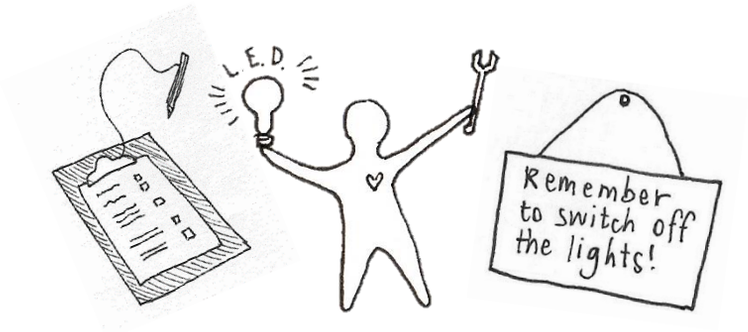
TEACH for ESD



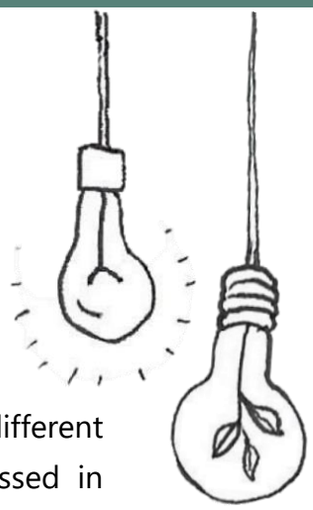
REDUCE RESOURCE USE

OVERVIEW

Reducing the use of resources at schools and in our daily lives is one of the environmental actions that we can take which gives an immediate result. Our school operations all rely on some form of energy and water and produce waste. By reducing our resource consumption and producing less waste, we will protect our natural resources, reduce our CO_2 impact *and* save money.

We can raise **awareness** through our lessons, education campaigns, as well as, through small daily reminders. **Auditing** and setting up a management plan, can improve our resource management. By addressing **infrastructure** maintenance and improvements, we can deal with some of the root causes of resource waste. These activities are on-going. Once ideal resource use is achieved, ensuring proper management and maintenance needs to be planned on a continuous basis.

1. AWARENESS



Many people are just not aware of the impact that wasting energy, water and other resources has on the environment. We often take for granted and assume that there will always be enough of things like water or firewood; however, this is not the case. Our natural resources are limited and with increased use per person and more people in Namibia, we must raise awareness.

AWARENESS

Concern about and well-informed interest in a particular topic or situation

We can begin by teaching our learners about the many different aspects around energy, water, and waste as discussed in ***Toolkit 1.3 – Namibia's Environmental Issues***.

This can be integrated throughout subjects to develop a solid understanding of our natural resources, how they are processed, managed and delivered to us, the consumers. We can begin with a general overview on natural resources and then explore the three topics in more depth.

RESOURCE CHECK

For secondary school learners use the many resources in ***Toolkit 1 – Environmental Knowledge.***

RESOURCE CHECK

For primary school learners, watch the **Environmental Learning** videos from *Giraffe Conservation Foundation (GCF)* about **Energy**, **Water Management** and **Waste and Litter Management**.

RESOURCE CHECK

For younger learners, use the ***It's Time to Grow*** activity booklets on ***Sun***, ***Water***, and ***Recycling*** which are available in six different Namibian languages.

To develop an understanding and an interest in protecting our natural resources, we can focus our education on the conservation of these limited resources and the minimization of waste.

ENERGY CONSERVATION

Using less energy by adjusting our behaviours, habits and purchases

WATER CONSERVATION

Adapting our behaviour and habits to reduce unnecessary water usage

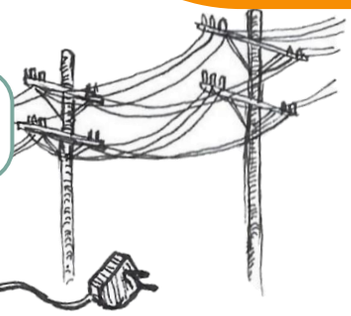
WASTE PREVENTION

Creating less waste through changing behaviours and habits

ENERGY CONSERVATION

In our schools we mainly use energy for lights, computer equipment, the staff kitchen, our school feeding programme, and in some schools, the hostel. Depending on how well-resourced schools are, their energy source (i.e. electricity, gas, paraffin, firewood, solar) and its use varies widely between different schools and regions. Refer to ***Toolkit 3.7 – Greening School Activities and Events*** to learn more about energy conservation and efficiency in our school feeding programmes. We can teach about energy aligned to SDG7, with a focus on the issues of access, efficiency and renewable.

Saving energy also means being climate smart!



RESOURCE CHECK

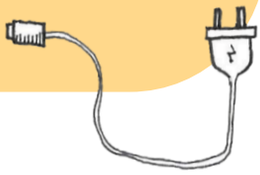
Watch the video by *Think Namibia* on **Conserving Energy** and read the informative documents on ***Renewable Energy*** and ***Conserving Energy***.

RESOURCE CHECK

The ***Energy Challenge Badge*** booklet has a wealth of information on the subject; focus on **pgs. 48 - 122.**

"In regard to environmental value, REEE-powering (renewable energy, energy storage and energy efficient technologies) is expected to reduce local and regional greenhouse gas emissions, lessen the environmental footprint from the use of fossil fuels, and save water in the electricity sector"

VON OERTZEN, 2015



WATER CONSERVATION

With the recent COVID-19 pandemic, there is already an increased awareness about the necessity for access to clean water in schools to maintain hygiene standards. It is important to teach how to use water wisely and to do our best to ensure that we will always have enough. Namibia is a dry country that is prone to long periods of drought. As we have learned, this will only continue to get worse through the impacts of climate.

RESOURCE CHECK

See the *Think Namibia* video about **Saving Water,** as well as their information document on ***Saving Water***.

RESOURCE CHECK

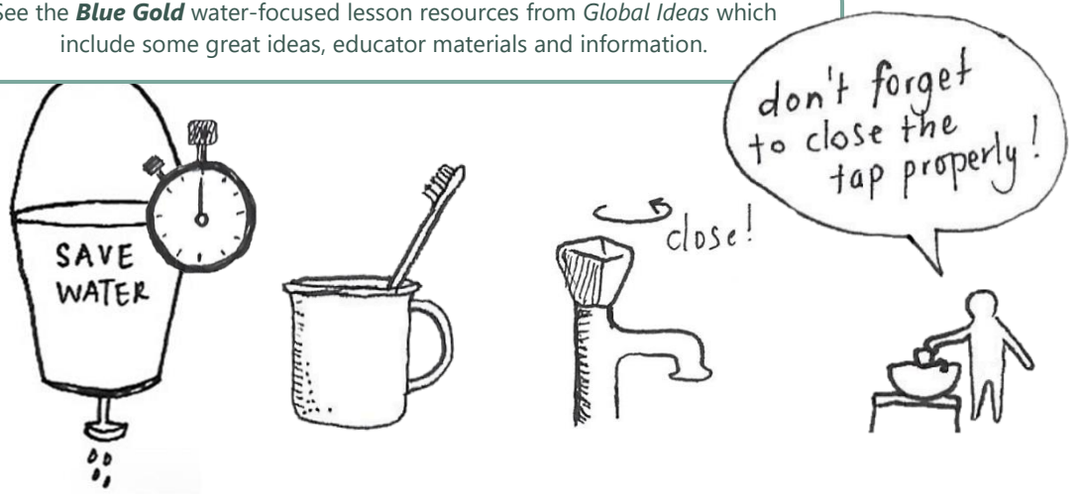
Use the teacher manual ***Caring for our Water*** developed by the *Wetlands Working Group of Namibia* to raise awareness and knowledge about Namibia's water situation and the importance of conservation.

We are all responsible to take care of our precious water resources. We have the opportunity to teach about water in many different subjects as it is the basis for life and our economy depends on it for sustainable development. Refer to ***Toolkit 3.5 – Celebrate the Environment*** for ideas about environmental days celebrating water.

RESOURCE CHECK

See the ***Blue Gold*** water-focused lesson resources from *Global Ideas* which include some great ideas, educator materials and information.

Water is one of Namibia's most limiting factors to development.



WASTE PREVENTION

The production of waste at schools differs greatly depending on the size, location and culture of the school. Is there a tuck shop and what does it sell? Homemade items, such as fat cakes? Or sweets and chips in plastic wrappers? Our classrooms and the office also produce waste. Does the school use both sides of paper? These all factor in to how large the task is to prevent wastefulness and to improve the waste management system. We can begin by raising awareness about waste, the different types and its impact on the environment.

Teaching about sustainable production and consumption and SDG12 is important to create an understanding of the link between what is produced, what we consume and what we throw away. Also refer to ***Toolkit 3.7*** for more ideas.

RESOURCE CHECK

Use the infographics and lesson plan ideas in the ***Trash Hack Teacher's Guide*** from *UNESCO* to teach about waste.

RESOURCE CHECK

Teach the "7 Rs concept" with the ***Sustainable Waste Management*** comic.

1. Rethink
2. Refuse
3. Reduce
4. Repurpose
5. Reuse
6. Recycle
7. Repair

GREEN NUDGING

Teaching about energy, water and waste is the beginning to having a good understanding of the resources and how we depend on them. But, we can all reflect on our own behaviour and know that we often need to be reminded to do things - such as turn off the light. Sometimes we may not have the time or know where to find the best environmentally-friendly option. We can use friendly reminders in the form of little posters and signs, and learn how to give sustainable options an advantage. These are called **green nudges**.

GREEN NUDGES

Positive and gentle persuasion to encourage sustainable behaviour.

UNEP, 2020

RESOURCE CHECK

The Little Book of Green Nudges gives some great nudge guidance, as well as, examples of this kind of raising of awareness.

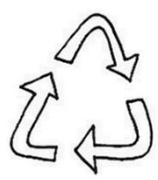
Sometimes we may find it uncomfortable to speak to others about their environmental actions and behaviours, or it may be culturally or socially unacceptable to do so. This is where green nudges can help us, as they focus on being positive and providing options instead of being reprimanding.

RESOURCE CHECK

See the ***Saving Water and You!*** article and the **Saving Electricity in Tourism** (particular to Namibia) which both give great practical advice on how to practice water and energy conservation.

RESOURCE CHECK

See the *Recycle Namibia Forum*'s **Recycling Poster** as an example of signage for kids. Use it to communicate waste management in the classroom.



Raising awareness and improving understanding is *one step* towards motivating a change in our attitudes and behaviours. As educators, we are everyday role models for our learners and the community around us. Through our actions, we are directly and indirectly demonstrating environmental behaviour.

2. AUDITING

Environmental auditing is one of the many environmental management tools we can use. Audits show where and how much of a resource is being used. This data can be evaluated to determine if the resource is being managed well or is being wasted.

Have you done an audit before? Try it out at home too!

ENVIRONMENTAL AUDIT

A systematic, documented, objective review of an organisation's resource use over a set period of time.

We may believe that we are wasting water in the kitchen, but find it is in a different place - such as the outdoor tap. Understanding the actual place where resources are used will help us make an effective management plan.

RESOURCE CHECK

Use the ***Bush Telegraph: Tools for a Sustainable School*** to get an overview about environmental auditing.

A good way for us to become more comfortable with auditing is to conduct our **own personal audit**. This is an enlightening way to find out our individual impact - be it positive or negative. There are many useful tools available to us online that have also been customized to Namibia.

RESOURCE CHECK

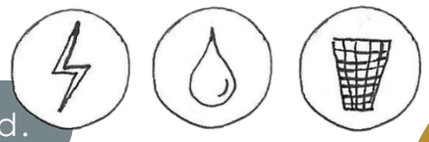
Use the *WESSA Share-Net* auditing worksheets on **How much waste do I produce** and **How much water do I use** to conduct personal impact audits. In response to these findings, also see the chapter on ***Conserving Electricity at Home*** from ***Learning for Sustainable Living***.

RESOURCE CHECK

Use these online consumption calculators and simulators to measure electricity and water consumption: **NEST Simulator** from the *Electricity Control Board*, **Erongo Red Load Simulator** and the **Water Footprint Calculator**. For more check out the **Green Living Tools Online Calculators**.

It costs money to produce, deliver and in some cases remove resources after use. The less you use, the less you pay!

SETTING UP AN AUDIT



STEP 1: Determine **what** will be audited.

We first need to decide on the scope of the audit. We can choose to only audit energy or we may decide to audit energy, water and waste.

An essential part of auditing is collecting information that we can use to **compare** and **evaluate**.

RESOURCE CHECK

Use ***Audit: School, Home and Community Water Use*** for water auditing and Chapter 3, **Using Our Water Wisely**, in ***Caring for our Water.***

RESOURCE CHECK

Use the ***Guideline for Schools to do Self-Energy Audits*** from *Eskom* for electricity auditing.

Involve the institutional workers and ask them for help...

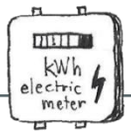
STEP 2: Decide **where** at the school will be audited.

Will we conduct a classroom audit, certain buildings or the entire school?

STEP 3: Determine the **time intervals** when data will be collected.

For example, in a daily water audit we will need to read the water meter at the same time every day.

STEP 4: Identify the school's **water** and **energy meters**.



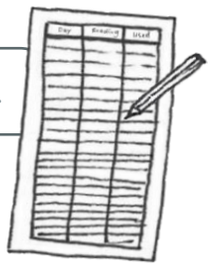
What to do if you do not have meters or access to a meter? We can use many of the audit manuals to guide us in how to measure resource consumption without a meter. For example, we can calculate how much energy is used by lights in a classroom with the following information:

Type of lightbulb ..... (LED/ Incandescent / CFL) :

(# of lightbulbs ..... x Watts ..... x Running time .....) / 1000 = kWh

STEP 5: Design or adapt a **data collection sheet**.

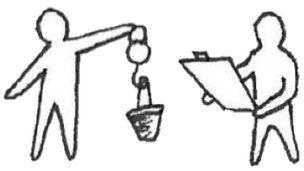
Make sure that you are able to measure what the data collection sheet asks and vice versa.



RESOURCE CHECK

Use the ***Global Change Green Audit Toolkit*** booklet, guide and sheets to help get started in setting up an audit.

STEP 6: Decide **who is responsible** for collecting the data and **how** this will be done as planned.

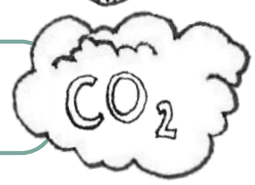


INVESTIGATING FURTHER

An audit gives us a 'snapshot' of our resource use for the time period that was examined. It allows us to focus on areas that need the most improvement. We can then use this information to look at the bigger picture. For example, we can use our collected data to measure our carbon footprint in order to act against climate change.

RESOURCE CHECK

Use *WESSA's* ***My Carbon Footprint*** to see the link between resource management and the reduction of our carbon footprint.



"Everything you throw away was made somewhere in a factory. This process of making the item released CO_2 emissions."

WESSA, 2016

*kg CO_2 produced per 1 kg of waste

REPORTING & SETTING UP A RESOURCE MANAGEMENT PLAN

An important part of auditing is giving feedback to everyone who has been involved in the audit; learners, teachers and other school stakeholders. A good way to do this is using graphs to show the usage over time.

RESOURCE CHECK

Use the chapter on **Organising Your Information** from ***Tools of the Trade*** to learn how to make graphs to show the audit data.

This information can be used to set up a management plan to better use the resource and ensure that the results of the audit are acted upon.

An audit can be used as an awareness raising tool!

RESOURCE CHECK

Use **Section 2 - 4**, which covers water, waste and sewerage, and energy management, in the ***Eco Awards Good Practices Handbook*** as a guide for resource management plan ideas.

3. INFRASTRUCTURE

For our schools to become more sustainable in their resource use, we can address our infrastructure. Ideally, we can build our schools using an ecological design. But, mostly we are working in existing buildings. Here we can act by addressing maintenance issues that may be causing the wasting of resources, as well as, opportunities for improving our efficiency to become less dependent on fossil-fuel energy.

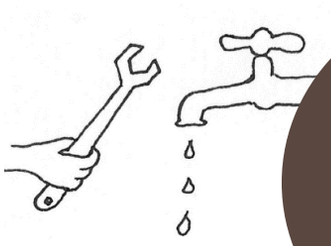
Take a look around! Where can we begin adapting our infrastructure to make it more sustainable? This is one place we can react to the outcome of our environmental audits. Some adaptations can cost almost nothing as they may simply be to improve the location of waste bins, while others may require us to fundraise or source a donor to realise our aims.

RESOURCE CHECK

Be inspired by these videos: **Amazing Kids Private School Going Green**, **Eco sanitation and Water Harvesting at Kakoma Primary** and **Solar Power Installed at Ohangwena Schools**.

MAINTENANCE

From fixing leaking taps to replacing broken windows and doors, a well-maintained school is an important step in saving resources and taking ownership. We can work together with institutional staff and the leadership (refer to ***Toolkit 3.6 – Greening Leadership***) to help realise our goals.



Ensure that your school has a budget for minor repairs to not fall in the trap of waiting for outside assistance

RESOURCE CHECK

See the ***Manual on Maintenance & Minor Repairs on Buildings*** for guidance as to how to make our schools last longer.

ENERGY EFFICIENCY AND RENEWABLE ENERGY SYSTEMS

ENERGY EFFICIENCY

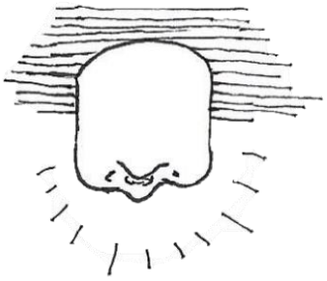
Using less energy to perform the same task

Our school buildings often lack **energy efficiency**. Understanding how to improve the energy efficiency of our buildings is a first step in long-term improvements. We can look at different areas including lights and equipment, as well as, the designs of our buildings. Although we may not be able to alter the building, we may be able to re-orientate furniture or allocation of classrooms to reduce energy needed (i.e. lights during the day).

RESOURCE CHECK

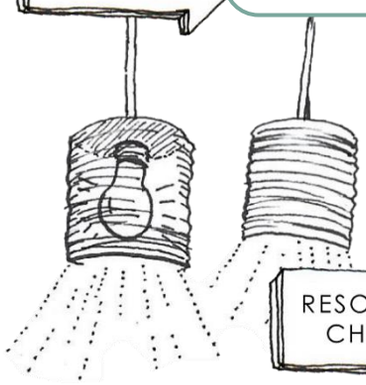
Refer to the energy calculators from the previous section for information about lightbulbs and equipment and look at ***Energy Efficiency in Building*** to get ideas to reduce energy wasting in buildings.

Some of our schools are fortunate to have their own solar systems for electricity. Even if we are not so fortunate, we can also use solar energy through self-made bottle skylights and solar cooking.



RESOURCE CHECK

Look through ***It's Time to be Efficient*** for different low-cost ideas and building plans for sustainable infrastructure.

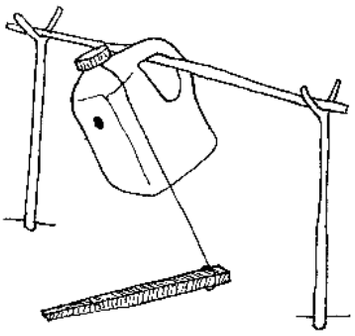


We often use lighting to combat crime and improve safety for our community. However, this can lead to light pollution if the lights are not installed correctly. It is also energy wasting. Correctly installing outdoor lighting can still serve the purpose, but also protect the environment.

RESOURCE CHECK

Read the ***Bush Telegraph: Light Pollution*** to get ideas to reduce energy wasting.

SUSTAINABLE WATER AND SANITATION SYSTEMS



Well-maintained water and sanitation systems are important for ensuring the health and well-being of the learners and teachers, as well as, the environment. Many schools have constructed **tippy-taps** as a response to COVID-19 and developed hygiene plans. It is important to provide proper facilities for the general well-being of our learners and the whole school community. Refer to ***Toolkit 3.2 – Promote Learner Well-being***.

RESOURCE CHECK

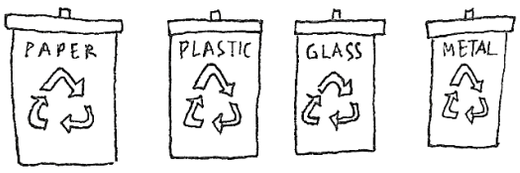
Refer to **How to Make a Tippy Tap, Grey Water Filter, Otji-Toilet Self Builder Manual** and ***Bush Telegraph: Sanitation for a Healthy Environment*** for guide on improving water and sanitation infrastructure.

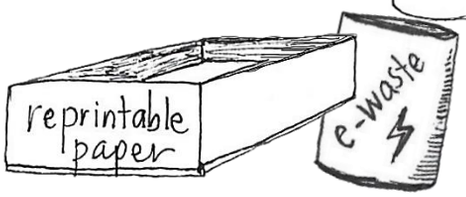
WASTE MANAGEMENT SYSTEMS

Many of us already conduct litter clean ups; however, we can do more by improving our waste collection and management systems at school. Make sure to have sufficient bins to prevent littering. Even if we do not live in an area that has access to recycling centers, we can separate waste to reclaim items that are reusable. See ***Toolkit 3.5*** for crafting ideas and ***Toolkit 3.2*** for composting tips.

RESOURCE CHECK

Use the waste guides in this section and the **RNF Green Directory** to understand waste management, as well as, the *Rent-A-Drum* posters **Types of Recyclables** and **What to Recycle.**





RESOURCES

SOURCE KEY Hardcopy Softcopy Online

1. AWARENESS

Environmental Learning with GCF Videos

VIDEO: These are easy to understand, educational videos on the topics of *Energy*, *Water Management*, and *Waste and Litter Management*. GCF has also produced videos on various other environmental topics such as *Ecosystems; Plants; Wildlife Conservation;* and the *Environment.* They clearly explain and illustrate the concepts and topics covered. The link is to a playlist of all the GCF learning videos done with One Africa TV.
AUTHOR: Giraffe Conservation Fund (2021)
Link: https://www.youtube.com/playlist?list=PL4VFia68Sc57ykrwLSZ_joRbykhY2i6

It's Time to Grow

ACTIVITY BOOK: These activity books, offered in 6 Namibian languages, on *Sun*, *Water* and *Recycling* are activity based educational materials. With illustrations and activities, children can connect to topics.
AUTHOR: V. Keding, NaDEET (2019)
Link: https://nadeet.org/its-time-toseries

Think Namibia: Energy Resources

VIDEO and BOOKLET: These resources on *Conserving Energy* and *Renewable Energy* share on Namibia's sustainable energy systems and energy saving considerations respectively, aiming to educate on the topics.
AUTHOR: R. Munyayi, G. Mukumbira, Desert Research Foundation of Namibia (2015)
Link: https://www.thinknamibia.org.na/images/projects/enviro/Climate_Change_Factsheet_09.pdf
Link: https://www.thinknamibia.org.na/images/projects/enviro/Climate_Change_Factsheet_10.pdf
Link: https://www.thinknamibia.org.na/publications/videos?video-conserving-energy

Energy Challenge Badge

BOOKLET: With the focus on energy, this booklet, is part of YUNGA's Challenge Badge series of educational material purposed to inform and engage youth in climate change. It contains both information and activities.
AUTHOR: Food and Agriculture Organisation of the United Nations, YUNGA (2019)
Link: http://www.fao.org/publications/card/en/c/CA4136EN

Think Namibia: Saving Water Resources

VIDEO and BOOKLET: This video and fact sheet on saving water are from a Namibian perspective; shared with a view to educate on the importance of water saving, and how best to do so in the Namibian context.
AUTHOR: G. Mukumbira, Desert Research Foundation of Namibia (2015)
Link: https://www.thinknamibia.org.na/images/projects/enviro/Climate_Change_Factsheet_03.pdf
Link: https://www.thinknamibia.org.na/publications/videos?video-practical-options-for-conserving-water-at-home

RESOURCES

SOURCE KEY Hardcopy Softcopy Online

Caring for Our Water

ACTIVITY BOOK: This workbook for upper primary school teachers and learners. It shows how Namibian's use water and how it can be used more wisely, including practical tips and a worksheet for water auditing (see the chapter on *Using our Water Wisely*).
AUTHOR: The Wetlands Working Group of Namibia (2007)

Blue Gold – Our Drinking Water and Climate Change

MANUAL and ACTIVITY BOOK: This learning material on water includes a teacher's handbook, background reading and guidance on the material, a student workbook and quiz cards as part of the activity material.
AUTHOR: M. Kasper-Claridge. Global Ideas (2020)
Link: https://www.dw.com/en/learningpack-drinkingwater/a-54088816

Trash Hack: Action Learning for Sustainable Development

MANUAL: This guide provides information, activities and guidance on "trash" awareness and management in schools and associated communities. It illustrates the link between engaging with the trash issue and ESD.
AUTHOR: UNESCO (2021)
Link: https://unesdoc.unesco.org/ark:/48223/pf0000375408

Sustainable Waste Management – The Seven R Concept

COMIC: This Namibian comic illustrates the "7 R concept" of sustainable waste management. It uses simple pictures and descriptions to educate on the concept, in a way relatable to Namibian learners.
AUTHOR: D. Zambrano, J. Champana (2021)
Link: https://conservationoptimism.org/creating-conservation-awareness-in-young-audiences-with-cartoons/

The Little Book of Green Nudges

BOOK: Created to encourage sustainable practices on a campus, this book gives practical guidance on how to effectively communicate sustainable actions and awareness, and suggests what the actions could be.
AUTHOR: United Nations Education Programme (2020)
Link: https://www.unep.org/resources/publication/little-book-green-nudges

Saving Water and You

ARTICLE: This Namibian article informs on the water scarcity issue, highlighting humans' responsibility to care for the natural resource. It also lists child-friendly ways to conserve water, growing a water-saving mindset.
AUTHOR: Gender Research and Advocacy Project, Legal Assistance Centre (2017)
Link: http://www.lac.org.na/projects/grap/Pdf/water_conservation_kids.pdf

RESOURCES

SOURCE KEY Hardcopy Softcopy Online

Saving Electricity in Tourism

MANUAL: Created in response to increased electricity costs, this document suggests ways of cutting down on electricity usage, including alternatives, across various areas that are relevant to the tourism industry.
AUTHOR: Eco Awards Namibia Alliance (2010)
Link: https://ecoawards-namibia.org/sites/default/files/2017-01/Eco%20Awards%20Energy%20Efficiency%20tips%20for%20Tourism%20in%20Namibia.pdf

RNF Kids Recycling Poster

POSTER: This poster illustrates recycling fundamentals, raising awareness for this form of waste management.
AUTHOR: Recycle Namibia Forum (n.d)
Link: https://rnf.com.na/printable-posters

2. AUDITING

Bush Telegraph: Tools for a Sustainable School

BOOKLET: This issue explores the elements of a sustainable school; what makes a school sustainable, how to achieve this and the relevance of it. It equips learners with activities, suggestions and information.
AUTHOR: NaDEET (2014)
Link: https://nadeet.org/sites/default/files/2014_2_BT_Tools%20for%20Schools.pdf

WESSA Share-Net Audit Worksheets

ACTIVITY SHEET: These auditing sheets for a *Water Audit* and a *Waste Audit* are designed for children to run these audits at home or school. They include "how to" and guidance and information on the calculations.
AUTHOR: WESSA Share-Net (2016)
Link: http://learningthroughnature.co.za/resoursedownloads/audits-pack1-1-7mb-zipped/

Learning for Sustainable Living

CHAPTER: This activity guide on *Conserving Electricity at Home*, includes information on the concept, tips on how to save electricity, and material to be used in activities for learners that includes teacher guidance.
AUTHOR: BirdLife South Africa (2000)

Consumption Calculators and Simulators

WEBSITE: These interactive sites calculate and simulate consumption of energy, water and demands on other resources. Their design allows for the comparison and analysis of appliance demands and consumer habits.
AUTHOR: Electricity Control Board, Erongo Red, GRACE Communications Foundations, Calculators.ORG
Nest Simulator: https://nest.org.na
Erongo Red Load Simulator: https://loadsimulator.erongored.com
Water Footprint Calculator: https://www.watercalculator.org
Green Living Tools Online Calculators: https://www.calculators.org/health/green.php

RESOURCES

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Audit School, Home and Community Water Use

ACTIVITY BOOK: This student workbook (teacher guidance and ideas included) focusses on educating on water audits for the purpose of raising awareness to water saving.
AUTHOR: National Water Conservation Campaign, Share-Net (n.d)

Guideline for Schools to do Self Energy Audits

MANUAL: This booklet educates on electricity usage and the assessment thereof whilst giving guidelines and material for running an energy audit at school. It includes formulas for calculating the cost of used electricity.
AUTHOR: ESKOM (2016)
Link:https://www.eskom.co.za/sites/idm/SchoolYard/Documents/36%202768_Eskom%20Energy%20audit%20guide%20for%20schools%20(a%20guide%20to%20help%20schools%20audit%20their%20energy%20use).pdf

Global Change - Green Audit Toolkit

MANUAL and ACTIVITY SHEET: This toolkit (*Educator's Guide*, *Learner's Booklet*, *Activity Sheets*, and *Audit Sheets*) is created to inform a school green audit. It contains the supporting information, relevance and practical steps and material for conducting a school audit.
AUTHOR: Africa Centre for Climate and Earth Systems Science (2009)
Link: https://ibali.uct.ac.za/s/ccse/item/13428

My Carbon Footprint

MANUAL: This practical lesson plan and activity sheets audits using the concept of "carbon footprint". It explains what it is and then guides through the footprint auditing and related activities.
AUTHOR: WESSA (2016)
Link: https://ibali.uct.ac.za/files/original/8a2952ea1e92970459f100865420124d568e8976.pdf

Tools of the Trade

CHAPTER: This textbook chapter (*Organising your Information)* informs and guides on how to organise data. It explains different methods, when to use them, how to process and present data, and gives visual examples.
AUTHOR: D. du Toit, T. Sguazzin (1995)

Eco Awards Good Practices Handbook

MANUAL: This guidebook for the tourism industry informs management principles, plans and the practical implementation of sustainable tourism. It is informative on good practice guidelines and can be applied to schools as well.
AUTHOR: J. Tarr, P. Tarr, T. Parkhouse (2005)
Link: https://ecoawards-namibia.org/sites/default/files/2017-01/eco%20awards%20Namibia%20Good%20Practice%20Handbook.pdf

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3. INFRASTRUCTURE

Schools Greening Infrastructure Videos

VIDEO: These presentation videos show different examples of schools that are implementing sustainable infrastructure. From solar power, to rainwater harvesting and eco-sanitation, the videos explain the various methods, how the schools have been able to fund the projects, and show the effect of the infrastructure.
AUTHOR: Namibian Broadcasting Corporation (2018), Empower Projects (2019), Think Namibia (2019)
Amazing Kids Private School Going Green: https://www.youtube.com/watch?v=8aHwAMVmdIc
Eco-sanitation and Water Harvesting at Kakoma Primary: https://www.youtube.com/watch?v=phA_wMwhZYA
Solar Power Installed at Ohangwena Schools: https://www.youtube.com/watch?v=p0DQ5cEDJ3w

Manual on Maintenance and Minor Repairs on Buildings – "Schools Lasting Longer"

MANUAL: This how-to styled guide advises how to maintain and repair infrastructure in schools and similar buildings, including establishing and caring for sustainable school infrastructure.
AUTHOR: F. Olsson, O. Diawara, R. Buckland and M. Wilkinson (2007)
Link: https://indd.adobe.com/view/a1b52465-8a56-49a9-9f53-e045f85fa35a

Energy Efficiency in Building – An Introduction

BOOKLET: This educational booklet explains the concept of energy efficiency in buildings and the various elements that improve efficiency. It gives guidance on achieving efficiency and awareness-raising activities.
AUTHOR: N. Maritz (2006)
Link: https://ecoawards-namibia.org/sites/default/files/2017-01/Eco%20Awards%20Energy%20efficiency%20in%20building.pdf

It's Time to be Efficient

BOOKLET: This booklet guides on sustainable house-hold practices in Namibia. It contextualises why this is important, giving understanding to efficiency methods and practices, showing how to be an efficient home.
AUTHOR: V. Keding (2015)
Link: https://nadeet.org/sites/default/files/Its%20Time%20to%20be%20Efficient%20NEW%20Low%20Res.pdf

Bush Telegraph: Light Pollution

BOOKLET: This issue illustrates the negative impact of artificial light through explanations and visuals on the effect of light pollution, information on night sky features, and tips and activities that educate on the issue.
AUTHOR: V. Keding, NaDEET (2011)
Link: https://nadeet.org/sites/default/files/pdf/educational_material/Bush%20Telegraph%20Vol%2010.%20No.%202.pdf

RESOURCES

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How to Make a Tippy Tap

HOW-TO: An instructive guide, this poster includes a materials list and visual aids on making a tippy tap.
AUTHOR: US Department of Health and Human Services Centers for Disease Control and Prevention (n.d)
Link: https://www.cdc.gov/healthywater/pdf/global/posters/11_229310-K_tippy_tap_print.pdf

Grey Water Filter

HOW-TO: This poster shows how to make a water filter out of upcycled materials. Listing materials needed, it illustrates how to prepare them and assemble the filtration system for the purpose producing grey water.
AUTHOR: Living Permaculture Project (2020)
Link: https://livingpermacultureproject.files.wordpress.com/2020/08/grey-water-filter-poster-.pdf

Otji-Toilet Self Builder Manual

HOW-TO: This is the guide for a self-build of the Otji-Toilet, a toilet designed for the Namibian context, with sustainable sanitation practices. It includes photos and explains the installation process.
AUTHOR: Clay House Project (2009)
Link: https://www.susana.org/_resources/documents/default/2-916-otji-toilet-for-self-builders-small1.pdf

Bush Telegraph: Sanitation for a Healthy Environment

BOOKLET: This issue focuses on the environmental and human health impact of sanitation practices. It educates on the problem, it's effect and guides on practicing human and environmentally-friendly sanitation.
AUTHOR: V. Keding, NaDEET (2009)
Link: https://nadeet.org/sites/default/files/BT_Sanitation.pdf

Recycle Namibia Forum: Green Directory

PORTAL: This directory links the user to environmentally-conscious Namibian businesses. A major category is waste management, but the directory also includes green manufactures, shops and services.
AUTHOR: Recycle Namibia Forum
Link: https://rnf.com.na/green-directory

Rent-A-Drum Posters

POSTER: These posters (*Types of Recyclables* and *What to Recycle*) aim to inform on different classes of recyclable materials and in doing so, bring awareness to recycling possibilities instead of rubbish dumping.
AUTHOR: Rent-A-Drum (2020)
Link: https://www.rent-a-drum.com.na/sites/default/files/downloads/Types%20of%20Reyclables_0.pdf
Link: https://www.rent-a-drum.com.na/sites/default/files/downloads/what-to-recycle_0.jpg