

Writing an Encyclopaedia Entry

Teacher Lesson Plan 004



This lesson plan does not assume previous experience of the game. Teachers may show VC from *Checkpoint KIDS* of the game, use YouTube clips, or play the game.

The lesson is designed to engage children with a learning opportunity based on computer gaming and is not intended as a substitute for teaching the National Curriculum.

English Assessment Objectives are provided as a means of justifying the lesson in a school environment.

All lesson timings are approximate.

Checkpoint KIDS welcomes students' work for submission, but only if the relevant permission slips are completed.

Issue: **7 – November 2020**

Theme: **Exploration**

Game: **No Man's Sky**

Focus: **Writing an Encyclopaedia Entry**

Lesson Objective:

By the end of this learning episode you will:

- understand how to write an encyclopaedia entry
- understand the criteria
 - introduction
 - subheadings
 - technical data
 - images
 - diagrams
- understand the content
 - facts not opinions

Assessment Objectives:

A05 - adapting for purpose/audience and organising ideas

A06 - sentence structures adapted to purpose with accurate spelling and punctuation

Literacy Objectives:

- understand the correct layout and writing conventions - numbers as words / chemical symbols / abbreviations

Duration: 2 x 45 minutes

Starter

- one of the oldest surviving encyclopaedias is from AD 77-79. It contained 37 chapters and 20,000 facts according to its author, the Roman Pliny the Elder. Interestingly, he died in Pompeii when Mount Vesuvius erupted in AD79
 - do the students know of any modern printed encyclopaedias? Has the school library got one: Britannica/Compton's?
 - do the students know of any online encyclopaedias? Wikipedia (wiki: technology for developing collaborative websites (Hawaiian for quick) and pedia meaning belonging to the genre encyclopaedias)
 - NOTE: even though Wikipedia offers more articles and links than a printed encyclopaedia, and can be edited quickly to stay current, it can be edited by anyone at any time and so is not a reliable source and cannot be used for academic purposes
 - Britannica insists that its content is more reliable as the contributors are carefully selected and all acknowledged experts in their field.
 - Question. What can we do when using the internet for research to mitigate the issue of reliability and accuracy of online resources like Wikipedia? (Answer: Find at least three other sources that agree with Wikipedia)
- spelling:
 - encyclopaedia - British
 - encyclopedia - general English
- introduce the two examples of past encyclopaedias. TLP004WS1a. Discuss the problem that printed materials are around for a considerable amount of time, and so the information they contain can become outdated. The issue is with the 'facts' in encyclopaedias:
 - 'facts' are only true in context. Science is continually updating our knowledge and understanding
 - printed encyclopaedias will be out of date quite quickly due to technological development but other information should be reliable
- can the students think what kind of content would remain reliable over time?
- establish the difference between facts and opinions
 - facts can be proven
 - *This school chair is made of plastic.* (fact)
 - *This school chair is comfortable.* (opinion)
- explain that the students are going to be writing several encyclopaedia entries. These will be based on the game No Man's Sky. One entry will be about a planet. One or more additional entries will be about an animal (fauna) or plant (flora) that has adapted itself for life on the planet
- run the trailer for No Man's Sky in Checkpoint Kids or use this link <https://www.youtube.com/watch?v=nLtmEjqzg7M> (NMS) 3 mins

Lesson 1




Activity 1:

- introduce the exemplar encyclopaedia entry for Mars. TLP004WS1
- discuss the content. Students may have to have a brief explanation of:
 - the solar system
 - planetary orbits
 - day and night
 - seasons
 - the Earth's rotation, revolution and orbit:
<https://www.youtube.com/watch?v=l64YwNl1wr0>
 - the distances involved. Solar system drawn to scale:
<https://www.youtube.com/watch?v=Kj4524AAZdE>
 - light years
 - a light year is the distance light travels in one Earth year = 6 trillion miles (6,000,000,000,000)
 - light travels at 186,000 miles per second
 - simple explanation: <https://spaceplace.nasa.gov/light-year/en/>
- if required, introduce the following conventions:

numbers 1-9	written as words: one, two etc
numbers with triple zeros	spaced with commas: 1,000
temperatures	written in °C
measurements	imperial: miles, feet, inches
speed	imperial: miles per hour - mph
speed	imperial: miles per second
weight	imperial: pounds - lbs
periodic table elements	capital letter, lower case letter: Na

- complete the encyclopaedia proforma for Earth. TLP004WS2. Students can research the data or use the sheet provided. TLP004WS2a
- briefly compare Earth to Mars and explain why life exists on Earth:
 - liquid water - sustains life
 - distance from the Sun - correct temperature
 - atmosphere - protects the Earth
- if required complete a table for a life sustaining planet. Students will need this knowledge to create a planet of their own




Criteria for a Life-Sustaining Planet	
Criteria	Explanation
liquid water	<hr/> <hr/> <hr/> <hr/>
correct distance from a sun	<hr/> <hr/> <hr/> <hr/>
correct atmosphere	<hr/> <hr/> <hr/> <hr/>

I understand this work so far.	  
I would like help with _____ <hr/> <hr/> <hr/>	

Criteria for a Life-Sustaining Planet	
Criteria	Explanation
liquid water	<u>Life requires liquid water to exist.</u> <hr/> <hr/> <hr/>
correct distance from a sun	<u>Suns provide light and heat. Too near to a sun and the planet is too hot. All the water will evaporate. Too far away and the water will freeze.</u> <hr/> <hr/>
correct atmosphere	<u>The atmosphere is a layer of gasses which surround the planet. This needs to be thick enough to shield the surface from radiation. A thick atmosphere will also destroy any objects trying to pass through: friction causes the objects to heat up.</u> <hr/> <hr/>

Activity 2

- the students can now choose one of the planets provided TLP004WS3a and create an encyclopaedia entry
- students complete a self-assessment grid

Statement	✓ or ✗	Focus
I have used capital letters to start sentences, for proper nouns and for subheadings.		
I have followed the conventions for writing encyclopaedia entries		
I have included appropriate content under the subheadings.		
SPaG check		
I understand this work so far.	  	
I would like help with _____ _____ _____		

- students share and discuss their encyclopaedia entries. Possible discussion points
 - How much water is there on the planet - salt/fresh?
 - What is the planet's distance from its sun - average temperature/light levels?
 - How extreme are the seasons - length and size of orbit?
 - How long is a day - time taken to rotate?
 - What is the atmosphere like - thin/thick, chemical composition?
- discussion should include the consequences of altering these variables and the way in which the variables dictate the development of life and the adaptations made
- explain that the students will have to create both flora and fauna which are perfectly adapted for life on their chosen planet

Lesson 2

Starter:

- recap previous lesson and the variables that influence a planet's ability to sustain life
 - students review their planet encyclopaedia entries
- discussion should include the consequences of altering these variables and the way in which the variables dictate the development of life and the adaptations made
- explain that the students will have to create both flora and fauna which are perfectly adapted for life on their chosen planet
- show BBC animal adaptations VC: <https://www.youtube.com/watch?v=ZT8YswmQuAg>
 - cold - frozen insect 0:00 - 3:35 mins
 - hot - leopard tortoise 5:30 - 6:05 mins
 - hot - giraffe 8:00 - 10:10 mins

Activity 1




- re-run the trailer for No Man's Sky: <https://www.youtube.com/watch?v=nLtmEjqzg7M> (NMS) 3 mins (if required, explain that the game is based in science fiction and fantasy and that the space exploration it shows is not possible)
- freeze the trailer and discuss what kind of planet it might be and what kinds of flora and fauna it possesses. What does the depiction of the planet imply about the adaptations that have been made and why?
- students create an encyclopaedia entry for an animal that has adapted to live on their planet. TLP004WS4a and TLP004WS4
- students complete a self-assessment grid

Statement	✓ or ✗	Focus
I have used capital letters to start sentences, for proper nouns and for subheadings.		
I have followed the conventions for writing encyclopaedia entries.		
I have included appropriate content under the subheadings.		
SPaG check		
I understand this work so far.	😊 😐 😞	
I would like help with _____		

- students share and discuss their encyclopaedia entries. Possible discussion points
 - How has the animal adapted to its environment?
 - body shape
 - size
 - skin
 - colour
 - feeding method
 - Is it an omnivore, herbivore or carnivore?
 - Which is the most important adaptation?
 - Why did you choose to create this animal?

Activity 2

- show plant adaptations VC:
 - https://www.youtube.com/watch?v=ca99WW_v0bA 7:40 mins
 - <https://www.youtube.com/watch?v=D43jKE76XLs> 5:34 mins
- students create an encyclopaedia entry for a plant that has adapted to live on their planet. TLP004WS4b and TLP004WS4
- students complete a self-assessment grid

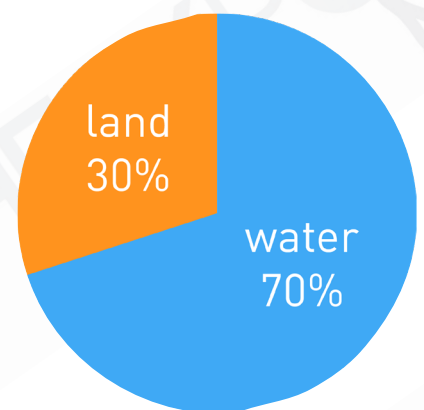
Statement	✓ or ✗	Focus
I have used capital letters to start sentences, for proper nouns and for subheadings.		
I have followed the conventions for writing encyclopaedia entries.		
I have included appropriate content under the subheadings.		
SPaG check		
I understand this work so far.	  	
I would like help with _____		

- students share and discuss their encyclopaedia entries. Possible discussion points
 - How has the plant adapted to its environment?
 - shape
 - size
 - colour
 - feeding method
 - diet
 - Which is the most important adaptation?
 - Why did you choose to create this plant?
- encourage positive feedback

- final self-assessment of this Learning Pack activity
- submit students' work to Checkpoint KIDS together with the relevant permission slips

Extension Activities

- students could draw and label their planet, animal or plant
- students could develop their encyclopaedia entries:
 - include explanation of adaptations - what necessitated the adaptation and how it enables the plant/animal to survive
 - include diagrams to support explanations
 - convert some of the factual numerical data into pie charts
 - how might the plant/animal be utilised by humans to aid their survival:
 - food sources
 - medicines
 - clothing
 - protection
- students could write journal entries for explorers on their chosen planet
- students could write a travel brochure for their planet
- students could write a promotional leaflet for prospective colonisers






Percentage of Earth covered by water

Lesson 1 Activity 1

Lesson 2 Activity 1, Activity 2

Statement	✓ or ✗	Focus
I have used capital letters to start sentences, for proper nouns and for subheadings.		
I have followed the conventions for writing encyclopaedia entries.		
I have included appropriate content under the subheadings.		
SPaG check		
I understand this work so far.	😊 😐 😞	
I would like help with _____		

Final self-assessment for TLP004

Writing an Encyclopaedia Entry		
Planet: _____ Animal: _____ Plant: _____		
Name: _____	Date: _____	Class: _____
Statement	✓ or ✗	Focus
I have written an encyclopaedia entry in the correct format.		
I have followed the conventions for writing encyclopaedia entries.		
I have included appropriate content under the subheadings.		
SPaG check.		
I have understood the work we have been doing.	  	
I have really enjoyed this work because _____ _____ _____ _____		
In future I would like help with _____ _____ _____ _____		

Word Bank

adaptation, analyse, atmosphere, boundary, data, discovery, encyclopaedia, expedition, exploration, fauna, flora, journal, laboratory, log, navigation, observations, quest, research, survival, terrestrial