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viking energy
Harnessing Shetland's natural resources

Vaila's Windy Day

Delivery Guide

Introduction

Vaila's Windy Day is a fun, interactive resource for schools in Shetland. Aimed at pupils working at Early and First Level, the resource encourages exploration of key STEM concepts and careers.

Pupils will meet Vaila, a 7-year-old girl from Shetland, and join her on her adventure as she learns about electricity and wind power. Younger pupils can work with older peers or an adult to explore the interactive content, while older or more independent pupils can access the story on their own or in small groups.

Learning Objectives/Outcomes

Pupils will...

Identify how wind can affect the world around us.

Explain how electricity is used in their home and the world around them.

Explore how wind turbines use the energy from the wind to generate electricity.

Timings

The resource can be used as a whole class lesson, presented using a smart board, or in small groups/individually on a tablet or laptop. Suggestions below are for a whole class or group approach. If pupils are working more independently, introduce the session by demonstrating the interactivity and encouraging them to read/listen to the instructions on each page.

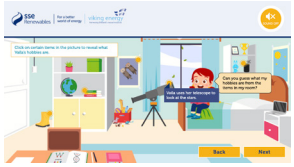
Suggested Timing	Resource and Activities Overview
Before the lesson	**Resource Guide** Read through and familiarise yourself with all the resources. **Printable Resources** Print appropriate activity sheets for the class (all pupils will need a copy of Energy in Our Homes for slide 15). **Interactive Storybook** Check Wi-Fi connection, sound and visuals of classroom equipment.
30–45 mins	**Resource Guide** Introduce the interactive resource. If pupils are to use it on their own, remind them to make the resource full screen to access interactivity.

Interactive Storybook

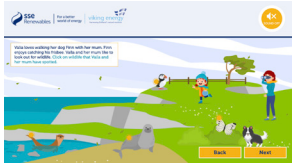
Explain that pupils should look at each slide to see if there is a task or interactive element

Work through the story, pausing to check for understanding, and talk through any new language e.g. parts of the turbine.

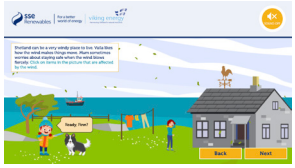
Slide 1: Introduction to the geography of Shetland. Ask pupils to look at the map, can they see anywhere they recognise? Ask pupils to guess the names of the places with the yellow dots before clicking on them to check the answers.



Slide 2: Getting to know Vaila. Ask pupils if they have any of the items that Vaila has in her room in their bedrooms. Can they guess what her hobbies are? Click on the yellow buttons to check.

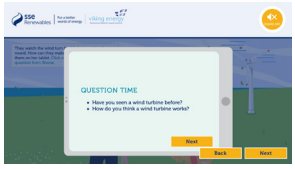


Slide 3: What wildlife have Vaila and her Mum spotted? Pupils or adults can read out the facts about each animal.



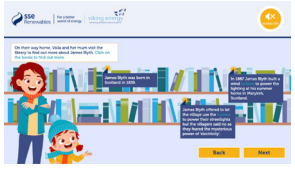
Slides 4/5: Ask pupils what their favourite thing about the wind is.

Slide 6: Introduction to windfarms. Pupils or adults can read out the facts about windfarms.



Slide 7: Follow the interactive cues, can pupils answer Shona's questions? Do they have any questions about wind turbines? Gather any questions and see if they are answered as the story unfolds.

Slides 8/9/10: The wind turbine challenge. These slides will introduce pupils to the parts of the turbine. They can work together to remember each part and challenge themselves to remember what each part does. Pupils can use the Wind Turbine Construction sheet later to recall this information.

	**Slides 11/12/13:** Follow the interactive cues.
	**Slide 14:** Pause on this slide. Using the Energy in our Homes worksheet, pupils can work independently or together to draw their ideas of how energy is used in their homes. Once complete, click on the rooms to see if they are similar to the pupils' ideas.
	**Slide 15:** Ask the pupils if they can think of the energy saving ideas they already use.
	**Slide 16/17:** Follow the interactive cues. After reading the facts on slide 18, why do pupils think the village feared electricity?
	**Slide 18:** Ask pupils which jobs they are interested in; what skills do they think you would need for each job? **Plenary** Ask pupils to share one thing they have learned about wind farms with a partner.
15 – 50mins (depending on resources chosen)	**Printable Resources** Explain chosen printable resources to pupils – detailed below in 'follow-up tasks'.

Follow up tasks

Following the interactive story, choose some follow up activities to complete with your class:

Discuss

Use the energy discussion cards to prompt discussion around the best ways to save energy. Note that there are no right or wrong answers.

Early – Read the cards aloud and discuss what is happening in each picture. Pupils should discuss what they think are the best options for saving energy.

First – Encourage pupils to read the text and to use because to justify their ideas.

Take a class vote to decide on the best options. Ask pupils which of the options they do or would like to try and do. Note that they are all great things to do to save energy!

Recall

Add labels to the Wind Turbine Construction sheet to recall the information about how wind turbines work.

Early/first (p2) – pupils cut out and stick the labels in place.

First (p3/p4) – pupils write in the labels. Challenge pupils to include a caption for some of the labels to explain what they do.

Identify

Using the power of the wind (1) sheet, pupils should identify the items affected by the wind.

Early – pupils circle the items affected.

First – pupils add in one or more other things that may be affected by the wind.

Create and Observe

Using the power of the wind (2) sheet, pupils complete their own beaufort scale. This can then be used to chart local weather over a week.

Early – pupils complete as a class, making decisions altogether.

First – pupils complete independently, making their own decisions.

Further activities

To extend the learning beyond this lesson, pupils could...

- Use NUSTEM'S windsock guide to make a windsock: https://nustem.uk/activity/wind-sock/ Hang your windsocks outside where pupils can see them take flight! Try to point out when they are blowing and help children to decide on the wind direction.
- In pairs, take a windy day photo – how can your audience tell that it was windy?
- Create a weather watching station: https://dreambigathome.uk/activity/homemade-weather-station/
- Explore how the wind is responsible for dispersing seeds: www.bbc.co.uk/bitesize/clips/znvfb9q www.youtube.com/watch?v=zVZh5usRpEA

Useful Links

www.keepscotlandbeautiful.org/education-and-learning/eco-schools/

Curriculum Links

Listening and talking

Finding and using information:

- When listening to, watching and talking about texts with increasingly complex ideas, structures and specialist vocabulary, I listen or watch for useful or interesting information and I use this to make choices or learn new things. LIT 0-04a
- As I listen or watch, I can identify and discuss the purpose, key words and main ideas of the text, and use this information for a specific purpose. LIT 1-04a

Topical science

By considering current issues of science, learners increasingly develop their understanding of scientific concepts and their capacity to develop informed social, moral and ethical views. They reflect upon and critically evaluate media portrayal of scientific findings.

- I can talk about science stories to develop my understanding of science and the world around me. SCN 0-20a
- I have contributed to discussions of current scientific news items to help develop my awareness of science. SCN 1-20a

People, place and environment

- I explore and discover the interesting features of my local environment to develop an awareness of the world around me. SOC 0-07a
- I can describe and recreate the characteristics of my local environment by exploring the features of the landscape. SOC 1-07a
- I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment. SOC 0-08a
- I can consider ways of looking after my school or community and can encourage others to care for their environment. SOC 1-08a
- While learning outdoors in differing weathers, I have described and recorded the weather, its effects and how it makes me feel and can relate my recordings to the seasons. SOC 0-12a
- By using a range of instruments, I can measure and record the weather and can discuss how weather affects my life. SOC 1-12a

Craft, design, engineering and graphics

- I explore ways to design and construct models. TCH 0-09a
- I can design and construct models and explain my solutions. TCH 1-09a

Application of engineering

- I explore a variety of products covering a range of engineering disciplines. TCH 0-12a
- I explore and discover engineering disciplines and can create solutions. TCH 1-12a