

The global journey of plastic waste



Age 11-14



60 minutes

Curriculum links

- Understand key processes in human geography: trade, use of natural resources and economic development
- Understand how human processes change landscapes and environments

Resources



Slideshow 5:
The global journey of plastic waste



Student Sheet 5a:
Plastic export maps

Student Sheet 5b:
Waste management futures info

Student Sheet 5c:
Waste management futures pyramid

Student Sheet 5d:
Whose waste is it anyway?

Extension or home learning

Students study a newspaper article from Indonesia about the need for western countries to take more responsibility for the impact of imported plastic waste.

Lesson overview

The UK exports over half a million tonnes of recovered plastic packaging each year. Historically, much of this was to China, but with a ban on waste imports other solutions and destinations have been sought. Students start by mapping the destinations of plastic waste exports before and after China's ban. Then students consider the UK's options, before ranking these and creating a proposal for action.

Lesson steps

- 1. How much plastic? (15 mins)**
Bans on imports by different countries are affecting the destination of these exports. Students create two maps to show changes in recent years.
- 2. How and why has this changed over time? (10 mins)**
Using the data and maps from the previous lesson step, students write a short paragraph to describe how the destinations for recovered plastic packaging exports has changed over time.
- 3. What are the options for future waste management? (15 mins)**
Working in groups, students are presented with a range of information on possible solutions and problems in reducing plastic waste in the UK.
- 4. Ranking recycling (15 mins)**
Student groups will need to rank a selection of proposals being considered by government and by industry for how to reduce the amount of plastic waste.
- 5. What should government do? (5 mins)**
Students write a paragraph stating their preferred option and giving reasons. These can be sent to the relevant political representative.

Learning outcomes

- Map the global destinations of UK recycling over time
- Describe how these destinations have changed over time
- Review information on the current state of UK plastic waste management
- Evaluate options for the future of UK plastic waste management
- Evaluate options for the future of UK plastic waste management

TEACHER GUIDANCE 5 (page 1 of 3)

THE GLOBAL JOURNEY OF PLASTIC WASTE

Step Guidance

Resources

1
15
mins



In this lesson, students will consider the global context of recycling. This first lesson step is a mapping exercise, looking at the top importers of the UK's recovered plastic packaging.

- Share the learning objectives and connect the learning to the previous lesson on recycling.
- Use slide 3 to share the enquiry question for this lesson step.
- Hand out two copies of Student Sheet 5a and atlases to students. Explain the mapping activity.
- Students will need to create two choropleth maps showing the amount of recovered plastic packaging exported to different countries from the UK in 2016 and 2018.
- Students will need to select a title and a colour scheme for each weight bracket.
- Students will then use atlases to locate the countries listed in the tables and shade these according to their map colour key.



If you feel that students will not be able to complete both maps in 15 minutes, assign students to work in pairs, with one student completing a choropleth map for 2016 and the other for 2018. It may make comparison easier, were both students in a pair to use the same colour scheme

Slideshow 5:
Slides 1-4

Student Sheet 5a:
Plastic export maps

Image:
Global plastic production interactive

2
10
mins



Having completed the mapping exercise, students to analyse the differences between 2016 and 2018.

- Prompt students by asking for initial thoughts about the main similarities and differences.
- Students then complete a short paragraph in their books.
- As a challenge, students can attempt the second question.
- Some students may sense that something drastic must have happened with China.
- If there is time probe any half-formed answers and steer students towards the realisation that China banned the import of plastic waste at the end of 2017.

Slideshow 5:
Slide 5

TEACHER GUIDANCE 5 (page 2 of 3)

THE GLOBAL JOURNEY OF PLASTIC WASTE

Step Guidance

Resources

3
15
mins



With China banning the import of plastic, students are asked to consider what the alternatives might be for the UK.

- Use slide 6 to frame this section of the lesson. Ask students whether they think that exporting waste to another country is the right thing to do anyway.
- For this activity students can work in groups of 3-4.
- Hand out copies of Student Sheet 5b which shows a range of information about recycling and waste management in the UK.
- Students will need to have a good overview of the information before attempting the ranking exercise in Student Sheet 5c.
- Students can cut out the info cards to make sharing easier.
- Show slide 7 and ask students to scan the info cards and locate answers to the nine questions.
- Review the answers as a whole class discussion to ensure that all students have a good grasp of the content of each card.



The questions are in the order of the cards, and to increase the level of challenge, the order can be changed on slide 7.

Slideshow 5:
Slides 6-7

Student Sheet 5b:
Waste management futures info

4
15
mins



Step 4 asks students to apply the information on the info cards to a ranking exercise and put in order of preference the different options facing the UK government, especially in light of the plastic import ban by China and the increasing pushback by other countries in South East Asia.

- Hand out Student Sheet 5c to each of the student groups.
- Using slide 8 explain that there are several options on offer to government. For more challenge, tell students that they can come up with their own ideas based on their own knowledge and the info cards.
- Slide 9 shows the pyramid that students need to select.
- Debrief with a mini-plenary asking groups what they selected as their top option and why.

Slideshow 5:
Slides 8-9

Student Sheet 5c:
Waste management futures pyramid

TEACHER GUIDANCE 5 (page 3 of 3)

THE GLOBAL JOURNEY OF PLASTIC WASTE

Step Guidance

Resources

5
5
mins



End the lesson, by asking student to write a short paragraph proposing a course of action to political representatives.

Slideshow 5:
Slides 10



The website WriteToThem (<https://www.writetothem.com>) lists the appropriate level of political representative by UK postcode. It lists contact details at all levels of political representation with guidance about the appropriate person to contact for different issues.

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Students study a newspaper article from Indonesia about the need for western countries to take more responsibility for the impact of imported plastic waste.

Student Sheet 5d:
Whose waste is it anyway?