Secondary School Lesson Plan — Key Stage 3 — (11-14 Years)

Lesson 3: Managing the impacts of climate change

Background:
WaterAid is an international not-for-profit organisation, determined to make clean water, decent toilets and good hygiene normal for everyone, everywhere within a generation. As our climate changes we feel the effects more and more through extreme weather, rising temperatures and ice melting leading to issues around too much or too little water. This makes the climate crisis a water crisis, as hundreds of millions of people across the world struggle to get clean water, pushing them further into disease and poverty.

Context:
This is the third lesson in a series of four that explain the causes, impacts and ways of managing climate change. This lesson introduces how we can manage the impacts of climate change and the explains the differences between the adaptation and mitigation techniques.

Notes for teachers / educators
The activity timings should act as a guide only. Teachers should adjust timings and adapt activities according to the lesson time available and the ability of the learners.

Learning Question:
● How can we deal with the changes caused by climate change?

Learning Objectives:
● I can interpret the methods of managing climate change.
● I can critique the best methods for managing climate change.

Key words:
● Mitigation ● Adaptation ● Renewable ● Response ● Conserve ● Risk ● Afforest

Curriculum link: The curriculum links are not exhaustive but offer a guide
● Science: Genetics and evolution; earth and the atmosphere
● Citizenship: the roles played by public institutions & voluntary groups in society, & the ways in which citizens work together to improve their communities, including opportunities to participate in school-based activities.
● Geography: human and physical geography

Resources:
● YouTube Video: How can we manage climate change? - https://youtu.be/qpchgGUDS7Y
● Resource 1 – Lesson slides
● Resource 2 – Managing climate change task sheet
● Resource 3 - Information pack
● Resource 4 - Climate responses game (cut out event cards and action cards prior to game)
● 1 Dice
Recap

- Display slide 1 - Explain to students that you will be following on from the previous two lessons on climate change. This lesson is going to help them understand how we can manage and limit the impacts of changes climate.
- Ask students if they know of or have heard about ways that climate change can be managed or slowed down. What types of changes can be made in the world that stop climate change from being so bad?
- Gather some responses to gauge prior understanding and to encourage a small discussion between yourself and the class. This should introduce any misconceptions that may need to be tackled throughout the lesson.
- Display slide 2 – Introduce the film “How can we manage climate change?” embedded on slide 2 (or follow the link in the notes section or button in the right-hand corner of the screen). This film outlines the differences between adaptation and mitigation and the methods that can be used to reduce the impacts of climate change. Students should note the ways in which climate change can be managed according to the film.
- Ask for volunteers to give the definitions of mitigation and adaptation. Let the volunteers provide you with a definition.
- Display slide 3 – This shows the definitions of mitigation and adaptation. Check the definitions against those given by the students to see if they match those on the slide.
- Ask the students the following questions:
  - How can we mitigate the effects of climate change?
  - How can we adapt to the effects of climate change?
- Gather some answers to these questions from the class.

How do these management methods work?

- Display slide 4 - Give each individual a task sheet.
- Split students into pairs and provide each pair with a copy of the information packs and ask them to read the information sheets.
- Once they have read the information sheets, they should draw an image that summarises that technique in the top box of their sheet.
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<th>Key Question</th>
<th>Activity</th>
<th>Resource</th>
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<td>How do these management methods work? - continued</td>
<td>● Each image they draw should be a summary of the information and so can be a collection of small images or one large image.</td>
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<td>● Encourage students to put detail into their images and reassure them that they are not intended to be works of art but are informational.</td>
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<td>● Allow writing in the picture boxes but limit it to five words.</td>
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<td>● Once they have finished drawing all of the methods, they should write a paragraph of 2 or 3 sentences explaining the technique in the box below their image.</td>
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<td>● This activity is best done with a timer to limit drawing time (2-3 mins drawing time per information sheet)</td>
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<td>How will these techniques impact on the environment and the economy?</td>
<td>● Display slide 13 - Split the class into small groups and explain that they will be playing a game about managing climate change. Ensure that each group of students has one game board, one set of action cards, one set of event cards and a dice. These should be cut out prior to the lesson.</td>
<td>Resource 4</td>
<td>15 mins</td>
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<td>● Each student will also need their own task sheet.</td>
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<td>● Explain that the aim of the game is to get as high an environmental score as they can, and a low economic score. Students begin the game with 25 economic and 25 environmental points.</td>
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<td>● They should roll the dice when it's their turn to make their way round the board, collecting event and action cards when they land on those spaces.</td>
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<td>● As they go round the board, they will gain and lose points, using the event and action cards.</td>
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<td>● Each student must keep track of their points and the events that happen to them during the game by recording them on their task sheet.</td>
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<td>● They should continue to play until the time allocated for the game is up.</td>
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<td>● By the end of the game students should have a record of all the events that happened to them and an environmental and economic score on their task sheet.</td>
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| Which are the best responses to climate change?  | ● Ask some of the students to explain what happened to them in their game. You could use these questions to help;  
   - What events took place  
   - What was the cost of these events?  
   - What actions did you have to take?  
   - What did you gain from these actions?  
   - Did any of the actions help you?“  
   ● Display slide 15 - Following this analysis of the game, ask the students to answer the questions displayed on the slide in their books or verbally to as a class discussion.  
   ● Finish the lesson by asking students to choose and share their favourite technique they have learnt about for tackling |          | 10 mins |

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Inspire, engage and educate your learners about WaterAid’s work with a trained speaker. WaterAid Speakers visit schools and groups across the UK to deliver educational talks and workshops on topics such as climate change, the water cycle, periods and more. We also offer online talks and workshops, including for international audiences.