

Incoming 8th Grade

ELA Summer Reading\Writing

This summer for your ELA class, you will be reading *Trash Vortex* by Danielle Smith-Llera. This book explores the serious problem of plastic pollution in our oceans and the environment. Along with *Trash Vortex*, you will also read other informative texts about plastic pollution to help you better understand the issue from different perspectives.

As you read each text, you will complete comprehension questions designed to help you build background knowledge. This will prepare you to write a strong argument essay explaining why targeting the end of the plastic cycle—through cleanup, recycling, and proper waste management—is the best way to reduce plastic pollution.

To help organize your ideas clearly, you will use the Painted Essay® template, which breaks your essay into four color-coded parts:

The Painted Essay® Template: Parts and Descriptions

1. Introduction (Red Paragraph)

- Introduce the topic and clearly state your main idea or claim.
- Include the title and author of the text(s) you are writing about.
- Explain what your essay will argue or prove.

2. Proof Paragraph 1 (Yellow Paragraph)

- Present your first strong reason supporting your claim.
- Include specific evidence or examples from the text(s).
- Explain how this evidence supports your claim.

3. Proof Paragraph 2 (Blue Paragraph)

- Present your second strong reason supporting your claim.
- Use more evidence or examples from the text(s).
- Explain how this supports your claim and builds your argument.

4. Conclusion (Green Paragraph)

- Restate your claim in a new way.
- Summarize your key reasons.

- Explain why your argument matters or what readers should take away.
- End with a final thought or call to action.

You will have access to a model essay that makes a different claim about plastic pollution. This model will help you see how a strong argument essay is structured and how evidence is used to support a claim.

You will also receive a writing plan graphic organizer to help you plan your own essay step-by-step. This organizer will guide you in organizing your ideas clearly before you start writing.

Using these tools along with the Painted Essay® template will make writing your argument essay easier and more organized.

You may type up and print your essay or write it on paper with a pencil

Summer Packets and Essays are due the first week of school and will be graded. Books will be provided by the school and a PDF in the 8th Grade ELA/SS Google Classroom. Please note: students who do not return the book to the school in the first week of school will be required to replace it.

Summer Reading & Writing Pacing Guide

Book: *Trash Vortex* by Danielle Smith-Llera + Additional Informative Texts

Dates: June 15 – August 30 (11 Weeks)

Assignment Components:

- Read *Trash Vortex* and two additional informative texts on plastic pollution
- Complete 5 Homework Assignments (Point of View & Word Relationships)
- Review a Model Literary Argument Essay (with a different claim)
- Complete a Writing Plan Graphic Organizer
- Write and revise an Argument Essay defending the claim:
Targeting the end of the plastic cycle is the best way to reduce plastic pollution
- Use the Painted Essay® structure for your writing

Week 1 (June 15–21)

- Read *Trash Vortex* Chapter 1
- Learn background information on plastic pollution
- Review the Painted Essay® structure

Week 2 (June 22–28)

- Read *Trash Vortex* Chapter 2
- **Homework:** Analyze Point of View and Purpose – *Trash Vortex* Chapter 2

Week 3 (June 29–July 5)

- Read *Trash Vortex* Chapter 3
- **Homework:** Analyze Point of View and Purpose – *Trash Vortex* Chapter 3

Week 4 (July 6–12)

- Read *Trash Vortex* pages 44–49
- **Homework:** Analyze Point of View and Purpose – *Trash Vortex* pages 44–49

Week 5 (July 13–19)

- Read "Five Weird Materials That Could Replace Plastic"
- **Homework:** Understand Word Relationships – *Five Weird Materials That Could Replace Plastic*

Week 6 (July 20–26)

- Read "Five Things You Can Do to End Plastic Pollution"
- **Homework:** Understand Word Relationships – *Five Things You Can Do to End Plastic Pollution*

Week 7 (July 27–August 2)

- Reflect on claims made in all texts
- Review vocabulary and key arguments

Week 8 (August 3–9)

- Begin Writing Plan Graphic Organizer
- Identify claim, two reasons, and supporting evidence

Week 9 (August 10–16)

- Complete Writing Plan Graphic Organizer
- Review the Model Argument Essay with a different claim
- Draft the Introduction and Proof Paragraph 1 using Painted Essay® template

Week 10 (August 17–23)

- Draft Proof Paragraph 2 and Conclusion
- Revise full essay for clarity and evidence

Week 11 (August 24–30)

- Finalize editing and revisions for your Argument Essay
- Finalize all materials for submission

Submit the first week of school:

- Completed readings
- 5 Homework Assignments
- Writing Plan Graphic Organizer
- Final Argument Essay (following the Painted Essay® format)

Estudiantes entrantes al octavo grado

Lectura y escritura de verano de Inglés(ELA)

Este verano, para tu clase de Lengua y Literatura Inglesas (ELA), leerás *Trash Vortex* de Danielle Smith-Llera. Este libro explora el grave problema de la contaminación por plástico en nuestros océanos y el medio ambiente. Además de *Trash Vortex*, también leerás otros textos informativos sobre la contaminación por plástico para ayudarte a comprender mejor el problema desde diferentes perspectivas.

A medida que leas cada texto, responderás preguntas de comprensión diseñadas para ayudarte a desarrollar tus conocimientos previos. Esto te preparará para escribir un ensayo argumentativo sólido que explique por qué abordar el fin del ciclo del plástico —mediante la limpieza, el reciclaje y la gestión adecuada de residuos— es la mejor manera de reducir la contaminación por plástico.

Para ayudar a organizar sus ideas con claridad, utilizará la plantilla *Painted Essay®*, que divide tu ensayo en cuatro partes codificadas por colores:

Plantilla de Painted Essay®: partes y descripciones

1. Introducción (Párrafo rojo)

- Introduzca el tema y exponga claramente su idea principal o afirmación.
- Incluya el título y el autor del texto(s) sobre lo que está escribiendo.
- Explique lo que tu ensayo argumenta o probará.

2. Párrafo de prueba 1 (Párrafo amarillo)

- Presenta tu primera razón sólida que respalde tu afirmación.
- Incluye evidencia específica o ejemplos del(los) texto(s).
- Explique cómo esta evidencia respalda su afirmación.

3. Párrafo de prueba 2 (Párrafo azul)

- Presenta tu segunda razón fuerte que respalda tu afirmación.
- Utiliza más evidencia o ejemplos del(los) texto(s).
- Explique cómo esto respalda su afirmación y construye su argumento.

4. Conclusión (Párrafo Verde)

- Reformula tu afirmación de una manera nueva.

- Resume tus razones principales.
- Explica por qué tu argumento es importante o qué deberían aprender los lectores.
- Termina con un pensamiento final o un llamado a la acción.

Tendrás acceso a un ensayo modelo que presenta una afirmación diferente sobre la contaminación plástica. Este modelo te ayudará a comprender cómo se estructura un ensayo argumentativo sólido y cómo se utiliza la evidencia para sustentar una afirmación.

También recibirás un organizador gráfico para tu plan de escritura que te ayudará a planificar tu ensayo paso a paso. Este organizador te ayudará a organizar tus ideas con claridad antes de empezar a escribir.

El uso de estas herramientas junto con la plantilla Painted Essay® hará que escribir tu ensayo argumentativo sea más fácil y organizado.

Puedes escribir tu ensayo a máquina e imprimirlo o escribirlo en papel con un lápiz.

Los paquetes y ensayos de verano deben entregarse durante la primera semana de clases y se calificarán. La escuela proporcionará los libros y un PDF en Google Classroom de Inglés/Estudios Sociales de 8.º grado. Nota: Los estudiantes que no devuelvan el libro a la escuela durante la primera semana de clases deberán reemplazarlo.

Guía de orden de lectura y escritura de verano

Libro: *Trash Vortex* por Danielle Smith-Llera + Textos informativos adicionales

Fechas: 15 de junio – 30 de agosto (11 semanas)

Componentes de la tarea:

- Leer *Trash Vortex* y dos textos informativos adicionales sobre la contaminación plástica
- Completar 5 tareas (punto de vista y relaciones entre palabras)
- Revisar un ensayo modelo de argumentación literaria (con una afirmación diferente)
- Completar un Plan de Escritura Organizador Gráfico
- Escriba y revise un ensayo argumentativo defendiendo la afirmación:
Apuntar al fin del ciclo del plástico es la mejor manera de reducir la contaminación plástica
- Utilice la estructura Painted Essay® para su escritura

Semana 1 (del 15 al 21 de junio)

- Leer *Trash Vortex* Capítulo 1
- Conozca información de fondo sobre la contaminación plástica.
- Revisar la estructura del Painted Essay®

Semana 2 (del 22 al 28 de junio)

- Leer *Trash Vortex* Capítulo 2
- **Tarea:** Analizar el punto de vista y el propósito –*Trash Vortex* Capítulo 2

Semana 3 (del 29 de junio al 5 de julio)

- Leer *Trash Vortex* Capítulo 3
- **Tarea:** Analizar el punto de vista y el propósito –*Trash Vortex* Capítulo 3

Semana 4 (del 6 al 12 de julio)

- Leer *Trash Vortex* páginas 44–49
- **Tarea:** Analizar el punto de vista y el propósito –*Trash Vortex* páginas 44–49

Semana 5 (del 13 al 19 de julio)

- Lea "Cinco materiales extraños que podrían reemplazar al plástico"
- **Tarea:** Comprender las relaciones entre palabras –*Cinco materiales extraños que podrían reemplazar al plástico*

Semana 6 (del 20 al 26 de julio)

- Lea "Cinco cosas que puede hacer para acabar con la contaminación plástica"
- **Tarea:** Comprender las relaciones entre palabras –*Cinco cosas que puedes hacer para acabar con la contaminación plástica*

Semana 7 (27 de julio – 2 de agosto)

- Reflexionar sobre las afirmaciones realizadas en todos los textos
- Revisar vocabulario y argumentos clave

Semana 8 (del 3 al 9 de agosto)

- Comience a escribir el plan Organizador gráfico
- Identificar la afirmación, dos razones y la evidencia que la respalda

Semana 9 (del 10 al 16 de agosto)

- Organizador gráfico del plan de escritura completo
- Revise el ensayo de argumento modelo con una afirmación diferente
- Redacte el párrafo de introducción y prueba 1 utilizando la plantilla Painted Essay®

Semana 10 (del 17 al 23 de agosto)

- Borrador del párrafo 2 de prueba y conclusión
- Revise el ensayo completo para mayor claridad y evidencia.

Semana 11 (del 24 al 30 de agosto)

- Finalizar la edición y las revisiones de su ensayo argumentativo.
- Finalizar todos los materiales para su envío.

Entregar la primera semana de clases:

- Lecturas completadas
- 5 tareas para hacer en casa
- Organizador gráfico del plan de escritura
- Ensayo argumentativo final (siguiendo el formato Painted Essay®)

Chapter Summaries

Synopsis: *Trash Vortex*, Chapter 1

RI.7.10

Name: _____ Date: _____

- Charles Moore sailed his boat, *Alguiita*, from California to Hawaii in 1997. The boat entered the North Pacific Ocean gyre, a whirlpool.
- He saw lots of pieces of plastic in the mid-Pacific.
- There are eleven gyres in the world's oceans. They move seawater and everything floating in it.
- The gyres create plastic bits of trash by breaking plastic apart.
- The gyres add more and more bits of plastic to the whirlpool.
- Researchers collect the microplastics and create maps of where it is floating.
- Moore created the Algalita Marine Research Foundation to help clean up the ocean.
- He discovered microplastic everywhere in the gyre. It is now named the Great Pacific Garbage Patch. It is twice the size of Texas.

Synopsis: *Trash Vortex*, Chapter 2

RI.7.10

Name: _____ Date: _____

- Microplastics mix with natural items and can travel far.
- Plastic doesn't break down, it lives forever.
- Plastic means moldable.
- Some trees make a material called rubber.
- Chemist Charles Goodyear discovered how to make rubber weatherproof.
- Wood fibers called cellulose, when mixed with nitric acid, make cheap combs, buttons, and silverware handles.
- By adding camphor and nitric acid to the cellulose, factory owner John Wesley Hyatt made balls, brush handles, piano keys, eyeglass frames, false teeth, and film.
- A Belgium-American chemist named Leo Baekeland invented petroleum and made Bakelite, the first modern plastic.
- To make plastic, you begin by extracting oil from underground. Next, you mix the oil with other chemicals to make different kinds of plastics.
- Plastics were used in World War II.
- After the war, plastic businesses kept making more and more plastic.
- Plastics made things easier, cutting down on household chores.
- Throwing away plastic became normal.
- Plastic started piling up in waterways.
- The Federal Clean Water Act was enacted in 1972.

Synopsis: *Trash Vortex*, Chapter 3

RI.7.10

Name: _____ Date: _____

- Earth is mostly water.
- Plastic ends up in the ocean when rain overflows dumps and storm drains, and when people litter.
- It takes 500 years or more for plastic to break down.
- Single-use plastic is the biggest problem.
- Floating plastics trap animals.
- Plastic harms animals when they eat it.
- Non-native species can use microplastics and other plastic litter as a raft to migrate to new territories and harm the native species and the ecosystem.
- Seals choke on plastic netting.
- Albatross die from eating microplastics.
- Nurdles, tiny round plastic balls, are found all over the world's beaches.
- Tiny plastic beads in toothpaste and soaps end up in the ocean.
- Plastic microfibers shed from clothing are polluting waters everywhere.
- Microplastics are like a plastic smog of polluted clouds in the water.
- Sun, waves, salt, and gyres break plastics into microplastics.
- Plastic travels through the food web.
- When we eat fish, we are often also eating plastic.
- Dangerous chemicals attached themselves to microplastics.
- Plastic is made from toxic chemicals, and when we eat them, we hurt our bodies.
- Plastic in the United States ends up in landfills, is recycled, or is burned.
- Some countries do not have a system in place to manage the waste they produce.
- Companies should be more responsible for plastic waste.

Synopsis: *Trash Vortex*, Pages 44–49

RI.7.10

Name: _____ Date: _____

- *Plastiki* is the name of a boat made from used water bottles.
- Finding solutions to deal with plastic pollution is one of our greatest challenges.
- Studies show that vast amounts of plastic are polluting the oceans.
- One way to help with plastic pollution is to rig up giant vacuum cleaners.
- Another way to help is to employ animals like wax worms that can eat plastic.
- Scientists are coming up with many different ideas to fight pollution.
- We need to stop using so much plastic, especially single-use plastic.
- Plastic bottles require a lot of oil and money to make.
- Recycling plastic bottles is a good idea.
- New types of plastics are being made that can biodegrade, or break down.

Additional Texts

Text: "Five Weird Materials That Could Replace Plastic"

Name: _____ Date: _____

Five Weird Materials That Could Replace Plastic

By Jessica Hullinger

Plastic is a wonder. It's malleable, so it can be molded into a variety of useful objects—from bottles to bags to medical supplies. At the same time, it's also durable and can resist wear and tear. Indeed, since synthetic plastic was first invented back in 1907, the world hasn't been able to get enough of the stuff. According to one study, we've manufactured enough plastic since World War II to coat the entire globe in a layer of saran wrap.

The problem, of course, is that for all its benefits, plastic is pretty rough on the environment. A single plastic bottle, when tossed into a landfill, could take at least 500 years to show signs of decay. And those styrofoam packing peanuts that make sure your packages arrive unharmed? Those will sit around for *one million years*. That's a bummer, but even worse is that a lot of our discarded plastic doesn't wind up in a landfill at all. Instead, it lands in the ocean, with one study suggesting as much as 8 million metric tons of plastic found its way to the ocean in 2010. That's "five plastic bags filled with plastic for every foot of coastline in the world," says Jenna Jambeck, an associate professor at the University of Georgia and an author on the study.

Okay, enough doom and gloom. Here's the good news: Scientists know this is a problem, and are working hard to find a solution. Here are a few recent attempts.

1. Sugar + Carbon Dioxide

The latest effort comes from the University of Bath, where researchers have created a new type of plastic that's biodegradable and made from two common ingredients: sugar and carbon dioxide. "This new plastic is a renewable alternative to fossil-fuel based polymers, potentially inexpensive, and, because it is biodegradable, will not contribute to growing ocean and landfill waste," explains Antoine Buchard, Whorrod Research Fellow at the university's department of chemistry. And, because this new material is bio-compatible, it could be used in medical devices and implants, so that's cool.

2. Edible Water Bottles

Before you picture yourself gnawing on a Dasani bottle, check out the Ooho, a "bubble-like sphere of water." The H₂O is protected inside a gelatinous film that's made of plants, so it's biodegradable, but it's also entirely edible. Meaning in the future, you might be eating your water, not drinking it. The downside: The

portions are pretty small. Plus, once you've bitten into the bubble, it can't be re-sealed, so you've gotta drink the whole thing. But that might not be so bad, considering we're all dehydrated all the time.

3. 'Smart Mud'

Researchers at the University of Tokyo think they've created a revolutionary material in the lab by mixing water with clay and a little extra something to thicken it up: a "molecular glue" called sodium polyacrylate. "The mixture is almost 98 percent water," *New Scientist* explains, but it transforms into a sort of mud, or gel, that could potentially become very strong. Bonus: This stuff is "self-healing" and can regain its strength, even if it breaks under pressure.

4. Mushrooms

Hidden underneath a mushroom's outer shell is a complex system of tubular cells called mycelia. These are fungi's eyes and ears; they sense the surrounding environment, absorb nutrients as food, and help the fungus grow and survive. They look a bit like fine, white hair, and they're the secret ingredient in a new kind of fungus-based packing material. A company called Ecovative Design is mixing natural ingredients (like oats or hemp) with the mycelia, which grows and binds the mixture together into a solid mat. Put these mats into a mold, and voila: You've got a container, carton, or canister that's eco-friendly. According to *Phys.org*, this mushroom material can break down in a landfill in about 180 days. Ecovative is marketing its innovation as a replacement for traditional styrofoam. And if you want to grow your own customized mold, that's an option, too.

5. Shrimp Shells

If you had to guess, how many plastic bags would you say you have lying around your house? Twenty? A hundred? No doubt, plastic bags are a massive environmental nuisance. Some one trillion of them are used around the world every year, and almost none of them are recycled. The effort to encourage people to buy canvas bags, or at least reuse their plastic ones, is ongoing, but in the meantime, an engineering professor at the University of Nottingham in the U.K. is taking a different approach: She wants to make biodegradable bags out of shrimp shells. For now, her project is aimed specifically at Egypt, where there is a huge overabundance of crustacean shell waste. The shells are collected, boiled in acid to make them less brittle, and stripped down to a plastic bag-like material. Just two pounds of shells can yield 15 biodegradable shopping bags. "I like the whole idea of taking a waste product and then making something that will contain waste and will make an environmental problem better," Everitt told *The Week*.

Source: Hullinger, Jessica. "Five Weird Materials That Could Replace Plastic." *The Week*, 16 June 2017. Web. Used by permission.

Text: "Five Things You Can Do to End Plastic Pollution"

Name: _____ Date: _____

Five Things You Can Do to End Plastic Pollution

By Anjali Acharya

The news headlines are grim. A male pilot whale dies on a Thai beach having swallowed 80 plastics bags; images of turtles stuck in six-pack plastic rings; a sad photo of a tiny seahorse clinging to a plastic ear-bud goes viral. Plastic products wash up daily on beaches worldwide—from Indonesia to coastal west Africa, and waterways in cities are increasingly clogged with plastic waste.

But the world is taking note and countries, the private sector, and communities are starting to act. From bans and taxes on various single-use plastics, to investments in waste collection, and policies on reduced plastics packaging, to beach clean-ups. We are trying to break the addiction to plastics, and contribute to healthier lives and a healthier planet.

This year, World Environment Day focuses on "Beating Plastic Pollution". The World Bank is contributing to this effort, using our suite of lending instruments and policy dialogue with key countries and cities to help identify and finance solutions to address the marine plastics issue. For example, the World Bank is a long term strategic investor in the improvement of municipal solid waste management systems that, if not correctly managed, are a major contributor to the ocean plastics problem. Since 2000, the World Bank has invested over \$4.5 billion to help improve more than 300 solid waste management programs to reduce pollution leakage, including plastics, into our environment. The Bank is also studying the flow of plastics into the ocean through a series of plastics pollution hotspot analyses to prioritize investments and look for quick wins.

But it is going to take more than building better solid waste management systems. Everyone needs to be on board to solve this problem and individual actions count.

Here are five things YOU can do—starting TODAY—to end plastic pollution:

1. **Say NO to Plastic Bags**

There are an estimated 1 million plastic bags used every minute, and a single plastic bag can take 1,000 years to degrade. Over the last two decades, more and more countries and cities are either banning plastic bags (examples include Rwanda, California) or introducing levies and taxes on them (examples include Ireland, Washington D.C.) to discourage people from the plastic option. These actions have had varying degrees of success, but you can set an example by bringing your own reusable bag when you shop. Not the nylon or polyester kind because they're also made from plastic—choose cotton ones instead.

2. **Bottle your Own Water**

Did you know that humans now buy an estimated million plastic bottles per minute, and that most of this plastic is not recycled? How many did you buy this week? Here is a quick win . . . bottle your own water or whatever you are drinking. Keep a recyclable bottle in your bag, place two on your desk—a mug for the hot drink; a tumbler/glass for something cold. Plastic bottles typically made from polyethylene terephthalate (Pet) take over 400 years to naturally decompose.

3. **Skip Plastic Straws**

Plastic straws are among the top items of marine plastics found around the world, and they're generally not recyclable. As a customer, use your voice at restaurants, cafes and eateries to refuse straws and plastic stirrers. Help a movement towards paper straws, as Starbucks and McDonalds are starting to do, or give up straws entirely. If you are desperate to use straws, carry your own. There are metal and bamboo straws that are now more widely available.

4. **Avoid Plastic Cutlery**

Ordering take-out? Tell the vendor to skip the plastic cutlery. Catering events? Use reusable cutlery (and plates and cups). France became the first country to pass a law that will go into effect by 2020 to ban plastic plates, cups and cutlery—hoping to spur on innovation in biodegradable products. Shop around, and change your own attitude towards choosing more ocean-friendly practices.

5. **Make Better Choices at Home**

Make Green choices at home in choosing products with less plastic packaging. Move away from the throwaway culture. Avoid cosmetics and personal hygiene products with microbeads. Microbeads, a type of microplastic, are the little dots in your toothpaste, and facial scrubs. New research shows increasing amounts of damage from microbeads to marine life, leading to potential harm to human health. Shop around before investing in clothing that has synthetic microfibers. Often when these items are washed, they release microfibers into the water, which make their way to oceans, and may then be ingested by fish and other marine creatures.

Today, on World Environment Day 2018, please join the Plastics Detox movement. These five, relatively simple, actions can revolutionize our relationship with plastic. Let's use our voice, and behavior to stem the tide of plastics pollution. Maybe then we'll read stories about pristine beaches and happy turtles.

Source: Acharya, Anjali. "Five Things You Can Do to End Plastic Pollution." *World Bank*, 4 June 2018. Web. Used by permission.

1240L

Text: "Boyan Slat: The Great Pacific Garbage Patch Kid"

Name: _____ Date: _____

Boyan Slat: The Great Pacific Garbage Patch Kid

by Pat Betteley

Plastics are polluting the oceans, rivers, and beaches of the world, and studies show that even the tiniest pieces pose a large threat. If you've walked a beach lately, you've seen plastic littering the coast. Although most of the plastics in the ocean are too small for the average person to even notice, what you don't see can hurt you. These microplastics (tiny pieces of plastic) are just the right size to enter the ocean's food webs and end up on our dinner plates. Quantities of microscopic litter were measured from 35 national parks across the United States in a 2013 study done by the U.S. Park Service, Clemson University, and the NOAA Marine Debris Program. Researchers found microplastics in every sample, no matter how protected or remote the park. The tiny bits of plastic are transported through the air and released when ice caps melt. They have been found in salt, beer, and bottled water.

What is the source of these microplastics? Some are microbeads (small plastic pieces) that were used in face wash and toothpaste until 2015. Others are fragments from larger pieces of plastic. But most are microfibers (small strands) from synthetic clothing (fabric made from a chemical process), fishing nets, carpets, wet wipes, and cigarette butts. These fibers are so small that they can pass through washing machine filters, travel through the water cycle, and end up in oceans where they get tangled in the guts of the organisms that eat them. How long will it take for plastic to completely biodegrade (break down)? Scientists' estimates range from 450 years to never. Meanwhile, nearly 700 species of marine animals are known to have been affected by ocean plastics. Some may develop tumors or liver damage because the plastics are sponges for soaking up pollutants such as mercury, flame retardants, and pesticides. These toxins make their way up the food chain. Says Chelsea Rochman, a marine ecologist at the University of Toronto, "We have a systemic problem. We're mismanaging our waste, and that's coming back to haunt us on our own dinner plates and in our drinking water."

Boyan Sees a Need

What to do about the confetti soup of plastics in our oceans? Enter 16-year-old Boyan Slat from the Netherlands. While scuba diving in Greece, he noticed more plastic than fish. After digging deeper into the world's plastic pollution problem, Boyan was surprised to find that no one has made any serious attempts to tackle the issue. "Why don't we just clean it up?" he thought. The teen designed his high school science project around the problem. His research identifies five

major zones in the world's oceans where the ocean's currents converge (come together). These are often called "garbage patches." The sun's UV rays in these zones slowly breaks down plastics into microplastics.

The "Boyan Wonder" quickly realized that cleaning the oceans using ships and nets would take thousands of years, cost billions of dollars, and harm sea life. What else will work? The creative teen has an idea. Instead of going after the plastic, he will create a "passive concentration system." In this system, the ocean currents bring the plastic to him.

After graduating from high school in 2012, Boyan presented his idea at a TEDx conference, but his plan was not noticed by the science community. Six months after beginning studies to become an aerospace engineer, Boyan couldn't stop thinking about the problem of plastics in the ocean. He quit school and used 300 euros of savings (about \$350.00 U.S. currency) to start The Ocean Cleanup. Then, in March 2013, his fortunes changed. Boyan's TEDx video was picked up by several news sites and went viral. Hundreds of thousands of people liked his idea.

Teen Entrepreneur to the Rescue

Five and a half years later, Boyan's staff of 70-plus engineers, researchers, and scientists, have designed System 001. This massive, floating, 2000-foot long barrier acts as an artificial coastline. This unmanned system moves with the currents and traps plastics in a 10-foot-deep skirt. From the collection zone, plastics are loaded onto a boat and taken for recycling. Boyan imagines that eventually, up to 60 devices that will ride the waves, collecting thousands of tons of debris a year. On September 8, 2018, the System 001 was launched from San Francisco Bay. However, 23-year-old Boyan was not aboard. Although the Great Pacific Garbage Patch Kid thinks a lot about the ocean, he gets violently seasick. Instead, he continues to work from land toward the goal of cleaning up half the Great Ocean Garbage Patch by 2025.

His story reminds us that creative ideas come from people of all ages and that kids really can change the world.

Source: Betteley, Pat. "Boyan Slat: The Great Pacific Garbage Patch Kid." *Faces Magazine*, vol. 35, no. 4, pp. 26-29. © 2019 by Cricket Media, Inc. Reproduced with permission. All Cricket Media material is copyrighted by Cricket Media, Inc., and/or various authors and illustrators. Any commercial use or distribution of material without permission is strictly prohibited.

1070L

Homework Assignments

Homework: Analyze Point of View and Purpose: *Trash Vortex*, Chapter 2

Name: _____ Date: _____

Directions: Read the excerpts from *Trash Vortex*, and select the correct response to answer the questions below.

1. Read the sentence below, and answer the question that follows.

"We were a nation of consumers now, a society increasingly **democratized** by our shared ability to enjoy the conveniences and comforts of modern life" (22).

What is the meaning of **democratized** as it is used in this sentence? (L.7.4)

- A. made equal
- B. made angry
- C. made confused
- D. made powerful

2. Reread the paragraph on page 24 of *Trash Vortex* beginning "Yet humans have always found new forms . . ." and answer the question below.

What is the author's point of view about how people treated plastic compared to other materials? (RI.7.6)

- A. Like other materials, people grew bored with plastic.
- B. Unlike other materials, people didn't try to reuse plastic.
- C. Like other materials, people didn't think plastic would last long.
- D. Unlike other materials, people combined plastic with different substances.

3. What is the purpose of the paragraph on page 24 of *Trash Vortex* beginning "Plastic trash started accumulating where trash always had"? (RI.7.6)

- A. to inform about the history of pollution of water
- B. to persuade the reader of the need to take action
- C. to engage the reader about recycling success stories
- D. to entertain with suspenseful stories about scientists

Homework: Analyze Point of View and Purpose: *Trash Vortex*, Chapter 3

Name: _____ Date: _____

Directions: Read the excerpts from *Trash Vortex* and select the correct response to answer the questions below.

1. This question has two parts. First, answer Part A. Then, answer Part B.

Part A

Reread the paragraph on pages 36–37 of *Trash Vortex*, beginning "Scientists in Plymouth, England, worked with a nature film director in 2015 . . ."

What is the author's point of view about the video described in this paragraph? (RI.7.6)

- A. It is unusual and surprising.
- B. It is outdated and incorrect.
- C. It is fascinating and inspiring.
- D. It is confusing and unhelpful.

Part B

What word from the paragraph best helps convey the author's point of view about the video? (RI.7.6)

- A. startling
- B. ingested
- C. equipped
- D. transparent

2. Reread the paragraph on page 38 of *Trash Vortex* beginning "Seafood, whether eaten raw or cooked, delivers . . ." and answer the question below.

What is the purpose of this paragraph in the text? (RI.7.6)

- A. to entertain the reader with stories and facts about seafood across the world
 - B. to persuade the reader that he or she should no longer eat seafood from the ocean
 - C. to engage the reader with a history about how humans first began fishing for seafood
 - D. to inform about the importance of seafood and the dangers of its being contaminated
3. Reread the sentence below from page 40, and answer the question that follows.

"Hormones carry **vital** messages ranging from instructions telling the body how to grow and develop to messages that trigger emotions and feelings of hunger."

What is the meaning of **vital** as it is used in this sentence? (L.7.4)

- A. new
- B. difficult
- C. complex
- D. important

Homework: Analyze Point of View and Purpose: *Trash Vortex*, Pages 44–49

Name: _____ Date: _____

Directions: Read the excerpts from *Trash Vortex*, and select the correct response to answer the questions below.

1. This question has two parts. First, answer Part A. Then, answer Part B.

Part A

What is the author's purpose in discussing *Plastiki* on page 44? (RI.7.6)

- A. to entertain the reader with jokes made about *Plastiki*
- B. to persuade the reader to build their own version of *Plastiki*
- C. to inform the reader of the similarities and differences between *Plastiki* and Charles Moore's boat
- D. to hook the reader about an interesting story about *Plastiki*, which was built from 12,500 used water bottles

Part B

Read the following sentence and answer the question below it:

"The bottle craft traveled through the gyre not as trash, but as part of a headline-grabbing expedition with a message." (p. 46, RI.7.6)

How does this sentence develop the purpose you identified in Part A?

- A. by amusing readers with surprising facts
- B. by teaching that plastic is not the enemy
- C. by convincing readers of the problem with plastic
- D. by confirming the interest that people took in the story

2. This question has two parts. First, answer Part A. Then, answer Part B.

Part A

What point of view does the author present on page 46? (RI.7.6)

- A. You can never catch up to the problem of trash in the ocean.
- B. Ocean currents will naturally take care of the plastic pollution.
- C. Vacuuming plastic pollution in the ocean won't solve the problem.
- D. Using plastic water bottles as a meal for bacteria won't solve the problem.

Homework: Understand Word Relationships: "Five Weird Materials That Could Replace Plastic"

Name: _____ Date: _____

Directions: Read the excerpts from the article "Five Weird Materials That Could Replace Plastic." Then answer the questions that follow.

1. Read the excerpt, and answer the questions that follow.

"It's **malleable**, so it can be **molded** into a variety of useful objects—from bottles to bags to medical supplies." (paragraph 1)

What is the meaning of the word **molded**? How can you use the meaning of **molded** to better understand **malleable**?

2. Read the excerpt, and answer the questions that follow.

"At the same time, it's also **durable** and can **resist** wear and tear." (paragraph 1)

What is the meaning of the word **resist**? How can you use the meaning of **resist** to better understand **durable**?

3. Read the excerpt, and answer the questions that follows.

"Hidden underneath a mushroom's outer shell is a complex system of tubular cells called **mycelia**. These are fungi's **eyes and ears**; they sense the surrounding environment, absorb nutrients as food, and help the fungus grow and survive." (paragraph 7)

What do **eyes and ears** allow people to do? What do **mycelia** in mushrooms do?

Source: Hullinger, Jessica. "Five Weird Materials That Could Replace Plastic." *The Week*, 16 June 2017. Web.

Homework: Understand Word Relationships: "Five Things You Can Do to End Plastic Pollution"

Name: _____ Date: _____

Directions: Read the excerpts from the article "Five Things You Can Do to End Plastic Pollution." Then answer the questions that follow.

1. Read the excerpt, and answer the questions that follow.

"Over the last two decades, more and more countries and cities are either banning plastic bags (examples include Rwanda, California) or introducing **levies** and **taxes** on them (examples include Ireland, Washington, D.C.) to discourage people from the plastic option." (paragraph 6)

What are **taxes**? How can you use the meaning of **taxes** to better understand **levies**?

2. Read the excerpt, and answer the questions that follow.

"Keep a recyclable bottle in your bag, place two on your desk—a mug for the hot drink; a **tumbler/glass** for something cold." (paragraph 7)

What is a **glass**? How can you use the meaning of **glass** to better understand **tumbler**?

Plastic Pollution

3. Read the excerpt, and answer the questions that follow.

"Ordering take-out? Tell the vendor to skip the plastic **cutlery**. Catering events? Use reusable **cutlery** (and **plates and cups**)." (paragraph 9)

What other items could be associated with **plates and cups** for takeout or events? What is **cutlery**? Hint: Use both the relationship to **plates and cups** and word parts of **cutlery** to figure out the meaning of the word.

4. Read the excerpt, and answer the questions that follow.

"**Microbeads**, a type of microplastic, are the little **dots** in your toothpaste, and facial scrubs." (paragraph 10)

What are **dots**? How can you use the meaning of **dots** to better understand **microbeads**?

Source: Acharya, Anjali. "Five Things You Can Do to End Plastic Pollution." *World Bank*, 4 June 2018. Web.

**Model Essay
&
Painted Essay Template**

Painted Essay® Template

W.6.2, W.6.4, W.6.5, W.6.9a

The Painted Essay®

A tool for teaching basic essay form

Introduction (RED) Catches readers' attention and gives some background information	
FOCUS STATEMENT (GREEN)	
Point 1 (YELLOW)	Point 2 (BLUE)
Proof Paragraph 1 (YELLOW) Gives evidence and reasons to support Point 1	
Proof Paragraph 2 Transition between the ideas in proof paragraph 1 and the ideas in Proof Paragraph 2 (BLUE and YELLOW). Gives evidence and reasons to support Point 2 (BLUE)	
Conclusion (GREEN) What? So what?	

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Model Argument Essay: "Reduce Plastic Pollution in the Beginning of Its Life Cycle"

W.7.1

(Example for Teacher Reference)

Prompt: Write an essay defending the idea that the beginning of the plastic life cycle is the best place to target to reduce plastic pollution.

It's easy to forget about plastic once you're done using it, but the problem doesn't go away. A plastic bottle could be around for five hundred years before it starts to decay (Hullinger). One whale could swallow as many as 80 plastic bags (Acharya). We must take action to reduce plastic pollution. People have suggested buying less plastic at the middle of the plastic life cycle or inventing new ways to clean up plastic at the end of the life cycle. These efforts are helpful, but the most effective place to reduce plastic pollution is at the beginning of its life cycle. By inventing and using new materials and banning plastic as much as possible, we can help ensure a future that is free of plastic pollution.

W.7.1a: First three sentences of paragraph give context.

W.7.1a: Sentence acknowledges alternate claim.

W.7.1a: Sentence introduces claim.

Many replacement materials for plastic already exist. We just need to start using them. An article by Jessica Hullinger in *The Week* magazine mentions some better alternatives for plastic. For example, there is already a company that makes water bottles out of a material that you can actually eat. There is even a scientist who is using shrimp shells to make plastic bags. According to the article, "Just two pounds of shells can yield 15 biodegradable shopping bags." If shrimp shells are not interesting enough, what about mushrooms? A company called "Evocative Design" is using mushrooms and other materials to create containers that can biodegrade in as few as 180 days. These are just a few examples that show that we already have new technologies for replacing plastic. The fact that we can successfully invent and use these alternative materials shows that focusing on reducing plastic pollution at the beginning of its life cycle can be extremely effective.

W.7.1c: Paragraph includes words like **for example** and **according to** to clarify relationships between evidence and claim.

W.7.1b: Paragraph uses relevant evidence and logical reasoning to support the claim.

Plastic Pollution

Another way to reduce plastic pollution from the beginning of its life cycle is to simply ban plastic. All around the world, people are taking action to stop plastic from beginning its journey from factory to ocean. According to the documentary *A Plastic Ocean*, Rwanda was the first country to ban plastic bags. Likewise, Danielle Smith-Llera writes in *Trash Vortex* that "[m]ore than 200 U.S. cities have banned plastic bags" (51). Some may argue that banning plastic is unrealistic. However, these examples show that it is possible to stop the use of plastic before it starts. Communities are making smarter, safer choices when it comes to plastic. The success of efforts to convince communities to ban plastic across the world demonstrates that targeting plastic pollution at the beginning of plastic's life cycle can work.

W.7.1d: Includes words like **Likewise** and **However** instead of **And** or **But** to establish and maintain a formal style.

The problem of plastic pollution is one of the most urgent that we face. As Smith-Llera writes in *Trash Vortex*, "[e]very day people fight the war on plastic pollution" (50). However, in this fight, we have to make a choice about how to best spend our energy. Some argue that focusing our effort in the middle of the life cycle, where consumers make choices, is best. Others say we should fight plastic where it already is by cleaning it up. These efforts are important, but the most effective place to focus is at the beginning. After all, how better to reduce plastic pollution than to create less plastic in the first place?

W.7.1e: Provides concluding section that follows from and supports the argument by restating the points and offering a new but connected thought.

Sources:

Acharya, Anjali. "Five Things You Can Do to End Plastic Pollution." *World Bank*. Web.

Hullinger, Jessica. "Five Weird Materials That Could Replace Plastic." *The Week*, 16 June 2017. Web.

Smith-Llera, Danielle. *Trash Vortex*. Capstone, 2018.

Model Argument Essay: "Reduce Plastic Pollution in the Beginning of Its Life Cycle"

W.7.1

Name: _____ Date: _____

Prompt: Write an essay defending the idea that the beginning of the plastic life cycle is the best place to target to reduce plastic pollution.

It's easy to forget about plastic once you're done using it, but the problem doesn't go away. A plastic bottle could be around for five hundred years before it starts to decay (Hullinger). One whale could swallow as many as 80 plastic bags (Acharya). We must take action to reduce plastic pollution. People have suggested buying less plastic at the middle of the plastic life cycle or inventing new ways to clean up plastic at the end of the life cycle. These efforts are helpful, but the most effective place to reduce plastic pollution is at the beginning of its life cycle. By inventing and using new materials and banning plastic as much as possible, we can help ensure a future that is free of plastic pollution.

Many replacement materials for plastic already exist. We just need to start using them. An article by Jessica Hullinger in *The Week* magazine mentions some better alternatives for plastic. For example, there is already a company that makes water bottles out of a material that you can actually eat. There is even a scientist who is using shrimp shells to make plastic bags. According to the article, "Just two pounds of shells can yield 15 biodegradable shopping bags." And if shrimp shells are not interesting enough, what about mushrooms? A company called "Evocative Design" is using mushrooms and other materials to create containers that can biodegrade in as few as 180 days. These are just a few examples that show that we already have new technologies for replacing plastic. The fact that we can successfully invent and use these alternative materials shows that focusing on reducing plastic pollution at the beginning of its life cycle can be extremely effective.

Another way to reduce plastic pollution from the beginning of its life cycle is to simply ban plastic. All around the world, people are taking action to stop plastic from beginning its journey from factory to ocean. According to the documentary *A Plastic Ocean*, Rwanda was the first country to ban plastic bags. Likewise, Danielle Smith-Llera writes in *Trash Vortex* that "[m]ore than 200 U.S. cities have banned plastic bags" (51). Some may argue that banning plastic is unrealistic. However, these examples show that it is possible to stop the use of plastic before it starts. Communities are making smarter, safer choices when it comes to plastic. The success of efforts to convince communities to ban plastic across the world demonstrates that targeting plastic pollution at the beginning of plastic's life cycle can work.

Plastic Pollution

The problem of plastic pollution is one of the most urgent that we face. As Smith-Llera writes in *Trash Vortex*, "[e]very day people fight the war on plastic pollution" (50). However, in this fight, we have to make a choice about how to best spend our energy. Some argue that focusing our effort in the middle of the life cycle, where consumers make choices, is best. Others say we should fight plastic where it already is by cleaning it up. These efforts are important, but the most effective place to focus is at the beginning. After all, how better to reduce plastic pollution than to create less plastic in the first place?

Sources:

Acharya, Anjali. "Five Things You Can Do to End Plastic Pollution." *World Bank*. Web.

Hullinger, Jessica. "Five Weird Materials That Could Replace Plastic." *The Week*. Web.

Smith-Llera, Danielle. *Trash Vortex*. Capstone, 2018.

Essay Planning Resources

Criteria of an Effective Argument Essay Anchor Chart

W.7.1

Introduction

- Catches the reader's attention and gives context
- Includes a main claim that states an opinion that can be proven or disproven with evidence and reasoning

Proof Paragraphs

- State a point
- Provide evidence and reasoning from the text(s) that support the point
- Provide elaboration and reasoning: What do these facts and evidence show? Why?
- Acknowledge alternative or opposing claims
- Restate and/or reflect on how the point, evidence, and reasoning support the main claim

Conclusion

- What? Restates the main claim and most important evidence and reasoning
- So what? Reflects on the larger meaning behind the main claim

Argument Writing Checklist

W.7.1**Name:** _____ **Date:** _____

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.9, W.7.1b	My claim is supported by reasons and evidence from accurate, credible sources and shows a solid understanding of the topic or text.		
W.7.1a	I state my claim clearly, and my writing stays focused.		

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.1a	I have an introduction that gives readers the context they need to understand the topic or text.		
W.7.1e	I have a conclusion that supports my argument and restates my claim.		

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.1a	I fairly acknowledge claims that are different from my own.		
W.7.1a	My reasons and evidence are organized logically, in a way that is easy to follow.		

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.1c, L.7.6	I use words and phrases to connect my reasons to my claim.		
W.7.1c, L.7.6	I use words and phrases to show the relationship between my reasons and evidence.		

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.1b, L.7.6	I support my claim with logical reasoning and relevant evidence.		
W.7.4 (partial), W.7.1d	I use a formal style.		

Standard	Characteristics of an Effective Argument Piece	Characteristics of This Argument Piece	Date Completed
W.7.8 (partial)	I provide a bibliography of sources.	N/A for this essay.	
L.7.1	My words and sentences follow the rules of writing.		
L.7.2	The spelling, capitalization, and punctuation are correct.		

Argument Writing Plan Graphic Organizer

W.7.1, W.7.4, W.7.5, W.7.10

Name: _____ Date: _____

Focus:

Write an essay defending the idea that the end of the plastic life cycle is the best place to target in order to reduce plastic pollution.

Introduction Paragraph

How will you catch the reader's attention? (Use facts, statistics, quotations, or anecdotes.)

What context about the text or topic does your reader need to make sense of the rest of your essay?

Opposing Claim: What counterclaim might others raise to refute your claim?

Briefly Refute: How do you respond to this counterclaim?

Main Claim:

Proof Paragraph 1

Point 1: What is the first point you are offering to support your claim?

Context: What context does the reader need to understand the evidence you are using?

Evidence: What evidence from the text(s) supports this point?

Elaboration: What reasons or reasoning develops your point and ties the point back to the claim?

Proof Paragraph 2

Point 2: What is the second point you are offering to support your claim?

Context: What context does the reader need to understand the evidence you are using?

Evidence: What evidence from the text(s) supports this point?

Elaboration: What reasons or reasoning develops your point and ties the point back to the claim?

Conclusion Paragraph

Restate your claim from the introduction:

Briefly restate your main points:

Point 1:

Point 2:

What are your further reflections on this topic?

- Why does this argument/claim matter?
- What would happen if this claim were not acted upon?
- Who is likely to benefit from this?

Plastic Pollution

My Sources

List any sources you used in planning your writing.

Grade 7 Argument Writing Rubric

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

Reading Comprehension

	4 - Advanced	3 - Proficient	2 - Developing	1 - Beginning
R.7.1 W.7.9	Demonstrates a deep understanding of the topic or text by developing an insightful claim supported by logical reasons and well-chosen evidence from source material	Demonstrates a clear understanding of the topic or text by developing a valid claim supported by logical reasons and evidence from source material	Demonstrates a limited understanding of the topic or text, offering a claim weakly supported by reasons and evidence from source material	Does not demonstrate understanding or shows a limited understanding of the topic or text, offering a claim with little or no supporting evidence from source material

Organization/Purpose⁵

	4 - Advanced	3 - Proficient	2 - Developing	1 - Beginning
W.7.1a	Claim is clearly communicated, and the focus is strongly maintained	Claim is clear, and the focus is maintained	Claim may be somewhat unclear, and/or the focus is insufficiently maintained	Claim may be confusing or ambiguous, and the focus may drift
W.7.1a	Effective or engaging introduction concisely provides needed context on the topic or text	Introduces claim(s), providing context on the topic or text	Introduction does not provide needed context	Introduction may be missing or unrelated to the argument presented
W.7.1a	Acknowledges and distinguishes the claim(s) from alternate or opposing claims	Acknowledges alternate or opposing claims	Attempts to acknowledge alternate or opposing claims are unclear or confusing	Does not acknowledge alternate or opposing claims
W.7.1e	Concluding statement or section concisely synthesizes the argument presented and offers relevant insights or reflection	Concluding statement or section follows from and supports the argument presented	Concluding statement or section follows from the argument presented	Conclusion is confusing, missing, or off-topic
W.7.1a	Organizational structure is effective and fully sustained between and within paragraphs	Organizes reasons and evidence logically	Organization is inconsistent; connections among ideas are sometimes unclear	Ideas are randomly ordered and may contain frequent extraneous information and ideas
W.7.1c L.7.6	Consistent use of a variety of transitional strategies to clarify the relationships among claim(s), reasons, and evidence	Uses words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence	Uses words, phrases, and clauses to clarify the relationships among claim(s), reasons, and evidence	Uses few or no transitions; the relationships among claim(s) and reasons are often unclear

⁵ W.7.4 is reflected in all descriptors.

Grade 7: Writing Rubrics

Evidence/Elaboration				
	4 - Advanced	3 - Proficient	2 - Developing	1 - Beginning
W.7.1b	Supports claim(s) with logical reasoning and comprehensive, relevant, and specific evidence from accurate, credible sources	Supports claim(s) with logical reasoning and relevant evidence from accurate, credible sources	Supports claim(s) with clear reasons and relevant evidence from credible sources	Claim is insufficiently supported by evidence from credible sources; evidence may be minimal, irrelevant, repetitive, or vague
W.7.1d W.7.4	Effective, appropriate style enhances content	Establishes and maintains a formal style	Voice and tone are largely appropriate to purpose and audience	Voice and tone are not appropriate to purpose and audience
Conventions ⁶				
	4 - Advanced	3 - Proficient	2 - Developing	1 - Beginning
L.7.1	Few, if any, errors in grammar and usage	Some errors in the conventions of standard English grammar and usage are present, but no systematic pattern of errors is displayed	Frequent errors in grammar or usage may obscure meaning	Errors in grammar and usage are frequent and severe, and meaning is often obscured
L.7.2	Effective and consistent use of punctuation, capitalization, and spelling	Adequate use of the conventions of standard English capitalization, punctuation, and spelling	Inconsistent use of punctuation, capitalization, and spelling	Errors in punctuation, capitalization, and/or spelling are frequent and severe, and meaning is often obscured

⁶ See Grade 7 Language standards 1 and 2 for specific expectations.