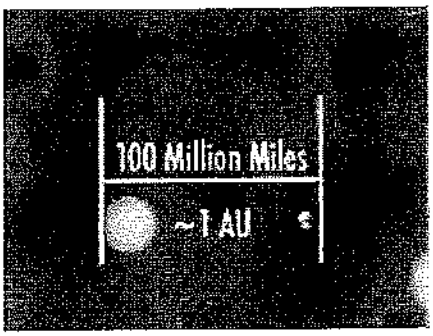


Figure 1: Magnetic bubbles at the edge of the solar system are about 100 million miles wide—similar to the distance between Earth and the Sun. Credit: NASA

5 "The sun's magnetic field extends all the way to the edge of the solar system," explains Opher[1]. "Because the sun spins, its magnetic field becomes twisted and wrinkled, a bit like a ballerina's skirt. Far, far away from the sun, where the Voyagers are now, the folds of the skirt bunch up."

6 When a magnetic field gets severely folded like this, interesting things can happen. Lines of magnetic force criss-cross and "reconnect." (Magnetic reconnection is the same energetic process underlying solar flares.) The crowded folds of the skirt reorganize themselves, sometimes explosively, into foamy magnetic bubbles.

7 "We never expected to find such a foam at the edge of the solar system, but there it is!" says Opher's colleague, University of Maryland physicist Jim Drake.

8 Theories dating back to the 1950s had predicted a very different scenario: The distant magnetic field of the sun was supposed to curve around in relatively graceful arcs, eventually folding back to rejoin the sun. The actual bubbles appear to be self-contained and substantially disconnected from the broader solar magnetic field.

9 Energetic particle sensor readings suggest that the Voyagers are occasionally dipping in and out of the foam—so there might be regions where the old ideas still hold. But there is no question that old models alone cannot explain what the Voyagers have found.

10 Says Drake: "We are still trying to wrap our minds around the implications of these findings."

[1] Dr. Merav Opher was born in Haifa, Israel in 1970. She received her B.Sc. in Physics at the University of Sao Paulo, Brazil in 1992. In 1998, she received her Ph.D. from the Institute of Astronomy and Geophysics at the University of Sao Paulo, Brazil. Her research interests are in the area of plasma effects in space physics and astrophysics.

11 The structure of the sun's distant magnetic field—foam vs. no-foam—is of acute scientific importance because it defines how we interact with the rest of the galaxy. Researchers call the region where the Voyagers are now "the heliosheath." It is essentially the border crossing between the Solar System and the rest of the Milky Way. Lots of things try to get across—interstellar clouds, knots of galactic magnetism, cosmic rays and so on. Will these intruders encounter a riot of bubbly magnetism (the new view) or graceful lines of magnetic force leading back to the sun (the old view)?

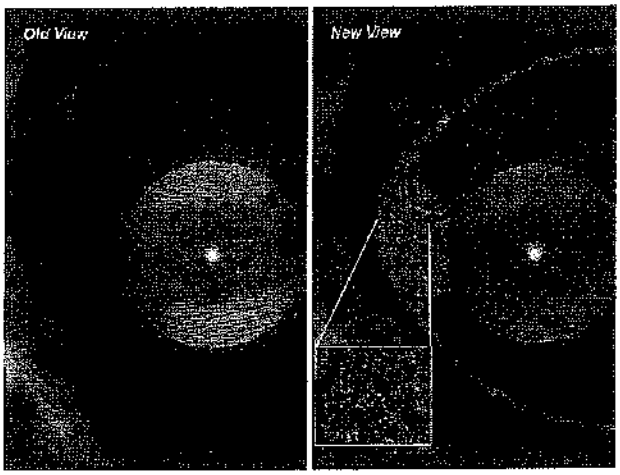


Figure 2: Old and new views of the heliosheath. Red and blue spirals are the gracefully curving magnetic field lines of orthodox models. New data from Voyager add a magnetic froth (inset) to the mix. Credit: NASA

12 The case of cosmic rays is illustrative. Galactic cosmic rays are subatomic particles accelerated to near-light speed by distant black holes and supernova explosions. When these microscopic cannonballs try to enter the solar system, they have to fight through the sun's magnetic field to reach the inner planets.

13 "The magnetic bubbles appear to be our first line of defense against cosmic rays," points out Opher. "We haven't figured out yet if this is a good thing or not."

14 On one hand, the bubbles would seem to be a very porous shield, allowing many cosmic rays through the gaps. On the other hand, cosmic rays could get trapped inside the bubbles, which would make the froth a very good shield indeed.

15 So far, much of the evidence for the bubbles comes from the Voyager energetic particle and flow measurements. Proof can also be obtained from the Voyager magnetic field observations and some of this data is also very suggestive. However, because the magnetic field is so weak, the data takes much longer to analyze with the appropriate care. Thus, unraveling the magnetic signatures of bubbles in the Voyager data is ongoing.

16 "We'll probably discover which is correct as the Voyagers proceed deeper into the froth and learn more about its organization," says Opher. "This is just the beginning, and I predict more surprises ahead."

Source: www.nasa.gov

Second Stimulus: Video – Heliosphere Surprise

When the class is ready, we will watch the video together. To signal that you are ready to watch the video, please turn your mini-assessment face down on your desk.

We will watch the video twice, as some of the questions later in this mini-assessment will be asking you to remember specific information from it.

Click on the link to view the video.

http://www.nasa.gov/mission_pages/voyager/heliosphere-surprise.html

Source: www.nasa.gov

QUESTIONS:

1. As used in paragraph 11 of "A Big Surprise from the Edge of the Solar System," which meaning of the word *acute* best applies?

   A. clear

   B. dire

   C. crucial

   D. intense

2. The following question has two parts. Answer Part A, then answer Part B.

   Part A: Read the caption under Figure 2 in the text. What is the meaning of the word *orthodox* as used in the caption?

   A. official

   B. legitimate

   C. conservative

   D. traditional

   Part B: Which word in the caption under Figure 2 provides the strongest clue to the meaning of the word *orthodox*?

   A. old

   B. views

   C. models

   D. mix

3. What is the relationship between the terms *magnetic reconnection* and *magnetic bubbles* as they are used in the article?

   A. Magnetic reconnection is what allows magnetic bubbles to create solar flares.

   B. Magnetic reconnection is what causes the magnetic bubbles to form.

   C. Magnetic reconnection occurs when magnetic bubbles rejoin the sun.

   D. Magnetic reconnection is what solar flares use to create magnetic bubbles.

4. The following question has two parts. Answer Part A, then answer Part B.

Part A: Why does the author provide an explanation of the graceful-arc theory of the sun's magnetic field?

A. to establish the idea that current data from Voyager probes seems to contradict previously held theories

B. to show what the Voyager is attempting to find as it reaches the outer edge of the Sun's magnetic field

C. to demonstrate the relationship between the Sun's magnetic field and the rate at which Voyager can send information back to Earth

D. to introduce the beliefs about our solar system that the Voyager mission was designed to disprove

Part B: How does this explanation contribute to the author's purpose in the article?

A. It gives an example that explains one of the Voyager's primary goals.

B. It provides support for the idea that scientific theories change as new information becomes available.

C. It provides support for the claim that the Voyager is NASA's primary tool for making discoveries in space.

D. It gives an example of one way that scientists can learn new things from old experiments.

5. **In the article, the author reveals Opher's claim that "The magnetic bubbles appear to be our first line of defense against cosmic rays . . ." Choose <u>two</u> sentences from the article that most help to develop this claim.**

A. "When a magnetic field gets severely folded like this, interesting things can happen."

B. "The crowded folds of the skirt reorganize themselves, sometimes explosively, into foamy magnetic bubbles."

C. "The actual bubbles appear to be self-contained and substantially disconnected from the broader solar magnetic field."

D. "Lots of things try to get across—interstellar clouds, knots of galactic magnetism, cosmic rays, and so on."

E. "When these microscopic cannonballs try to enter the solar system, they have to fight through the sun's magnetic field to reach the inner planets."

F. "On the other hand, cosmic rays could get trapped inside the bubbles, which would make the froth a very good shield indeed."

6. Create a summary of the article by writing the ideas from the "Possible Ideas" table in the "Summary" table in the order in which they were introduced and discussed in the article. Not all ideas will be used.

Summary			
First	Second	Third	Fourth

Possible Ideas					
Cosmic rays are subatomic particles that travel at near-light speed.	In the 1950's, the magnetic field of the sun was believed to be in the shape of an arc.	Scientists expect to make further discoveries based on data recorded by the Voyager craft.	Scientists believe the foam-like magnetic fields are caused by the spinning of the sun.	A new theory of magnetic foam is based on information gathered by the Voyager craft.	The border between the Milky Way and the Solar System is known as "the heliosheath."

7. Which excerpt from the video <u>best</u> demonstrates the central idea?

A. "The two Voyager spacecraft have been travelling away from earth for more than thirty-three years, and they are finally in the outer edge of the solar system." (0:14-0:20)

B. "The sun's magnetic field spins on opposite directions on the North and South Poles, creating a sheet where the two spins meet." (0:46-0:52)

C. "The smooth, streamlined look is gone, replaced with a bubbly, frothy outer layer." (1:20-1:23)

D. "When they arrive at the bubble region, they slowly move from bubble to bubble until they can reach smooth magnetic field lines, and follow them toward the sun." (1:31-1:38)

8. This item has two parts. Answer Part A and then answer Part B.

Part A: Why does the author of the article compare cosmic rays to cannonballs?

A. to clarify the role dangerous cosmic rays play in space

B. to explain the technical topic of cosmic rays using a familiar object

C. to illustrate the explosive nature of the process of forming cosmic rays

D. to describe the shape and trajectory of cosmic rays

Part B: Which excerpt from the video demonstrates a technique similar to the answer to Part A?

A. "As the solar wind travels out from the sun, it pushes against the galactic medium and abruptly slows down." (0:29 – 0:33)

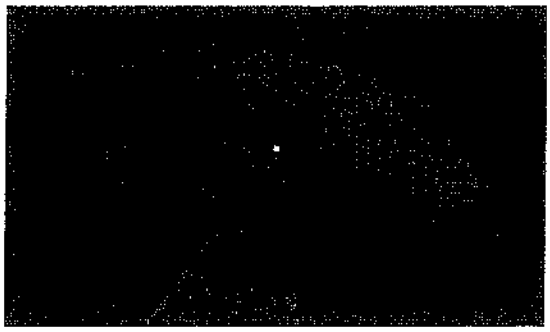
B. "This sheet gently ripples as it travels outward, and the ripples get bigger as they go." (0:53 – 0:57)

C. "When this sheet reaches the termination shock, it starts to compress, like water hitting a wall." (0:59 – 1:04)

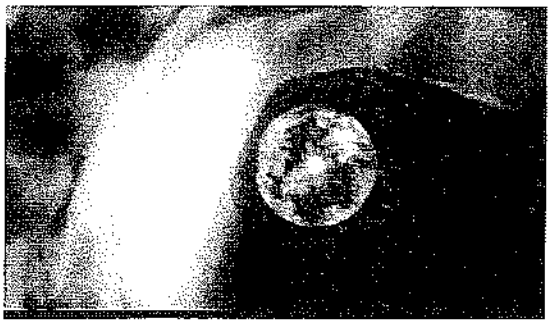
D. "This new layer also changes our understanding of how extremely fast-moving particles, called cosmic rays, enter our solar system." (1:24 – 1:31)

9. **In paragraph 9 of the article, the author claims that "Energetic particle sensor readings suggest that the Voyagers are occasionally dipping in and out of the foam—so there might be regions where the old ideas still hold." Circle the image from the video that <u>best</u> supports this claim?**

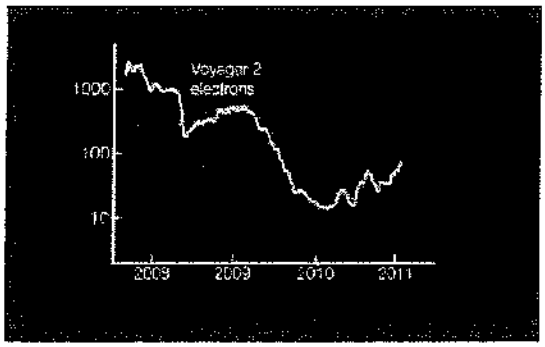
A



C



B



D

10. The article and the video both describe the appearance and function of the heliosheath. Write an essay to explain how watching the video helps add meaning to information from the text. Be sure to include details from both the video and the text in your response.

Your response will be scored on how well you:

- Demonstrate your understanding of the ideas of the text
- Use evidence from the text to help develop and support your ideas
- Organize your response in a logical manner
- Demonstrate an appropriate writing style through the use of precise word choice and varied sentences
- Use standard conventions for writing

GRADES 6-11 (July 2015) v3.01

PARCC SCORING RUBRIC FOR PROSE CONSTRUCTED RESPONSE ITEMS

Research Simulation Task and Literary Analysis Task

Construct Measured	Score Point 4	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Reading Comprehension and Written Expression	The student response • demonstrates **full** comprehension of ideas stated explicitly and inferentially by providing an accurate analysis; • addresses the prompt and provides **effective and comprehensive** development of the claim or topic that is **consistently appropriate** to task, purpose, and audience; • uses clear reasoning supported by relevant text-based evidence in the development of the claim or topic; • is **effectively** organized with **clear and coherent** writing; • establishes and maintains an **effective** style.	The student response • demonstrates comprehension of ideas stated explicitly and/or inferentially by providing a **mostly accurate** analysis; • addresses the prompt **and provides mostly effective** development of claim or topic that is **mostly appropriate** to task, purpose, and audience; • uses **mostly** clear reasoning supported by **relevant** text-based evidence in the development of the claim or topic; • is organized with **mostly clear and coherent** writing; • establishes and maintains a **mostly effective** style.	The student response • demonstrates **basic** comprehension of ideas stated explicitly and/or inferentially by providing a **generally** accurate analysis; • addresses the prompt and provides **some** development of claim or topic that is **somewhat appropriate** to task, purpose, and audience; • uses **some** reasoning and text-based evidence in the development of the claim or topic; • demonstrates **some** organization with **somewhat** coherent writing; • has a style that is **somewhat** effective.	The student response • demonstrates **limited** comprehension of ideas stated explicitly and/or inferentially by providing a **minimally** accurate analysis; • addresses the prompt and provides **minimal** development of claim or topic that is **limited in its appropriateness** to task, purpose, and audience; • uses limited reasoning and text-based evidence; • demonstrates **limited** organization and coherence; • has a style that is **minimally** effective.	The student response • demonstrates **no** comprehension of ideas by providing an **inaccurate** or **no** analysis; • is **undeveloped and/or inappropriate** to task, purpose, and audience; • includes little to no text-based evidence; • **lacks** organization and coherence; • has an **inappropriate style.**
Knowledge of Language and Conventions		The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There may be **a few minor errors** in mechanics, grammar, and usage, but **meaning is** clear.	The student response to the prompt demonstrates **some** command of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear.**	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be **errors** in mechanics, grammar, and usage that **often impede understanding.**	The student response to the prompt **does not demonstrate command** of the conventions of standard English at the appropriate level of complexity. **Frequent and** varied errors in mechanics, grammar, and usage **impede understanding.**