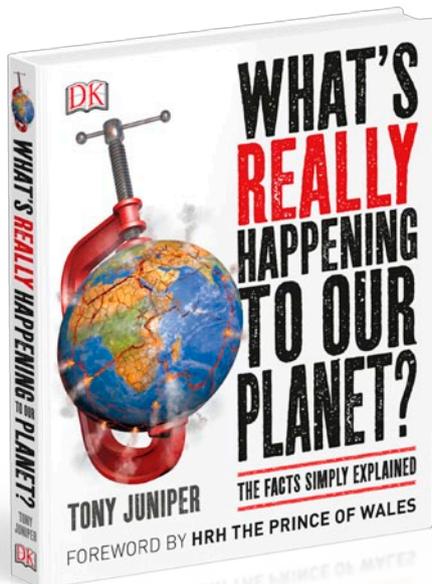


WHAT'S REALLY HAPPENING TO OUR PLANET?

SIX LESSON PLANS FOR KEY STAGE 3



What's Really Happening to Our Planet? fully reviews the current state of the planet and the way in which our unchecked human activity could change the world forever, with a perspective on what we can do to reverse the damage. Wide ranging and heart-stopping research is distilled into one reliable, eye-opening book.

The book charts the dramatic explosion of human population and consumption and its impact on climate change and our planet. Written by leading sustainability expert **Tony Juniper**, with insights from globally respected scientists, states people and cultural leaders and thinkers, *What's Really Happening to our Planet?* includes positive ideas and a fresh perspective on how we can begin to reverse the damage we have caused.

These lesson plans offer suggested teaching and learning activities for KS3 and will cover the key questions:

- Why is the global population growing?
- What are the impacts of rapid population growth?
- How have people's lives changed as a result of rapid population growth?
- How has our environment changed as a result of rapid population growth?
- What is being done to tackle the challenges of population growth?
- How can we respond to the challenges of population growth?

Author **Tony Juniper** is a globally acclaimed writer, campaigner, environmentalist and sustainability advisor. He has worked for more than 30 years to promote solutions to environmental challenges, including through his work as the Director of Friends of the Earth.

Lesson plans and ideas from Dr. R. Gillman, Teacher of Geography



A WORLD OF IDEAS:
SEE ALL THERE IS TO KNOW

For further resources, go to www.dk.com and search 'Tony Juniper' or click here <http://www.dk.com/uk/explore/reference/tony-junipers-presentation-slides-now-available-for-download/>

Lesson plans © Dr R Gillman

WHAT'S REALLY HAPPENING TO OUR PLANET?

Scheme of Work for KS3

<p>KEY CONCEPTS</p> <p>Consequences</p> <ul style="list-style-type: none"> Students will develop an understanding about the impact of global population growth on different regions around the world. <p>Population</p> <ul style="list-style-type: none"> Students will develop an understanding of how and why population change occurs over time. <p>Environment</p> <ul style="list-style-type: none"> Students will develop an understanding about the interaction between human activity and the environment and will be able to consider the advantages and disadvantages of this interaction. <p>Responding to challenges</p> <ul style="list-style-type: none"> Students will develop an understanding about the different ways in which the challenges of population growth can be addressed, considering short and long-term strategies. 	<p>CONTENT</p> <p>Students will address a range of content, based on the three overarching themes of the book, which may be used as an accompanying text / resource base:</p> <ul style="list-style-type: none"> Drivers of change – what has caused population growth and what have been its impacts? Consequences of change – what are the positive and negative impacts of population growth on people and the environment? Bending the curves – what is being done to address the challenges raised by population growth and what opportunities are there for future responses? 	<p>KEY QUESTIONS</p> <ul style="list-style-type: none"> Why is the global population growing? What are the impacts of rapid population growth? How have people's lives changed as a result of rapid population growth? How has our environment changed as a result of rapid population growth? What is being done to tackle the challenges of population growth? How can we respond to the challenges of population growth? 	<p>HIGHER LEVEL THINKING SKILLS</p> <ul style="list-style-type: none"> Thinking skills activities – card sort activities / Mysteries. Emotive writing and extended writing using extended geographical vocabulary. Verbal presentation skills through debate and hot-seating activities.
<p>KEY PROCESSES</p> <p>Geographical Enquiry</p> <ul style="list-style-type: none"> Students will be encouraged to ask questions about why population growth has occurred and what impact it has had. Students will explore different responses to the challenges of population growth. <p>Graphical and Visual Literacy</p> <ul style="list-style-type: none"> Students will use diagrams, maps and images to develop their understanding and come to considered conclusions. <p>Geographical Communication</p> <ul style="list-style-type: none"> Students will develop their communication skills through verbal presentation opportunities. 	<p>CROSS-CURRICULUM OPPORTUNITIES</p> <ul style="list-style-type: none"> Developing an understanding of the challenges facing the world, linking to Religious Studies. Historical links to the reasons for population growth over time as a result of industrialisation, linked to History. 	<p>KEY WORDS</p> <ul style="list-style-type: none"> Population growth Environment Transnational Corporations/Companies Impacts Challenges Responses 	<p>ADDITIONAL LINKS</p> <p>Citizenship</p> <ul style="list-style-type: none"> Understanding the impact of human activity on the planet and its natural systems. <p>Literacy</p> <ul style="list-style-type: none"> Identified language for learning. Writing frames. Sentence starters to aid writing. Reading for information. Analysis of key texts through DARTS style activities. Pupils ask questions to gain clarification and further information, e.g. why, how, what then. <p>Numeracy</p> <ul style="list-style-type: none"> Analysis of population data. <p>ICT</p> <ul style="list-style-type: none"> Internet research.



A WORLD OF IDEAS:
SEE ALL THERE IS TO KNOW

For further resources, go to www.dk.com and search 'Tony Juniper'

Lesson plans © Dr F Gillman

Lesson 1: Why is the global population growing?

LEARNING OBJECTIVES

- To be able to describe how the world's population has changed since 1750.
- To be able to explain why this growth has been uneven.
- To be able to assess the role of companies and countries in shaping modern lives.

SUGGESTED ACTIVITIES

Starter

Students are shown a timeline of population growth (p. 16 – 17 in WRHTOP?), which they are asked to compare to a timeline of economic expansion (p. 24 – 25). This could be done on mini whiteboards.

Discuss as a class what the relationship between the two timelines is.

Introduction

Teacher introduces the topic and the book, explaining the importance and timeliness of the issue of global population growth. Ask students for initial ideas as to why the global population is growing and where the growth is most significant. This provides an opportunity to link back to any previous units of work, specifically on development and economic growth.

Development activities

Card sort of reasons for global population growth. The information for the card sort can be accessed from the WRHTOP? book, specifically pages 18, 19, 22, 23, 28 and 29. For higher ability students, the teacher could give the information as it is, whereas for lower ability students the cards could be already organised into groups/categories. Students to organise the information into economic and social reasons for population growth. Opportunities for extra stretch and challenge include asking students to decide on their own categories and justify these.

Introduce students to the idea that both countries and companies play a role in shaping people's lives. Students to read the information on p. 30 – 31 and write a paragraph in their books comparing the economic influence of countries and companies.

Students watch Countries –v- Companies: Numbers You Should Know and make notes comparing the economic power of both.

Plenary

Human continuum: students told to stand along a continuum in the classroom, answering the question 'Which has greater power to shape modern lives – countries or companies?'

RESOURCES

- Mini whiteboards.
- WRHTOP? book and PPT slides.
- Card sort (can be created from the pages highlighted in the 'Suggested activities' box).
- Video link: <https://www.youtube.com/watch?v=-j8w84S0ZCk>

HOMEWORK IDEAS

Students to write up their response to the Plenary activity, justifying their opinion using evidence from the lesson.



Lesson 2: What are the impacts of rapid population growth?

LEARNING OBJECTIVES

- To be able to identify the pressures on urban and rural areas as a result of population growth.
- To be able to explain why population growth has put increasing pressure on water and food supplies.

SUGGESTED ACTIVITIES

Starter

Using the mini-whiteboards, students will answer the following question in pairs:

What could be the impact of population growth on these places? Students will be shown 3 images of rural areas and 3 images of urban areas (the teacher could select these as local to students, or showing a variety from around the world) and asked to write down what pressures they think population growth will put on these different locations. Stretch and challenge opportunity – students to rank the pressures they have identified in order of significance.

Introduction

- Teacher exposition – explaining the difference between rural and urban areas.
- Students to write a definition in their books of rural and urban areas. This could be differentiated for lower ability by providing sentence starters and / or a choice of words to include in their definition. Students to peer-mark each other's definition and write down a suggestion for how their partner's definition could be improved.

Development activities

- Students read p. 42 – 43 of WRHTOP? and create a mind-map of the pressures that population growth is putting on those living in urban areas. Stretch and challenge – which of these pressures is the most significance and why?
- Students shown diagram of grain production (p.62). Students to write down on a piece of paper one question they have about the increase in grain production – teacher to choose a couple at random and, as a class, brainstorm potential answers. Opportunities for extending students' ideas and encouraging verbal confidence.
- Students put into small groups and given one of the following four rural pressures issues to research: fertilizer boom (p.66), pest control (p.68), food waste (p. 70)and freshwater scarcity (p.78). Students to use the book as a starting point to find out more about their pressure and its link to population growth.

Plenary

Each group elects a presenter who summaries their findings to the rest of the class. Every student to note down three key findings from each group.

RESOURCES

- Mini whiteboards.
- Images of rural and urban areas (these can be accessed by a simple internet search engine).
- WRHTOP? book and PPT slides.

HOMEWORK IDEAS

- Students to write a paragraph in their book explaining which pressure they think is the most significant and why.
- **Stretch and challenge opportunity:** which is the greatest short-term pressure and which is the greatest long-term pressure?



Lesson 3: How have people's lives changed as a result of rapid population growth?

LEARNING OBJECTIVES

- To be able to explain the positive and negative impacts of global population growth.
- To be able to order these impacts according to short and long-term significance.

SUGGESTED ACTIVITIES

Starter

Show students video explaining the difference between the population theories of Malthus and Boserup. Students to write down two points about each theory.

Introduction

Teacher to explain the concept of resource imbalance. Students to decide whether they agree with Malthus or Boserup, then find someone in the class who thinks the opposite and explain their opinion in 15 seconds.

Development activities

- Students to be divided into groups for the remainder of the lesson. They will be given one advantage and one disadvantage of population growth and will produce a poster with key information about both.
 - Advantages: mobile technology (p.98), sanitation and clean water (p.104), education (p.106).
 - Disadvantages: economic inequality (p.110), corruption (p.112) and terrorism (p.114).

For higher ability, students could be asked to decide which advantage should be paired with which disadvantage, or teacher can decide. Higher ability students should be encouraged to try and find links between the two. All students should consider both the long and short term consequences of the impacts they are examining.

- Students to present their two impacts and to explain to their peers whether they think the advantage outweighs the disadvantages or vice versa.
- Class vote on whether the advantages outweigh the disadvantages.

Plenary

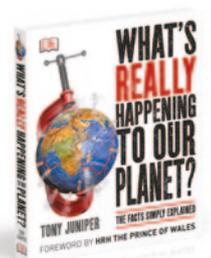
Students to rank the six impacts into order of significance.

RESOURCES

- Video link: <https://www.youtube.com/watch?v=7zw81bJSG6s>
- Mini whiteboards.
- WRHTOP? book and PPT slides.

HOMEWORK IDEAS

Students to create a Venn Diagram of social, economic and environmental impacts of population growth, using their class work so far.



Lesson 4: How has our environment changed as a result of rapid population growth?

LEARNING OBJECTIVES

- To be able to explain how population growth has altered the atmosphere, land and sea.
- To be able to estimate the long-term impact of these changes.

SUGGESTED ACTIVITIES

Starter

Diagram of the greenhouse effect from p. 120 to be shown on the screen. Teacher to explain the process to the students, who then draw their own copy of the diagram in their books. Higher ability students to include annotations, whilst lower ability asked to label the key processes.

This could also be done as a fun-tray modelling exercise – students asked to reproduce the greenhouse effect diagram using pipe cleaners, Play-Doh etc.

Development activities

- Students are given a choice of three ways in which population growth has impacted the planet: students read the information for forest clearance (p.150), over-fishing (p.158) or plastic pollution (p.164). Their task is to become an 'expert' on this issue by the end of the lesson. Students can be given a choice of ways in which to present their expert information – poster, leaflet, annotated diagram or mind-map.
- Teacher to ask for volunteers to be in the 'hot seat' for each of the three impacts – students to formulate questions to ask them about how population growth has impacted on their specific concern. Good opportunity for those who are more confident verbally than in their written work (particularly dyslexic students) to show off their learning.
- (Alternatively, this could be done as a market place activity, whereby students lay out their work around the room and students move around to the different pieces of information to gather notes on the impacts of population growth.)

Plenary

Students asked to vote on which impact they think will have the greatest long-term effects. Ask students to justify their answers.

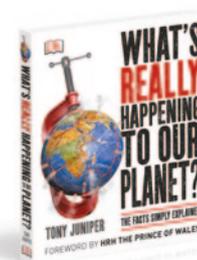
Opportunity for stretch and challenge: for or upon whom/what will the impact be greatest? Do we assume that the impact on humans is the most significant? How else could we think about the significance of these impacts (i.e. on animals, marine ecosystems etc.).

RESOURCES

- WRHTOP? book and PPT slides.

HOMEWORK IDEAS

Students to prepare a sixty-second radio broadcast about their chosen impact, explaining why it is of concern and what its long-term consequences could be.



Lesson 5: What is being done to tackle the challenges of population growth?

LEARNING OBJECTIVES

- To be able to identify what individuals, companies and nation states can do to alleviate the impact of population growth.
- To be able to determine which strategies will be most effective in tackling the challenges of population growth.

SUGGESTED ACTIVITIES

Starter

Choose students to present their homework radio presentation.

Introduction

- Show students video clip about the UN's Sustainable Development Goals (SDGs).
- Ask students to write down which goals they think are easily achievable and which will be more difficult to achieve. They will need to justify their opinion in class discussion.

Development activities

- Information about multilateral environmental (p.186) and TNCs' green energy goals (p.199) to be pinned up around the classroom. Students move around to the different pieces of information and note down in their books how these two approaches, as well as the SDGs could help to alleviate the negative consequences of population growth.
- Once sat back down, students write flash card summaries of each of the three approaches. They then pin these onto a 'washing line' hung up in the classroom, which represents a continuum from 'most effective approach' to 'least effective approach'. Individual students are then asked to justify their decision-making.

Plenary

Students to write a paragraph in their book explaining whether they think it is the responsibility of individuals, companies or nation states to alleviate the impacts of population growth.

RESOURCES

- Video link: <https://www.youtube.com/watch?v=5G0ndS3uRdo>
- String and pegs for washing line activity.

HOMEWORK IDEAS

To research what is being done by a named company or charity to alleviate the impacts of population growth.

This information to be brought to next lesson, to act as a basis for classwork.

For the less able, a company/charity could be provided, with some initial information to get them started, plus recommended websites/news articles.



Lesson 6: How can we respond to the challenges of population growth?

LEARNING OBJECTIVES

- To be able to select or create a response to the challenge of global population growth.
- To be able to persuasively present and explain a chosen response.

SUGGESTED ACTIVITIES

Starter

Students to be asked to explain to their partner what their chosen company/charity is doing to alleviate the impact of population growth. Partners to write a brief summary and then feedback on what information is missing / could be developed.

Introduction

Recap of the key issues studied during the topic. This could be in the form of teacher questioning about the impacts of population growth, or through a game of 'Consequences', whereby each student writes down a cause of population growth and passes it on to the next student, who writes down an impact (and so on).

Development activities

- Students to choose a specific response to the challenges of population growth that they think will be most effective. This can be one they have studied in class, or an alternative approach of their own. Students produce a mind-map explaining the short and long-term impacts that their response would address in rural and/or urban areas, for the world's wealthy and poor. This could be reduced or extended, depending on ability.
- Students given a choice of written activity: a letter to the Secretary-General of the UN, CEO of a TNC or Prime Minister / President of a government; a poem; a drawing etc. Less able students could be provided with a medium or writing frame to help them develop their ideas.
- Students to complete their written activity to argue the benefits of their chosen approach in tackling the challenges of population growth.

Plenary

Students asked to write down a question that they have as a result of the topic and hand these in.

RESOURCES

- A3 sheets of paper, colouring pencils, etc. for writing activity.

HOMEWORK IDEAS

Teacher to shuffle and re-distribute the questions written in the plenary. One each given to students who have to write an answer in their books.

This can be differentiated by suggesting websites etc. that could help them find out an answer.

