

ENERGY & CLIMATE ACTION AUDITS

INTRODUCTION

An audit is a technique that through unbiased exploration helps establish the baseline levels of a particular facet of an organisation (your school in this case). Once baseline has been ascertained, you can move to improve wherever you fall short.

To perform an environmental audit, one is required to **investigate, measure, analyse** and **evaluate** our environment, in an unbiased way using a resource or activity.

Sustainable Schools' audits employ the **Active Learning Framework** – learners investigate information about environmental issues, explore these through direct interactions in the environment and are then able to act based on their findings. Learners become active participants in positive environmental change.

All our activities follow the four steps of the Active Learning Framework:

1. **Tuning in** (collect & analyse data – access information)
2. **Finding out** (investigate, experiment, and explore – document evidence)
3. **Act** (plan projects that focus on environmental improvement)
4. **Communicate/Report** (discuss, reflect and share)

ENERGY AUDITS

Why is tackling our energy consumption important?

We need energy to function in our technology-based society. Every time you turn a light, print a document, wash your hands in warm water, energy, predominantly electricity, has been used.

First things first, energy is not free. Not only do you pay money for electricity, but it also comes at an environmental cost. The most common way to generate electricity, particularly in South Africa, is to burn coal or oil. Coal mining is one of the most destructive activities on the planet. It causes habitat destruction, massive amounts of pollution, creates waste that can harm the environment as well as using and polluting scarce water resources. When it is burned to create steam, it releases massive amounts of pollution that is terrible for the environment and a big contributor to global warming.

How is your school contributing to energy consumption and wastage?

The objectives of the energy audits include the following:

1. To introduce the concept of energy usage, with a particular focus on electricity, to learners.
2. To introduce learners to the variety of methods used to measure electricity usage.
3. To understand the energy consumption and wastage within the school community.
4. To facilitate discussion around the importance of reducing our electricity consumption for the betterment of the planet.
5. To strategize methods to improve school energy management.

Basic guidelines

1. **Understand** – ascertain the learners understanding of introduced concepts.
2. **Introduce** – establish the basic concepts of energy sources, uses and methodology used to measure it.
3. **Discuss** – establish methodology to be used.
4. **Act** – undertake energy audit.
5. **Reflect** – discuss results.

6. **Communicate/Report** – learners should be able to communicate method, results, and conclusion.

Grade 1-3

Energy for the Earth	
Prior knowledge:	Counting (terminology and methods explained on the worksheet)
Equipment needed:	Energy audit worksheets, coloured pencils/crayons
Duration:	30 minutes – 1 hour
Extra notes:	Inside lesson

Grade 4 & 5

Energy Efficiency	
Prior knowledge:	Counting (terminology and methods explained on the worksheet)
Equipment needed:	Energy audit worksheets, coloured pencils/crayons
Duration:	30 minutes – 1 hour
Extra notes:	Inside lesson

Grade 6 & 7

The Excitement of Energy	
Prior knowledge:	Basic mathematical skills (terminology and methods explained on the worksheet)
Equipment needed:	Energy audit worksheets, pens/pencils
Duration:	1 – 1.5 hours
Extra notes:	Part of the lesson is outside so it is weather dependent. Safety issues regarding electricity should be discussed prior to the lesson.

Grade 8 - 11

The Economy of Energy	
Prior knowledge:	Basic mathematical skills (terminology and methods explained on the worksheet)
Equipment needed:	Energy audit worksheets, pens/pencils
Duration:	1 – 1.5 hours
Extra notes:	Part of the lesson is outside so it is weather dependent. Safety issues regarding electricity should be discussed prior to the lesson.