

LIVING SUSTAINABLY



Description:

Learners will learn about which of the world's resources are running low and how we should learn to use them sustainably.

Learners will develop their planning skills and identifying how their builds will not only be made out of sustainable materials but also to allow the owners of their builds to live in a sustainable manner.

This project covers many aspects of the Science and Technology Area of Learning and Experience. The learning objectives are mapped to the what matters statements in the AOLE and the project itself is based around the design engineering cycle.

Additionally, developing literacy is a key part of this project. In order to understand the meaning of living sustainably and what defines a sustainable material, this involves a lot of research. A range of reading techniques, such as close reading, skimming and scanning will also develop as part of this research. The project provides the learners with opportunities to develop their writing skills, especially in the initial research and planning phase and also the evaluation phase at the end of the project.

Critical thinking and problem-solving are at the heart of Science and Technology when analysing problems to develop models, solutions and innovations. This is an integral part of this project especially so during the building phase of the project. When developing their sustainable builds from their plans, learners will be making decisions and solving problems sub-consciously as part of their thinking processes.

Planning and organisation are key in scientific and technological processes and learners will be organising and planning their projects and ideas, while setting their own goals within distinct requirements. They will also be critically evaluating their progress and results to further improve their ideas and outcomes.



Overarching Statement

This Minecraft: Education Edition project has been developed to enrich the delivery of the Curriculum for Wales. Although specific **Areas of Learning and Experience (AoLE)** have been identified in this scheme of work (SoW) these are **not** prescriptive, but the authors interpretation. Educators should interpret this SoW and lesson support documentation and apply accordingly to the relevant age groups in terms of breadth and depth of application (and considering any other relevant AOLEs).

Within the Lesson support documents, details of the **Statements of what matters** associated to the relevant **AoLE** are explicitly detailed, along with appropriate referencing of the cross-curricular skills: literacy, numeracy and digital competence. Where appropriate references have also been given to the Digital Competence Framework (DCF) and National Literacy and Numeracy Framework (LNF).

At the heart of the Hwb Minecraft: Education Edition projects is the development of the four core purposes of Curriculum for Wales and the underpinning integral skills of **Creativity and innovation, Critical thinking and problem-solving, Personal effectiveness and Planning and organising**. Thus, providing a holistic integrated 21st Century curriculum to inspire the youth of Wales to be innovative contributors to their communities by embracing our nation's culture, geography, history, language and sense of belonging.

Area of Learning and Experience

- **Science and Technology**
- **Humanities**
- **Expressive Arts**

Cross Curricular Skills

- **Literacy**
- **Numeracy**
- **Digital competence**
- **LCF**
- **DCF**



Learning Objectives covered

Learning, practice, and activities

Stage 1: Introduction and Research

During this stage the learners are introduced to the project and initial research is carried out into defining sustainability.

Learning Objectives

- Learners understand the concept of living sustainably
- Learners explore which of the earth's resources are sustainable

Lesson elements:

- Class discussion about the word sustainability
- How do the learners live sustainably (Recycle, Reuse)
- Challenge pupils to define living sustainably
- Create a mind map about using sustainable building materials and how they could live sustainably
- Extensive writing piece under the title: "What is sustainable living"



Learning Objectives covered

Learning, practice, and activities

Stage 2: Planning

In this stage, the learners will plan their sustainable house on paper.

The learners will use the knowledge acquired during the research lesson and annotate the plan accordingly.

The house must be built from sustainable materials and must ensure the occupants can live sustainably.

Learning Objectives

- To identify requirements of design and build of a sustainable building
- To create 'Design Specification'
- To create a 2D plan of a Minecraft: Education Edition build
- Annotate how the house is enables people to live sustainably

Lesson elements:

- Draw up Design Specification
- 1cm grid paper is provided to the learners and the ratio of 1cm = 1M is explained
- Birds eye view of first floor of house is planned on paper
- Learners are encouraged to add outdoor elements to live sustainably
- Learners must annotate work about the sustainability aspects of the build



Learning Objectives covered

Learning, practice, and activities

Stage 3: Building

Learners will begin to build the sustainable house in Minecraft: Education Edition. They must follow their plan.

Learning Objectives

- Build outline of house using sustainable materials
- Add one aspect which allows the occupants to live sustainably
- Export world safely

Lesson elements:

- Log in to Minecraft: Education Edition and create the world
- Build sustainable house
- Export world and save the world in the learner's home drive on the school network



Learning Objectives covered

Learning, practice, and activities

Stage 4: Adding information to World's

During this stage learners will be introduced to the chalkboards (Slate, Poster & Board) & NPC.

Learners will need to use the chalkboards and NPC's to provide information about how certain elements of their builds provide sustainability.

Learning Objectives

- Import worlds from previous lesson
- Describe sustainable elements
- Use Chalkboards and NPC's in Minecraft

Lesson elements:

- Demo of Chalkboards & NPC
- Class Discussion
- Build sustainable house
- Export world and save the world in the learner's home drive on the school network



Learning Objectives covered	Learning, practice, and activities
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Stage 5: Identifying improvements

During this stage, learners are encouraged to view other learners work and get inspired to improve their own work.

Learning Objectives

- To identify strengths and weaknesses of their builds
- To suggest improvements for their builds and apply the improvements
- To share ideas with peers

Lesson elements:

- Small group discussion about their worlds
- Showcase worlds to small groups
- Share ideas and inspire each other



Learning Objectives covered

Learning, practice, and activities

Stage 6: Evaluation & Presentation

In this stage learners will evaluate their builds against the brief.

Improvements should be identified as well as noting the successful parts of the build.

Learners will present their build and evaluation using the Book & Quill.

Learning Objectives

- Evaluate strengths and weaknesses of build
- To use Minecraft: Education Edition features (camera, book and quill, portfolio)

Lesson elements:

- Revisit the design specification
- Identify specific elements of build that meet design requirements
- Use the book and quill to record and demonstrate their understanding of the sustainable elements of the build.

