Evaluation

Education Alliance Finland

Global Warning

Global Warning is a science-based course material that storyfies and gamifies climate change.

Global Warning
High Educational Quality Aspects

Education Alliance Finland

1. Extremely high-quality material for STEAM education with a strong research basis and current topic.
2. The teacher materials are noteworthy and give teachers with different levels of experience a support they might need to feel capable and competent in teaching a STEAM project.
3. The whole project is very relatable to the targeted learner age-groups and provides numerous different learning methods whilst covering several key competences in the tasks given throughout the lessons.

Pedagogical Approach 95 %

Learning Engagement 4.43

Subject area - Primary skills

MYP Science - IB Curriculum - Knowing and understanding

1. iii. Analyse and evaluate information to make scientifically supported judgments. A
2. ii. Apply scientific knowledge and understanding to solve problems set in familiar and unfamiliar situations A
3. i. Explain scientific knowledge A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Design - IB Curriculum - Developing Ideas

1. iv. Develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution. A
2. iii. Present the final chosen design and justify its selection. A
3. ii. Develop a range of feasible design ideas which can be correctly interpreted by others A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Design - IB Curriculum - Evaluating

1. iv. Explain the impact of the solution on the client/target audience ..... A
2. iii. Explain how the solution could be improved ..... A
3. ii. Critically evaluate the success of the solution against the design specification ..... A
4. i. Design detailed and relevant testing methods, which generate data, to measure the success of the solution A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Design - IB Curriculum - Inquiring and Analyzing

1. iii. Analyse a range of existing products that inspire a solution to the problem . . . . . A
2. i. Explain and justify the need for a solution to a problem for a specified client/target audience . . . . A
3. ii. Identify and prioritize the primary and secondary research needed to develop a solution to the problem . . . A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Science - IB Curriculum - Inquiring and designing

1. ii. Formulate a testable hypothesis and explain it using scientific reasoning ..... A
2. i. Explain a problem or question to be tested by a scientific investigation ..... A
3. iv. Design scientific investigations. ..... A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Design - IB Curriculum - Creating the Solution

1. i. Construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution — A
2. ii. Demonstrate excellent technical skills when making the solution — A
3. v. Present the solution as a whole, either: a. in electronic form, or through photographs of the solution from different angles, showing details. — A
4. iv. Fully justify changes made to the chosen design and plan when making the solution — A
5. iii. Follow the plan to create the solution, which functions as intended — A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Science - IB Curriculum - Processing and evaluating

1. iv. Explain improvements or extensions to the method ..... A
2. ii. Interpret data and explain results using scientific reasoning ..... A
3. i. Present collected and transformed data ..... A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

MYP Science - IB Curriculum - Reflecting on the impacts of science

1. iv. Document the work of others and sources of information used . . . . . A
2. iii. apply scientific language effectively. . . . . A
3. ii. Discuss and evaluate the various implications of the use of science and its application in solving a specific problem or issue . . A
4. i. Explain the ways in which science is applied and used to address a specific problem or issue . . . . A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Computing - UK National Curriculum 2013

- General aims

1. Are responsible, competent, confident and creative users of information and communication technology. A
2. Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. A
3. Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Computing - UK National Curriculum 2013

- Key stage 1

1. Recognise common uses of information technology beyond school. A
2. Use technology purposefully to create, organise, store, manipulate and retrieve digital content. A
3. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Computing - UK National Curriculum 2013

- Key stage 2

1. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. A
2. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Computing - UK National Curriculum 2013

- Key stage 3

1. Learn to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. A
2. Be responsible, competent, confident and creative users of information and communication technology. A
3. Make appropriate use of data structures. A
4. Learn to analyse problems in computational terms A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Computing - UK National Curriculum 2013

- Key stage 4

1. Develop their capability, creativity and knowledge in computer science, digital media and information technology. A
2. Develop and apply their analytic, problem-solving, design, and computational thinking skills. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Design and Technology - UK National Curriculum 2013

- General Aims - Keystage 3

1. Critique, evaluate and test their ideas and products and the work of others. A
2. Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. A
3. Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Design and Technology - UK National Curriculum 2013

- General Aims - Keystages 1 and 2

1. Critique, evaluate and test their ideas and products and the work of others. A
2. Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. A
3. Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. A

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Subject area - Primary skills

Design and Technology - UK National Curriculum 2013

- Keystage 1

1. Build structures, exploring how they can be made stronger, stiffer and more stable. A
2. Evaluate their ideas and products against design criteria. A
3. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. A
4. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. A
5. Design purposeful, functional, appealing products for themselves and other users based on design criteria. A

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Subject area - Primary skills

Design and Technology - UK National Curriculum 2013

- Keystage 2

1. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. A
2. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. A

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B = Secondary goal: content is facilitative

Subject area - Primary skills

Design and Technology - UK National Curriculum 2013

- Keystage 3

1. Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions. A
2. Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists. A
3. Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups. A
4. Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. A
5. Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools. A
6. Identify and solve their own design problems and understand how to reformulate problems given to them. A
7. Use research and exploration, such as the study of different cultures, to identify and understand user needs. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Science - Chemistry - UK National Curriculum 2013

- Key stage 4

1. potential effects of, and mitigation of, increased levels of carbon dioxide and methane on the Earth's climate A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Science - Physics - UK National Curriculum 2013

- Key stage 3

1. Fuels and energy resources. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Science - Physics - UK National Curriculum 2013

- Key stage 4

1. renewable and non-renewable energy sources used on Earth, changes in how these are used . . . . A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Science - Working scientifically - UK National Curriculum 2013

Key stage 3

1. Undertake basic data analysis including simple statistical techniques. A
2. Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions. A
3. Present observations and data using appropriate methods, including tables and graphs. A
4. Make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements. A
5. Make predictions using scientific knowledge and understanding. A
6. Ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience. A
7. Evaluate risks. A
8. Understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and A
9. Pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility. A

A = Primary goal: content is didactic

Subject area - Primary skills

Science - Working scientifically - UK National Curriculum 2013

- Key stage 4

1. developing their use of scientific vocabulary and nomenclature . . . . . A
2. presenting reasoned explanations, including relating data to hypotheses . . . . . A
3. presenting observations and other data using appropriate methods . . . . . A
4. evaluating methods and suggesting possible improvements and further investigations . . . . . A
5. making and recording observations and measurements using a range of apparatus and methods . . . A
6. planning experiments to make observations, test hypotheses or explore phenomena . . . . . A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Science - Working scientifically - UK National Curriculum 2013

- Key stage 4

7. evaluating risks both in practical science and the wider societal context, including perception of risk . . . A

8. explaining everyday and technological applications of science; evaluating associated personal, social, economic and environmental implications; and making decisions based on the evaluation of . . . . A

9. using a variety of concepts and models to develop scientific explanations and understanding . . . . . A

10. appreciating the power and limitations of science and considering ethical issues which may arise . . . A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Second Grade - Next Generation Science Standards

- K-2.Engineering Design

1. K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. A
2. K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

Subject area - Primary skills

Middle School Engineering Design - Next Generation Science Standards

- MS.Engineering Design

1. MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to A
2. MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. A

A = Primary goal: content is didactic

B = Secondary goal: content is facilitative

According to Education Alliance Finland evaluation, Giant Alphabet represents high educational quality and is proven to promote learning efficiently.