

A PALE BLUE DOT MEDIA FILM

# THE STORY OF PLASTIC

## IN-CLASSROOM EXPERIENCE GUIDE

### FILM SUMMARY

The Story of Plastic uncovers the ugly truth behind the current global plastic pollution crisis. Striking footage shot over three continents illustrates the ongoing catastrophe: fields full of garbage, veritable mountains of trash; rivers and seas clogged with waste; and skies choked with the poisonous runoff from plastic production and recycling processes with no end in sight. Original animations, interviews with experts and activists, and never-before-filmed scenes reveal the disastrous consequences of the flood of plastic smothering ecosystems and poisoning communities around the world - and the global movement rising up in response.

Year: 2019 // Time: 90 min // Director: Deia Schlosberg  
[www.storyofplastic.org](http://www.storyofplastic.org)



## BEFORE THE FILM

10 minutes

Plastics may seem invisible to your students. Help them become more conscious of the material by asking them to write down as many things made out of plastic as they can think of in one minute. For example, cups, a pen, chip bags, their chair, water bottles, etc. As an extension, turn this into a friendly competition by seeing who can write down the most in the class. Then explain to students that you'll be watching the film *THE STORY OF PLASTIC* to learn more about where these items came from, and where they might be going.

Then read aloud the following:

“Plastic pollution is everywhere we look, smothering our oceans and poisoning communities around the world. From city streets to the arctic ice sheets, plastic pollution has reached every corner of the globe. But it’s not just the plastic we can see; tiny particles of plastic called microplastics are showing up in our water, our food, and even the air we breathe. This flood of plastic is poisoning communities and smothering our environment, threatening whole ecosystems. There is simply too much plastic being created. If we don’t change course – and soon – we face a future in which the consequences of our plastic addiction will only grow more severe.”

## DURING THE FILM

90 minutes

Before starting the film give each student a Story of Plastic **STOP & JOT**. This worksheet is designed to help students log their thoughts and feelings while they watch the film. We recommend that you encourage them to add at least one log to each box. This sheet can be used after the film for journaling or open discussion activities (more on this later).

Find your **STOP & JOT** worksheets on page 8 of this guide.

## AFTER THE FILM

### PROCESSING FILM CONTENT

Although THE STORY OF PLASTIC was designed to deliver complex ideas in digestible ways, your students will be introduced to new vocabulary and concepts. In addition, the film will challenge your students to explore seemingly disparate connections. Here are some resources to help them better understand what was presented in the film.



#### **CLASSROOM DISCUSSION QUESTIONS**

Found on page 9 of this guide.



#### **VOCABULARY PICTIONARY GAME**

Found on page 14, 15, and 16 of this guide.



#### **OCEAN PLASTIC SCIENCE LABS**

[www.algalita.org/educators](http://www.algalita.org/educators)

[www.5gyres.org/curriculum](http://www.5gyres.org/curriculum)



#### **PLASTICS SYSTEM MAPPING**

Found on page 11 and 12 of this guide.



#### **EXPLORE IN-DEPTH REPORTS**

[www.storyofplastic.org/reports](http://www.storyofplastic.org/reports)

## AFTER THE FILM

### EXPLORING POST-FILM EMOTIONS

Many of the stories, images, and ideas presented in THE STORY OF PLASTIC may provoke new feelings your students have never experienced before. Some may feel emotionally paralyzed, others may feel full of passion to solve the issue, and many may not know exactly what they're feeling. The resources below will help you guide your students through this experience.



#### **STOP & JOT OPEN DISCUSSION**

Use the STOP & JOT worksheet (on page 8) for these discussion questions (on page 10)



#### **JOURNALING**

Encourage your students to freely generate thoughts and ideas over a period of time. We recommend 3-5 days. See page 10 for prompt ideas.



#### **WORRY IN / WISDOM OUT JAR**

Allow students to anonymously leave notes in a jar at the back of your classroom. Selected a few to read aloud each day and do your best to share wisdom. Email us if you get stuck [info@algalita.org](mailto:info@algalita.org).



#### **LETTERS TO A HERO IN THE FILM**

Address letters to Story of Plastic at Algalita  
148 North Marina Drive, Long Beach CA 90803



#### **POSTERS FOR THE CLASSROOM**

Help your students process emotions by encouraging them to create posters to hang in the classroom or around campus. Find a way to use recycled materials to take the inspiration to the next level!

## AFTER THE FILM

### BRING INSPIRATION INTO YOUR CLASSROOM

Young people often are told that THEY are the hope in this world. While we believe students play an important role in solving the plastic pollution crisis, we want them to know that they are not alone. Adults and youth all over the world are working together to stop plastic pollution for good.



#### INVITE A CHANGEMAKER INTO YOUR CLASSROOM

Whether it's in person, virtually, or through phone interviews, giving your students a chance to meet a real-world change-maker is an invaluable experience. Seek out a local or visit these sites for a list of plastic pollution organizations to reach out to.

[www.breakfreefromplastic.org](http://www.breakfreefromplastic.org)

[www.plasticpollutioncoalition.org/the-coalition](http://www.plasticpollutioncoalition.org/the-coalition)



#### GET INVOLVED IN SOLUTIONS

Wayfinder Society is an online platform designed to help young people join the movement to end plastic pollution

[www.wayfindersociety.org](http://www.wayfindersociety.org)



#### EXPLORE UPLIFTING SOLUTIONS

The Indisposable Podcast is a great place to find interviews with heroes and champions of the movement to end plastic pollution. Explore the site with your students or ask them to do a verbal report on a single episode.

<https://upstreamsolutions.org/podcast>



#### PUT UP A PLEDGE WALL IN YOUR CLASSROOM

Pledges to reduce single-use plastics are great, however be sure to also encourage pledges that extend into the root cause of the plastic pollution crisis. Examples may include efforts to investigate and educate, stay on top of legislation, and support plastic-smart businesses.

## AFTER THE FILM GET INVOLVED LOCALLY

Instead of highlighting the efforts of one hero, THE STORY OF PLASTIC celebrates the acts of many individuals that often go unrecognized in today's hero-centric culture. We strongly believe that these acts, in large numbers, will be what enables communities to take charge of their futures. This is where we stop asking 'what can I do' and start asking, 'what can we do.' Below are a few ideas that may be low-hanging fruit in your community.



### RESEARCH YOUR LOCAL WASTE STREAM

Work with your students to create "Our Story of Plastic" by following the local waste investigation guide found on page 13.



### WRITE LETTERS TO LOCAL RESTAURANTS

Help your students make a list of 20-30 local restaurants and their addresses. Using [this guide](#) as inspiration, have your students write and send letters that encourage plastic-smart practices.



### BECOME A PLASTIC-FREE CAMPUS

Visit this website to start learning how to transition your school - [www.breakfreefromplastic.org/plastic-free-campus](http://www.breakfreefromplastic.org/plastic-free-campus)



### EXPLORE CIVIC ENGAGEMENT PATHWAYS

Many students have never explored their civic engagement pathways. Use this investigative worksheet, found on page 17, to help students understand what their local government looks like. For extra credit have them find out who their state representatives are by visiting this website [www.openstates.org/find\\_your\\_legislator/](http://www.openstates.org/find_your_legislator/)

## AFTER THE FILM

### EXPAND BEYOND LOCAL EFFORTS

After viewing the film your students will understand that the plastic pollution crisis is a global crisis. Luckily, our team at THE STORY OF PLASTIC is part of an international community of change-makers all working together toward the same vision. From youth networking events to internship opportunities, our network is packed full of experiences designed for young people.



### EXPLORE YOUTH NETWORKING EVENTS

[www.algalita.org/students](http://www.algalita.org/students)  
[www.zerowasteyouthusa.org](http://www.zerowasteyouthusa.org)  
[www.yocs.org](http://www.yocs.org)  
[www.postlandfill.org](http://www.postlandfill.org)



### STAY UP TO SPEED ON LEGISLATION

The following groups send out newsletters that can help:  
[breakfreefromplastic.org](http://breakfreefromplastic.org) // instagram @breakfreefromplastic  
[surfrider.org](http://surfrider.org) // instagram @surfrider  
[plasticpollutioncoalition.org](http://plasticpollutioncoalition.org) // instagram @plasticpollutes



### SHARE STORIES ON SOCIAL MEDIA

#breakfreefromplastic  
#storyofplastic

## THANK YOU!

We strongly believe educators are some of the most important people on this planet and we are honored to have made an impact in your classroom. Please know that preparing young people for the challenges ahead is not solely on your shoulders. Hundreds of nonprofit organizations are here to support you and your students. Don't hesitate to reach out at any time, for anything.

The Algalita Team // [info@algalita.org](mailto:info@algalita.org) // [algalita.org](http://algalita.org)

# THE STORY OF PLASTIC

## STOP & JOT

While watching THE STORY OF PLASTIC use this sheet to log your thoughts and feelings. Feel free to use words or doodles - whatever comes natural to you.

UNFORGETTABLE IMAGES

IMPORTANT QUOTES & STATEMENTS

I THINK....

I FEEL....

I WONDER....



# THE STORY OF PLASTIC

## FILM DISCUSSION QUESTIONS



Can be combined with STOP & JOT DISCUSSION QUESTIONS (found on page 10)

1. What are the main messages of THE STORY OF PLASTIC?
2. Why do you think the filmmakers made this film?
3. What argument is the film making?
4. What tools did the filmmakers use to support their argument?
5. Was the film's argument persuasive? Why or why not?
6. What parts of the film were most effective in persuading you and why?
7. If you were the filmmakers, would you have done anything differently to make the argument more persuasive?
8. Who did the filmmakers rely on to help them make the argument?
9. Do you think the people interviewed in the film were reliable sources? Why or why not?
10. How did the filmmakers use cinematography to support their argument?
11. Why do you think the filmmakers included ads from plastics companies? How did it feel to see the plastics ads?
12. What are some of the benefits of plastics that were mentioned in the film? How have plastics helped people?
13. Does plastics recycling solve the problem? What did the film reveal about plastics recycling?
14. Who does the film argue should take responsibility for plastics pollution?
15. How do you think the public will react to this film?
16. How do you think the plastics industry will react to this film?
17. After watching the film, how do you feel about plastics? How do you feel about the plastics industry?
18. How do you feel about the nonprofits working to fight plastic pollution?

# THE STORY OF PLASTIC

## STOP & JOT DISCUSSION QUESTIONS



Can be combined with FILM DISCUSSION QUESTIONS (found on page 9)

1. What unforgettable images did you log in your STOP & JOT? Why are they unforgettable?
2. What quotes or statements did you log in your STOP & JOT? Why did they stick out to you?
3. How did it feel to hear the perspectives of the people interviewed in the film?
4. How did it feel to see the images of plastic waste floating in the ocean? Have you ever seen plastic waste floating in a water way? If so, where?
5. After watching the film do you feel motivated to take action? If so, how?
6. Does anyone want to share any thoughts, feelings, or questions they logged in their STOP & JOT?
7. Who in our community may be negatively impacted by plastics and their production and disposal? How so?
8. What do you feel may be the biggest challenge we're facing when it comes to solving the plastic pollution crisis?
9. Did the end of the film give you a sense of hope? If so, why? If not, why?
10. Do you feel young people have a role in solving plastic pollution? If so, what do you think it is?
11. How does this film make you feel about adults?
12. How does this film make you feel about the place you live?
13. Can you relate to anyone in the film? If so, who and why?
14. Is this a cause you feel compelled to stay up-to-date on?
15. Which hero in the film was more inspirational?

**NOTE: If your students have questions, worries, or thoughts they'd rather not share with the group, let them know they can connect with you directly.**

# THE STORY OF PLASTIC

## SYSTEMS MAPPING CLASSROOM ACTIVITY



### STEP 1

Purchase 10 sets of yellow post-its, 10 sets of blue post-its, and 10 pieces of blank poster paper roughly 3ft x 3ft in size.

### STEP 2

Print out 10 system mapping sheets found on page 12, or project to save paper.

### STEP 3

Instruct your students to form groups of four and spread throughout the classroom. Each group will need to find a flat surface like a blank wall or table that is roughly 3ft x 3ft.

### STEP 4

Give each group one set of yellow post-its, one set of blue post-its, and the systems mapping sheet you printed out in STEP 2, unless it's being projected.

### STEP 5

Instruct groups to copy the statements found on the system mapping sheet onto the yellow post-its. Then instruct them to copy the actors listed on the bottom of the systems mapping sheet on the blue post-its \*\*This step saves you from having to hand-write the post-its on your own!

### STEP 6

Instruct your students to arrange the post-its however they think they should be arranged. Give no other instruction here and allow 30 minutes for creation.

### STEP 7

Have each group place their creation (exactly as is) onto their 3ft x 3ft poster paper. This will allow them to bring it to the front of the classroom.

### STEP 8

Allow each group to present their systems map. Ask these questions:

- What are some major realizations your group had while doing this activity?
- Did your group notice any leverage points for solutions?
- Did your group feel like there were any actors or facts missing?

Be sure to observe and discuss thought patterns, realizations, differences between groups for more robust engagement.

Click [here](#) for additional system mapping resources.

# THE STORY OF PLASTIC

## SYSTEMS MAPPING CLASSROOM ACTIVITY



Copy these onto yellow post-its

There is a low collection rate for plastics	Choice is valued in our capitalist society	Brands have enormous lobbying power
Companies are investing billions into new plastic factories	Low-income people are harmed most	Plastic is a petroleum product
Plastic is hard to recycle when it is small, has mixed materials or additives	There are tech barriers to high PCR recycled content	Cities have different recycling systems. Some cities don't have recycling
Fossil fuels are cheaper because of fracking	Turning plastic into fuel is expensive and creates green-house gases	People often don't know how to recycle correctly
Plastic is lightweight - recycling isn't economical	Businesses transfer the cost of recycling onto the consumer	People aren't incentivized to recycle
Products are rarely designed for recycling	China's National sword disrupted the recycling economy	Additives are often harmful to humans
It's hard to sort the huge variety of plastics for recycling	Inspiring people to change habits is difficult	The public doesn't really know what's going on

Copy these onto blue post-its

FOSSIL FUEL COMPANIES	BRANDS	PLASTICS MANUFACTURERS
NONPROFITS	STORES	GOVERNMENT
PEOPLE/CONSUMERS	RECYCLERS	EDUCATORS
ENVIRONMENT	DESIGNERS	YOUTH

# THE STORY OF PLASTIC

## LOCAL WASTE INVESTIGATION QUESTIONS



1. Who at the city level would know the most about our waste?
2. Where does the trash from our school go?
3. Where does the trash from our homes go?
4. Does our city have a recycling program? If so, where do the materials go and what do they take?
5. Does our city have any laws that regulate waste?
6. Does our city have any laws that regulate the distribution of plastics?
7. Does our city export waste and recycling? If so, where to?
8. Are there plastics manufacturing businesses in our community?
9. Are there petrochemical companies in our community?
10. Who are the trash haulers in our city?
11. Are there nonprofit advocacy groups in our community working to address waste and plastic pollution? If yes, who are they and what are their websites?
12. Do you live near any incinerators?
13. Where is the closest landfill?
14. Are there any product refill stores in your community where you can bring your own containers to fill up on personal and home care products?
15. Are there any grocery stores that allow citizens to bring their own containers to buy food in bulk?
16. Do most students at your school bring their own reusable water bottles?
17. Does your city have industrial composting facilities?

# THE STORY OF PLASTIC

## FILM VOCABULARY Pictionary GAME



### STEP 1

Find the vocabulary lists on page 15 and 16 of this guide and print out enough to distribute to groups of three or four students.

### STEP 2

Divide your class into groups of three or four students. Give each group a marker and a white board or pieces of scratch paper to draw on. Ask them to draw a score box on their paper or whiteboard to keep track of their points as they play.

### STEP 3

Send one student from each group to the front of the room to get the first word or concept from you. Whisper and/or show the word(s) to the students on an index card so the rest of the class won't know the word.

### STEP 4

The students then return to their groups and get ready to draw a pictorial representation of the word without speaking and without using words or letters. Set a timer for 30 seconds to one minute (depending on the difficulty of the representation) and then tell the students to begin drawing. When their group correctly identifies the word within the time limit, the group gets a point.

### STEP 5

Have another student from each group come up to play the next round. Continue playing until everyone has a chance to draw at least once.

### Speed Pictionary

Once students are familiar with how the game works, you can play the speed version of the game. Instead of timing each round of play, as soon as a group correctly identifies the word, another student in the group should come up to you for the next word on the list. The first group to complete all the words on your list wins.

To keep yourself from getting confused about which vocabulary word to show a student, number each of the words or concepts you are using for the game. Create a set of cards for each group with the numbers 1 through 6 (or however many concepts you are using). As students come up for the first word, give them the card with number 1. When the next person comes back for the second word, they should return the card with number 1 and pick up the card for number 2.

**Advocacy** – expressing public support for a particular policy. This often involves speaking on behalf of a person, place, or thing that cannot speak for itself.

**Biodegradable** – when something is capable of breaking down into its constituent elements in the natural environment.

**Chemical Recycling** – is a term that refers to several technical processes where plastics are broken down to molecular building blocks that can be used to make fuel and other chemical products. Visit [GAIA WEBSITE](#) for more.

**Circular systems** – intentionally designed industrial systems in which output from one system becomes input for that system or another industrial system, thereby minimizing the creation and disposal of waste and minimizing the need for raw material extraction.

**Climate change** – a significant change in the climate over time.

**Cracking** – a refining process for breaking down large, complex hydrocarbon molecules into smaller ones. A catalyst is used to accelerate the chemical reactions in the cracking process.

**Crude oil** – liquid petroleum as it comes out of the ground. Crude oil varies radically in its properties, such as specific gravity and viscosity.

**Emissions** – any release of gases such as carbon dioxide which cause global warming, a major cause of climate change.

**Environmental justice (EJ)** – the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

**Fossil fuel** – an energy-rich substance type of fuel that is created from dead plant and animal material trapped between layers of rock deep within the Earth. Over millions of years, heat and pressure transform this material into fossil fuels. Some examples of fossil fuels are coal, oil, and natural gas. Humans burn fossil fuels to make energy. When fossil fuels are burned, they release carbon dioxide, a greenhouse gas.

**Fracking** – hydraulic fracturing, a pressurized process in which underground rock formations (shale) are cracked, or fracked, to release trapped oil and gas.

**Grassroots movement** – rallying the general public in support of your campaign. Creating a movement that starts at the local level and works its way up.

**Gyre** – a large rotating system of ocean currents that collect plastic and breaks it down into microplastic.

**Hauler** – a waste transporter operating truck(s) that haul waste from point of collection to material recovery facility (MRF), from MRF to dump site, or both. Services are typically contracted by local governments but often managed directly by public authorities.

**Incineration** – burning waste material at high temperatures until it is reduced to ash. Incineration can occur in a managed facility or out in the open environment.

**Landfilling** – the disposal of waste in a waste pile that is usually underground and may be sanitary (i.e., measures have been taken to prevent leachate) or unsanitary (no prevention measures have been taken).

**Legislation** – a set of laws or regulations made by a government.

**Low-to-no-value plastic** – plastic waste materials that do not have value in local recycling markets (e.g., grocery bags, thin films, composite plastics, and residual polypropylene).

# THE STORY OF PLASTIC

## FILM VOCABULARY



**Marginalize** – to put someone in a position of being viewed as insignificant or powerless within a society, being the less popular option to a decision-maker.

**Material recovery facility** – a facility used for separating different materials in the waste stream.

**Material Recovery Facility (MRF)** – a specialized plant that receives, separates and prepares recyclable materials for marketing to end-user manufacturers.

**Microplastic** – plastic that is 5mm or smaller. This includes primary microplastics which are created to be small, and secondary plastics that are a byproduct of other plastic such as fragmented plastic and microfibers.

**Microfiber** – an extremely fine synthetic fiber that can be woven or knit into textiles with the texture and drape of natural-fiber cloth but with enhanced washability, breathability, and water repellency.

**Municipal solid waste** – waste generated by households and sometimes including streams of commercial and industrial waste.

**Natural Gas** – an odorless, colorless gas found in the Earth. Natural gas is a type of fossil fuel.

**Off-gassing** – the release of gases into the air as a byproduct of a chemical process.

**Oil** – a dark-colored liquid that can be found deep in the Earth. It can be refined to make gasoline, diesel, asphalt, and plastics. Oil is a type of fossil fuel.

**Petrochemicals** – fossil-fuel-derived chemicals, some of which are used to produce plastic.

**Plastic waste leakage** – the movement of plastic from land-based sources into the ocean.

**Polymer** – a substance that has a molecular structure consisting chiefly or entirely of a large number of similar units bonded together, e.g., many synthetic organic materials used as plastics and resins.

**Preproduction resin pellets** (also called nurdles) – very small pellets of plastic that serve as raw material in the manufacture of plastic products.

**Recycle** – the process of converting waste into reusable material, or the return of material to a previous stage in a cycle process.

**Refinery** – The facility where the characteristics of petroleum or petroleum products are changed.

**Renewable resource** – a natural resource that can be made or regrown as fast as it is being used. Some examples are wind power or solar energy, which are both used to make electricity.

**Single-use plastic** – items that are used only once before they are thrown away or recycled. These items are things like plastic bags, straws, coffee stirrers, soda bottles and most food packaging. Additionally, there are a limited number of items that recycled plastic can be used for.

**Supply chain** – the sequence of processes involved in the production and distribution of a commodity.

**Waste** – any discarded material, such as household or municipal garbage, trash or refuse, food wastes, or yard wastes, that no longer has value in its present form but may or may not be recyclable or otherwise able to be repurposed.

**Zero waste** – the conservation of all resources by means of responsible production, consumption, reuse, and recovery of materials without incineration or landfilling.



# THE STORY OF PLASTIC

## LOCAL GOVERNMENT INVESTIGATION



Get to know your local government by finding information for the grid below. Although you may find the answers on the internet we encourage you to call or write local stakeholders while conducting your research.

NAME OF YOUR LOCAL GOVERNMENT

LOCATION (region, state, province)

IS YOUR LOCAL GOVERNMENT IN A....

SHIRE

CITY

COUNTY

BOROUGH

TOWN

CHIEF OFFICIALS

RESPONSIBILITIES

COUNCIL MEMBERS

GOVERNMENT SERVICES PROVIDED

INFORMATION ABOUT DISTRICTS & DEMOGRAPHICS