

LESSON TITLE: ENERGY AND FUELS

T: 3 WK: 1 SUBJ: NST

GR: 5

LESSON 1 OF 8

Lesson Objectives:

- Recap of Grade 4 material
- Developing scientific vocabulary
- Categorising types of energy
- Identifying input and output energy

Resources:

- **DWS1:** Wordbank (digital)
- **WS1:** Wordbank (printable)
- **RES1:** Types of Energy (Slideshow)
- **RES2:** Types of Energy (Poster)
- **DWS/WS2:** Types of Energy

Equipment:

- Lamp
- Fan
- Radio

LESSON OUTLINE

**Question hook:**

**Lesson A: Could humans survive without energy?**

**Lesson B: Is it better to have low energy when you're writing a test or when you're playing a sports match? Justify your answer.**

**Lesson A:**

1. Begin the lesson with the question hook. This question should elicit a discussion about what 'energy' means, where we use it and the different ways energy might present itself.
2. **RES1:** Use the slideshow to revisit the different types of energy that were discussed in Grade 4. There is a game on slide 11 for learners to assign types of energy to pictures. Allow learners to explain why they thought a particular type of energy was relevant to that particular picture.
3. **RES2:** This can be printed and used as a poster in the classroom.
4. **WS1: (ZedTech):** This word bank booklet can be printed on A4 paper, back to back and then compiled as an A5 booklet to be pasted into the learners' workbooks. Please note that pages 5 & 6 can be pasted together. Each week, learners will write explanations or definitions, in their own words, for the different concepts or words used in the lesson. They can easily refer back to this when needed.

5. **DWS1: (TechLoaded):** This word bank is digital and learners can access each page by clicking on the numbers on the front cover. Each week, learners will type in explanations or definitions, in their own words, for the different concepts or words used in the lesson. They can easily refer back to this when needed.
6. Learners can now complete the first few definitions for week 1 in their word bank using the slideshow and poster as a resource.

**Lesson B:**

1. Begin the lesson with the question hook. This question is meant to stimulate debate and discussion and give learners the opportunity to justify their thinking. Learners can give feedback to the class when the teacher asks, "Did anyone hear a really interesting or convincing opinion? Share someone else's excellent idea." This allows learners to think about what they heard, summarise it and talk about it, instead of waiting to share their own ideas.
2. **DWS/WS2:** Learners complete the circle maps for each type of energy by filling in as many different examples for each type of energy. Learners should be encouraged to collaborate and share ideas.
3. The teacher can now demonstrate the idea of input and output energy. Use examples such as a lamp that requires electrical energy as input in order to produce light and heat energy. Other examples could be: a radio (electrical energy as input, sound energy as output), a drum (movement/ kinetic energy as input, sound energy as output), a fan (electrical energy as input, movement/ kinetic/ wind energy as output).
4. Also demonstrate the concept of potential energy either by using a toy car at the top of a slope (potential gravitational energy as input) and then releasing it (movement/ kinetic energy as output) OR by using a torch with batteries in it (stored chemical energy) and then turn it on (light and heat energy as output)
5. **DWS/WS2:** Learners complete the activity on input and output energy as well as the remaining words in the wordbank for Week 1.

ZED TECH	TECH LIGHT/ TECH LOADED
<p><b>Lesson A:</b></p> <ul style="list-style-type: none"> <li>● <b>RES1:</b> Look through slidedeck</li> <li>● <b>RES2:</b> Can be displayed in the classroom.</li> <li>● <b>WS1:</b> Complete wordbank</li> </ul>	<p><b>Lesson A:</b></p> <ul style="list-style-type: none"> <li>● <b>RES1:</b> Look through slidedeck</li> <li>● <b>RES2:</b> Can be displayed in the classroom.</li> <li>● <b>DWS1:</b> Complete wordbank</li> </ul>

**Lesson B:**

- **WS2:** Complete circle maps
- Explain and demonstrate input and output energy as well as potential energy
- **WS2:** Complete second activity
- **WS1:** Complete wordbank

**Lesson B:**

- **DWS2:** Complete circle maps
- Explain and demonstrate input and output energy as well as potential energy
- **DWS2:** Complete second activity
- **DWS1:** Complete wordbank

Assessment opportunities: n/a

**REFERENCES UTILISED**

## Sources:

- [Chatgpt](#), accessed 2025 by R Walker

## Images:

- [Pixabay.com](https://pixabay.com/users/mohamed_hassan-5229782/), [https://pixabay.com/users/mohamed\\_hassan-5229782/](https://pixabay.com/users/mohamed_hassan-5229782/)
- [Vecteezy.com](https://www.vecteezy.com/free-vector/types-of-energy), <https://www.vecteezy.com/free-vector/types-of-energy>
- [Vecteezy.com](https://www.vecteezy.com/free-vector/electric), <https://www.vecteezy.com/free-vector/electric>
- [Vecteezy.com](https://www.vecteezy.com/free-vector/potential-energy), <https://www.vecteezy.com/free-vector/potential-energy>
- [Vecteezy.com](https://www.vecteezy.com/free-vector/roaring-lion), <https://www.vecteezy.com/free-vector/roaring-lion>
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- [Vecteezy.com](https://www.vecteezy.com/free-vector/jack-in-the-box), <https://www.vecteezy.com/free-vector/jack-in-the-box>
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