

## USC LESSON PLAN: Plastic Waste - China, the United States and the World

By Kelly McKee

**Grade Level:** Middle School and High School (6th to 12th grade)

### **Learning Targets:**

- Students can identify the United Nations Sustainable Development Goals (UNSDGs)
- Students can explain the relevance of the UNSDGs at a global and local level
- Students can analyze the necessity for responsible consumption and production
- Students can evaluate the role of China's sustainable development initiatives
- Students can describe the relationship between overconsumption and production and the impact this has on the environment in China and the United States
- Students will recognize the relationship between their daily consumption behavior and global sustainable development
- Students can identify ways to support and take action to promote sustainable development in their local communities

### **STANDARDS**

#### **Common Core: ENGLISH LANGUAGE ARTS**

CCSS.ELA-LITERACY.SL.9-10.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-LITERACY.SL.9-10.2 Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

CCSS.ELA-LITERACY.RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.

#### **C3 FRAMEWORK: National Council of the Social Studies Standards**

D4.6.9-12 Use disciplinary and interdisciplinary lenses to understand the characteristics and causes of local, regional, and global problems in multiple contexts; and challenges and opportunities faced by those trying to address these problems over time and place.

D4.7.9.12 Assess options for individual and collective action to address local, regional, and global problems by engaging in self-reflection, strategy identification, and complex causal reasoning.

#### **NEXT GENERATION SCIENCE STANDARDS**

HS-LS2-7 Design, evaluate and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

## STEP 1: What are the United Nations Sustainable Development Goals?

In 2015 all 193 member states of the United Nations agreed to implement seventeen Sustainable Development Goals by the year 2030. The key objective is to enforce universal goals that meet the urgent challenges our world is facing environmentally, politically and economically. These goals replaced the Millennium Development Goals (MDGs) that were enacted from 2000 to 2015 with a clear objective to eradicate poverty worldwide. The outcome of the MDGs was that one billion people were lifted out of extreme poverty since 1990.

There are seventeen SDGs and all of the goals are interconnected. So the success of one goal affects the success for others. These goals differ in focus from the MDGs as they address a broader range of challenges in our world today. Some of these issues include: *clean water and sanitation; responsible production and consumption; life on land; life on water; affordable and clean energy; and climate action.*

As a class watch the online [video](#) as a class to learn more about the transition from the Millennium Development Goals to Sustainable Development Goals.

Today students will focus on UNSD Goal **#12: Responsible Consumption and Production**

<https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>

Before reading the introduction of the website explain the terms: consumption and production. Read the introduction together as a class. Discuss the statement “doing more and better with less” with students. How do they interpret this quote and how can it impact their daily lifestyle?

Next, click on *Why it Matters: Responsible Consumption and Production*. Print the [PDF](#) and pass out to students or post electronically.

<https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/12.pdf>

In small groups students will read the document and respond to the following:

What is the goal?

Why does it matter?

Identify three current consumption and production patterns that need to change:

- 1.
- 2.
- 3.

Share the two most important things students can do as consumers:

- 1.
- 2.

When students are finished reading the PDF and recording their responses the teacher can lead a discussion to unpack thoughts and questions about the PDF. Emphasize the need to reduce your consumption of plastic, carrying a reusable bag, refusing to use plastic straws and recycling plastic bottles. These sustainable behaviors will be re-emphasized throughout this lesson plan about US/China plastic waste.

## STEP 2: NPR: Where will your plastic trash go now that China doesn't want it?

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March 13, 2019

Report by Christopher Joyce

<https://www.npr.org/sections/goatsandsoda/2019/03/13/702501726/where-will-your-plastic-trash-go-now-that-china-doesnt-want-it>

*Directions:* Listen to the NPR radio program and respond to the questions below. Students can respond individually or the teacher can have a whole class debriefing.

What % of the world's plastics has been sent to China before 2018?

How did China make money from US plastic waste?

Was this a profitable business? Who was the first female billionaire in China and what did she do?

What is the difference between Good Garbage vs. Bad Garbage?

What did China do with the bad garbage they had been imported from the US?

How was American trash shipped to China?

What did China tell the WTO (World Trade Organization) in 2018?

How did some of America's garbage negatively impact China's environment?

Before 2017 \_\_\_\_\_ tons of plastic waste were imported into China every year. Today China is taking less than \_\_\_\_\_ of that amount.

What will the United States do with its garbage since China's enacted new trade policies regarding importing plastic waste?

## STEP 3: Plastic China

*Directions:* View the film with students.

The Discussion Guide shares a film summary, themes, questions for discussion, film facts and ways to influence. Teachers can decide how much of the film guide they want to share with their students.

<http://influencefilmclub.com/wp-content/uploads/2018/05/Plastic-China-Discussion-Guide.pdf>

#### STEP 4: How has China's plastic waste policy changed since 2018?

Read the two articles below to learn how the Chinese government is addressing the plastics issue within China today. You can put students in small groups and do a pair-share reading or have all students read both articles.

**Article #1:** *China Says It Will Ban Plastics That Pollute Its Land and Water*

By Chris Buckley

January 20, 2020

<https://www.nytimes.com/2020/01/20/world/asia/china-plastic.html>

**Article #2:** *A Rubbish Story: China's Mega Dump Full 25 Years Ahead of Schedule*

November 15, 2019

<https://www.bbc.com/news/world-asia-50429119>

*Follow up questions:*

- What is the most pressing concern in China today with the consumption of single-use-plastics?
- Describe new guidelines implemented by the Chinese government to make China more sustainable.
- Explain how people in China feel about these new guidelines.
- Where does the majority of China's garbage go?
- How is the current method of waste disposal impacting the citizens of China?
- Why do you think China put a ban on importing plastic waste in 2018?

This is another excellent source I researched for this lesson plan. Teacher may choose to use this e360 Yale

<https://e360.yale.edu/features/piling-up-how-chinas-ban-on-importing-waste-has-stalled-global-recycling>

#### STEP 5: Revisit UNSD Goal #12: Student Action Plans

Go back to the UNSDG website and click on 'Goal 12 Targets.'

<https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>

Read target goal 12.5 'By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse. Put students into groups of four. As a group they will review new information learned during the first four steps of this lesson plan and create a 'mitigation' plan for the US and China to achieve UNSD goal #12 by 2030. Students should place emphasis on Goal target 12.5. A few questions to consider: What new policies can the US and China adopt to make our planet more sustainable? How can both nations promote educational policies to spread awareness of plastic waste? How will the US and China enforce this mitigation plan? How will your plan support the goals of UNSDG #12?

Assign each group to create a 1.5 minute Flipgrid video [www.flipgrid.com](http://www.flipgrid.com) sharing out their mitigation plan and questions shared above. Be concise and get to the point. Again, the student plan will be implemented in both the US and China. Share Flipgrid videos with the whole class for feedback and discussion. Students can also make comments directly on flipgrid to share feedback.