

# Become an Enviro Hero

## Saving the Planet is in Your Hands



**environmental affairs**

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



# What is BIODIVERSITY?

Biodiversity is the variety of life on Earth and includes all living organisms, animal species, and groups of people. Naturally there is a big variety of all these things but they all connect with each other and the ENVIRONMENT.



## Everything IS CONNECTED

Our world is very different from one part to the next. We have hot dry deserts and lush green forests. We have deep oceans and high mountains.

Our land has large creatures and tiny insects and yet we all live and connect on the planet. This is what life is all about. The special name for all these different things is called BIODIVERSITY



# Main causes of BIODIVERSITY LOSS?

Not balanced!



Everything is perfectly balanced and that is what makes life on earth possible. When things are NOT balanced, we have a problem and loss of biodiversity.

## HABITAT LOSS AND DESTRUCTION

This is the greatest threat to biodiversity and is directly linked to mankind's destruction of land.

## CHANGES IN ECOSYSTEMS

Animal species or plants need to remain in the same balance to save species. When the environment changes, the animals cease to function normally and the entire ecosystem changes. Mankind is often responsible.

## OVER EXPLOITATION

Over-fishing, over-hunting and destroying forests can lead to the decline of a species.

## POLLUTION

Pollution can cause permanent damage to the land, rivers and oceans. It is a slow process but it is FOR EVER!

## CLIMATE CHANGE

Climate change causes biodiversity loss. Species and populations may be lost forever as there may not be enough time to adjust to the new climate.

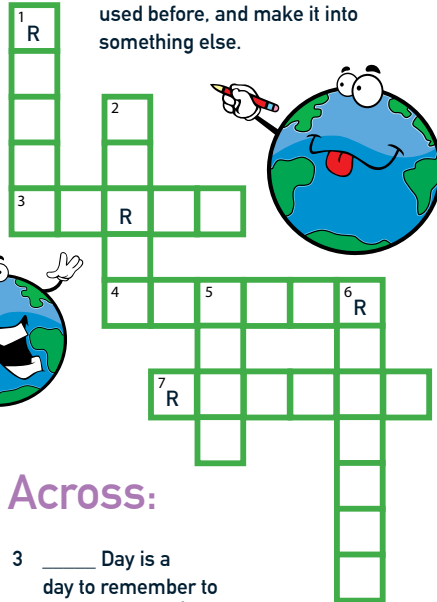


## EARTH DAY

### CROSSWORD

#### Down:

- 1 To use over again.
- 2 The month in which we celebrate Earth Day.
- 5 Plant a \_\_\_ on Earth Day.
- 6 To take material that has been used before, and make it into something else.



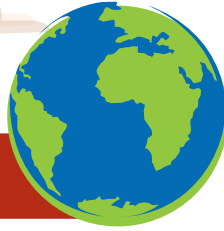
#### Across:

- 3 \_\_\_ Day is a day to remember to protect our earth.
- 4 Rubbish on the ground.
- 7 To use less of.



# What is our RESPONSIBILITY?

Biodiversity helps to keep the environment in a natural balance. For life on earth this is critical



We need to ensure that the earth stays in its natural balance

## THE BENEFITS OF BIODIVERSITY

### BIOLOGICAL RESOURCES

If there are enough resources, humans and all animal and plant species will continue to exist.

We need to make sure there is enough food to feed all the humans and animals on the planet.

**RHINO FACTS:**  
Rhinos are on the critically endangered species list.

The white rhino is grey, not white, and is the biggest rhino and the next biggest land animal to an elephant.

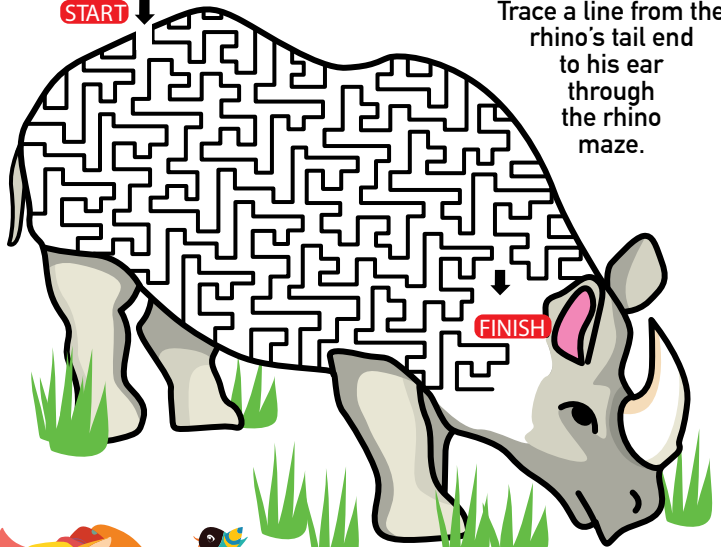
### ECOSYSTEM SERVICES

If we put systems in place that protect our water and protect the planet from pollution, we will all be taking responsibility for the future of the planet.

### SOCIAL BENEFITS

If everyone is educated and taught to be aware that the planet is in danger, we can all work together to ensure that the planet is protected.

START

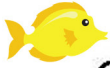


Trace a line from the rhino's tail end to his ear through the rhino maze.



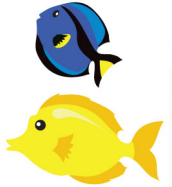
# ANIMAL HABITATS

A habitat is a place that an animal lives. It provides the animal with food, water and shelter. There are many different sorts of habitats around the world from forests to grasslands and from mountain slopes to deserts. Different habitats are home to different animals



Let's see how many you can get!

SEANTARCITRURTOI IY  
OCUPONAPSANDDUNERL  
COAUSEARLMOOYNOSIN  
EPOYALLAARRAADFORE  
DRFLRDRYNI LSRR CRAA  
YALLEYSADYHUMATAPE  
TIDALPOOLMOUNTAINS  
DRJODDCORALREEFNSE  
AIUA EPEOASISNOOFEA  
NENSSOASRISLACAOAF  
TDGSE DALCEHUMEARFL  
AELDPIITTAOLAKEELO  
RDESETRIVEREPRSOO  
CPICEIDOCEANPOLTHR  
JOTOANTARCTICUETUP  
UNUSANDDUOAGRASSMO  
NDHUMFORESTSEAFDIP  
YALLRETIDALPTIDADI



ANTARCTIC  
ARCTIC  
CORAL REEF  
DESERT  
DRY  
FOREST

GRASS  
HUMID  
ISLAND  
JUNGLE  
LAKE  
MOUNTAIN

OASIS  
OCEAN  
POND  
PRAIRIE  
RAIN FOREST  
RIVER

SAND DUNE  
SEA  
SEAFLOOR  
TIDAL POOL  
TUNDRA  
VALLEY



# ENVIRONMENTAL CALENDAR

## JANUARY:

1 New Year's Day

With five eco-factories nationally, the Department of Environmental Affairs is working hard to improve the quality of education in schools by providing much-needed desks for the poorer communities of South Africa. The eco-desks are made from wood of invasive alien plants, cleared as part of the Expanded Public Works Programme and Working for Water programme.



## FEBRUARY:

2 Wetlands Day

Teaching children about the environment is the first step towards building a sustainable future. DEA runs the Working for Wetlands Programme which is implemented through the government's Expanded Public Works Programme methodology. The programme focuses on rehabilitation, maintenance and protection interventions to ensure healthy wetlands.



## MARCH:

History has proven that conservation has to be about the protection and the sustainable use of plants and animals for their survival. Within the ambit of the Biodiversity Economy, South Africa has adopted a path that ensures transformation, economic growth and ecological suitability.

This approach facilitates amongst others, the socio-economic upliftment of rural communities through conservation and meaningful ownership of natural resources.

3 World Wildlife Day  
21 Human Rights Day  
22 World Water Day  
23 Meteorological Day  
30 Good Friday

## APRIL:

2 Family Day  
22 Earth Day  
27 Freedom Day

The SA Agulhas II is South Africa's state-of-the-art polar research and supply vessel. The vessel has provided logistical support to research bases in Antarctica, Marion and Gough Islands including rescue missions. Aboard the ship will usually be the expedition team, as well as a host of researchers and scientists from DEA and tertiary institutions who are conducting research in the ocean and on the island.



## MAY:

1 Workers' Day  
12 World Migratory Bird Day  
22 International Biodiversity Day



Nature-based tourism, or rather ecotourism is recognised as a driver and critical component to the sustainability and efficacy of conservation management. The "I Do Tourism" campaign launched by South African Tourism is moving South Africa forward to make Biodiversity and Sustainable Tourism a reality.

## JUNE:

5 World Environment Day  
8 World Oceans Day  
16 Youth Day  
17 World Day to Combat Desertification

South Africa celebrates Environment Month in June. World Environment Day is the biggest, most globally celebrated day for positive environmental action. Youth Month is also celebrated in June with a specific focus on 16 June which is known as Youth Day. The department is focusing on empowering the youth through environmental careers, internships, bursaries and employment opportunities in the green economy.



# 2018



## JULY:

18 Nelson Mandela Day  
31 World Ranger Day

On 31 March, South Africa pays tribute to game rangers who dedicate their lives to the protection of South Africa's rich biodiversity. Rangers in certain parts of South Africa face daily hardships in their efforts to protect many of our species, such as the elephant, rhino, cycad and abalone, from unscrupulous poachers.



## SEPTEMBER:

South Africa brought the rhino back from the brink of extinction in the 1960's and today has an estimated 20 000 black and white rhino. The international trade in rhino horn remains prohibited in terms of the Convention on the International Trade in Endangered Species of Wild Fauna and Flora.

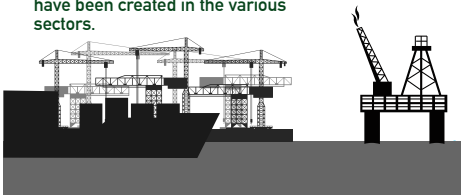
1 National Labour Day  
16 World Ozone Day  
19 International Coastal Clean-up Day  
22 World Rhino Day  
24 Heritage Day



## NOVEMBER:

Operation Phakisa: Oceans Economy commenced with operational work in October 2014. Overall progress to date includes the unlocking of investments amounting to approximately R17 billion in the Oceans Economy. Over 4 903 jobs have been created in the various sectors.

3 National Disability Rights Awareness Day  
21 World Fisheries Day



## AUGUST:

9 National Women's Day

National Women's Day is an annual public holiday celebrated on 09 August. The month of August is now dedicated to women and is marked by several government and nongovernment events. The National Environmental Management Act seeks to recognise the vital role of women and youth in environment management and development.



## OCTOBER:

10-15 National Marine Week

South Africa observes October as Transport Month. With the introduction of the Zero Emission Electric Vehicles, which are also referred to as green cars, the department seeks to ensure that South Africa contributes to the reduction of environmentally harmful gases, by promoting the use of cleaner sources of fuel by the automotive industry.

The department also added four new BMW i3's to its fleet of green cars, making it easier for staff to reduce the carbon footprint.



## DECEMBER

16 Day of Reconciliation  
17 Public Holiday  
25 Christmas Day  
26 Day of Goodwill

South Africa has over 3000 km of beautiful coastlines and some of the most diverse environments in the world. There are many benefits derived from these coastal environments but because of constant development along our coastal environment, it is of utmost importance to educate communities about the impacts of litter on the marine environment. While on your holiday this December leave only footprints and keep our coasts clean.



# A to Z of sustainable working, living & eating



It takes only a few simple steps to change our behaviour into habits that make good economic and ecological sense. It is said that it takes the mind 21 days to absorb a new behaviour into a habit.

Together with your family, friends and colleagues, try to adopt at least two of the following green economy tips each month, so that you become life-long champions of the green economy:



**Act** now to save the future as well as pence and cents. Simple things like planning your trips in advance to find the shortest route, reduces your driving time and fuel use, should you get lost. When you are shopping with your children, teach them by example that using cloth bags and buying energy saving bulbs today actually saves money and the environment in the long term.



**Bring** a cloth bag to do all your shopping, but not just for groceries. Take a cloth bag on your trips to the mall when you shop for clothes, small electronics or other products. A sturdy, reusable bag will last for years, and only needs to be used five times to have a lower environmental impact than a plastic bag.



**Check** energy requirements before you buy any new appliances for your home or office equipment. A cheap kettle, printer or stove might use a lot more energy than a slightly costlier option, which is more modern and energy efficient. Take the running costs into account when looking at the total cost of ownership. Think about how much heat new equipment could produce too and whether it could increase your air conditioning bills.



**Don't** let the tap run when brushing your teeth. You will save money on your monthly water bill in the long term if you use one cup to gargle or you only open the tap for a few seconds, only when you need to rinse off. Dripping taps drain your pockets! Check the taps and pipes at home and the office for any leaks and drips. Leaking plumbing wastes a precious resource and also costs you money.



**Ensure** that all photocopying and printing in your home, school or office are produced in double-sided format on recycled paper. Question whether you need to produce copies at all. You will save money and trees.







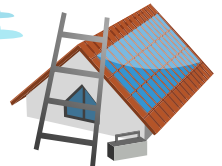
Fair trade is fabulous! Supporting fair trade schemes helps producers get a fair price and even ensures further investment into improving their communities . Look for Fair Trade products which ensure bio-prospectors (communities involved in growing indigenous material for trade or research) aren't exploited.



Grow an organic garden and your own delicious food. The average home only needs a patch of ground about the size of door, to grow a variety of vegetables and herbs to supplement their diet. Give green gifts. Consider giving seeds, vegetable seedlings, memberships to an environmental organisation or adopting animals at a zoo or game as a creative and greener option to traditional gifts.



Hang it out to dry. Traditional clothes driers are energy intensive. If possible, dry your washing on a clothesline outside. If this is not an option, dry your clothes with the spin cycle as it is 20 times less energy cycle as it is 20 times less energy intensive as heat.



Improve the insulation of your home – it will really help your energy consumption...and reduce your monthly bills!



Join a local environmental or conservation group. You can team up with those around you and make a real difference for your community.



Keep your kettle energy efficient. When using a kettle, only boil as much water as you need. It will save electricity and boil water more quickly.



Local is lekker, so consume locally . You will help reduce the demand for cutting down forests in foreign countries to meet export demands. Locally grown food also has a shorter distance to travel from the Field to your local shop, meaning less emissions from its transport and freezing to preserve it.



**Mobilise your networks!** Message your friends on social networks about green living and tips. Your messages on Facebook, Twitter, WhatsApp, YouTube, email signatures and other platforms can reach an ever widening global audience and help spread the news that Green is In! It doesn't matter how, just get the word out!



**Night lights or bright lights?** Consider installing a motion sensing security light at your home, school or business. This kind of light will turn on when there is some movement in the area, rather than illuminating empty premises for hours on end.



**Organise lift clubs to work or school.** Find out which of your colleagues or classmates live around you and organise a lift club. Sharing transport this way can help you save money, cut emissions and get to know your peers in an informal setting.



**Play outside!** Encourage children to switch off the television or computer and play outside. Contact the Department of Environmental Affairs for more information about the Kids in Parks programme



**Quantify how much money you could save each cold winter if you lowered the temperature inside your home by 2 degrees Celsius. It could reduce your energy consumption by 14 percent!**



**Reduce, reuse, recycle.** Reducing your consumption and impact helps take pressure off the world's natural resources. Reuse glass jars of jam, mayonnaise and other products to store odd and ends in your home. Recycle paper, cardboard, wood, glass, cans, tins, and plastic bottles. Compost food waste if you can.

**REDUCE  
REUSE  
RECYCLE**



**Solar energy is hot news.** Mzansi has an abundance of sunshine for most of the year. Turn your own home into a clean power station by fitting solar panels on the roof. This will cut down your monthly spend on power.



Take a hike! Instead of a costly activity this weekend like going to the movies or shopping, why not take a walk, hike or have a picnic with friends at your local park or nature conservancy?



Understand your options. Learn about the small ways you, as an individual, can make a positive impact on the environment. Use rainwater for your indoor plants – they love it, and you'll save water at the same time.



Vehicle maintenance can help go green. Have your vehicle checked and serviced regularly for oil leaks, tyre pressure and excessive exhaust emissions. A modern vehicle operating in peak condition will have less of a negative impact on the environment than a leaky, fuel guzzling and smoke emitting one.



Waste is wealth! Before you throw away bottles, paper, plastic containers and tins, consider recycling them to raise money for your school or making them available to someone less fortunate, who is a waste collector.



X-ray your activities and habits. Spend one week noting down all your daily activities that use up energy and have an impact on the environment. At the end of the week write down solutions for each item that can help to save energy and decrease any negative impacts.



Youth Month is also Environment Month. Create platforms in your community or school for young people to learn and participate in environmental initiatives. If you are a young person lead by example to show your peers that caring for the environment is cool!



Zip around your neighbourhood on your bike, kick-scooter or your own two feet. Get some fresh air by using your own energy to get to your local spaza shop, run errands or to visit friends.

# Grow your own veggies!



## What you need:



two or three 2-litre plastic cooldrink bottles



potting soil



stones



rope

seeds or seedlings



Use plastic bottles to make your own hanging garden, and have lovely fresh homegrown vegetables.

## What you do:



1 Cut the bottoms off the plastic bottles.

2 Turn them upside down and thread the rope through the bottles tying knots to hold them in place.



3 Make sure you leave enough rope at the top to tie onto a tree or fence.

4 First place stones into the necks of the bottles, then fill the bottles with potting soil



5 Carefully tie your garden to a tree or fence.



6 Plant your seeds carefully.



7 Water the top bottle well, and you will see the water trickle down into the other bottles.



8 When planting and watering, follow the instructions on the seed packet.

9 Enjoy your very own homegrown veggies!



# RECYCLE REDUCE RE-USE

Reduce, Reuse, Recycle —  
Three great ways YOU can eliminate waste  
and protect your environment!



## What is Waste?

Waste is anything we throw away or get rid of, that doesn't get used.



## How can you help?

You can help by learning about and practicing the three R's of waste management: Reduce, reuse, and recycle! Practicing all three of these activities every day is not only important for a healthy environment, but it can also be fun too. So let's take a minute right now to learn more about waste and waste management, so you can become a key player in making our world a safe and healthy place.



## Recycle

Your recycling mission is not impossible! In fact, it is very simple: Don't throw away anything that can be recycled!

## Reduce Waste

A key part of waste "reduction" is "conservation"—using natural resources wisely, and using less than usual in order avoid waste.

## Reuse

You can "reuse" materials in their original form instead of throwing them away, or pass those materials on to others who could use them too!

## TRY TO REDUCE THE WASTE YOUR HOUSE OR SCHOOL GENERATES

- ♻️ Buy in bulk, purchase refills and concentrates
- ♻️ Avoid buying products with excessive packaging
- ♻️ Buy products made from recycled materials
- ♻️ Avoid disposable products like paper cups and plastics
- ♻️ Re-use waste by using cans and glass jars to store pens and pencils
- ♻️ Keep used paper to make paper maché
- ♻️ Repair broken items rather than throwing them away

# HOW TO START A SCHOOL RECYCLING PROGRAMME



## HOW TO START A SCHOOL RECYCLING PROGRAMME

Current legislation puts more emphasis on waste avoidance, minimisation, reuse and recycling. Implementing a recycling programme at your school instils the right values and behaviour in children and also presents the school with new learning opportunities. The aim of this booklet is to educate learners and educators about ways to minimise waste and become part of the solution in doing their bit to protect the environment.

## GREEN SCHOOLS

### What is an environmentally green school?

An environmentally green school is a school that upholds the values of good environmental management. Such as:

- Natural resource conservation like water conservation;
- energy conservation;
- reduce, re-use and recycle activities; and
- a safe, clean and green school.

## HOW TO RUN A GREEN SCHOOL

There are 5 basic steps your school needs to take in order to become a green school.

1. Set up a waste management committee for the school;
2. conduct a waste audit;
3. reduce the waste your school produces;
4. reuse materials to prevent them from becoming waste; and
5. set up a waste recycling programme at your school.



## STEP 1: Setting up a waste management committee

You need to make sure that all interested parties (school management, educators, learners, parents) buy into the idea of a “Green School” and are committed to making it work! The following people will constitute a Waste Management Committee:

- ♻️ **The Waste Coordinator. This is the leading waste champion elected from the school’s top management. He or she will:**
  - Take responsibility for the project.
  - Drive the implementation of the project.
  - Raise awareness of the project.
  - Provide training for all involved.
  - Set up regular meetings with the committee.
  - Keep the governing body and management team informed.
- ♻️ **Representative from Top Management. It would be ideal if the school’s principal could be directly involved to ensure that the project receives full support from management.**
- ♻️ **Representatives from Educators. The committee should include at least three educator representatives.**
- ♻️ **Representatives from the Governing Body. The support of the governing body is crucial for the success of the project.**
- ♻️ **Learner Representation. This is vital as learners will assist in generating awareness and support amongst their peers.**
- ♻️ **Representative from the School Cleaning Staff. Although learners, educators and parents can do a great deal to ensure the success of the project, the support and buy-in of cleaning staff is crucial.**

## STEP 2: Conducting a waste audit It is important to determine how much and what types of waste your school is currently throwing away.

The audit will answer the following questions:

- ♻️ **Where does your school produce the most waste? Is it in the classrooms, rugby field or offices**
- ♻️ **What type of waste is produced?**
- ♻️ **How much waste is produced?**





### STEP 3: Reduce the waste your school generates

Here are some tips on how to reduce the waste you generate:

- ♻️ Avoid buying products with excessive packaging;
- ♻️ buy in bulk, purchase refills and concentrates;
- ♻️ try to buy products made from recycled materials; and
- ♻️ try to avoid disposable products such as paper cups

### STEP 4: Reusing the waste your school generates

Waste is not waste until it is wasted! If you identify clever and creative ways in which waste can be reused, you not only save your school money, but you also cut down on the amount of waste sent to landfill. For example:

- ♻️ Discarded paper can be used for making papermaché;
- ♻️ discarded cans can be used in the art class;
- ♻️ glass jars can be used to store pens and pencils; and
- ♻️ repair items that are broken.

### STEP 5: Setting up the school recycling centre

Recycling refers to the separation of recyclable waste from the general waste stream. What are the different aspects of setting up a recycling centre at your school? Let's take a look at the diagram:

This information is re-published in partnership with PlasticsSA and the Recovery Action Group Partners. For more information contact: Douw Steyn Tel: 011 314 4021 Douw.steyn@plasticsSA.co.za



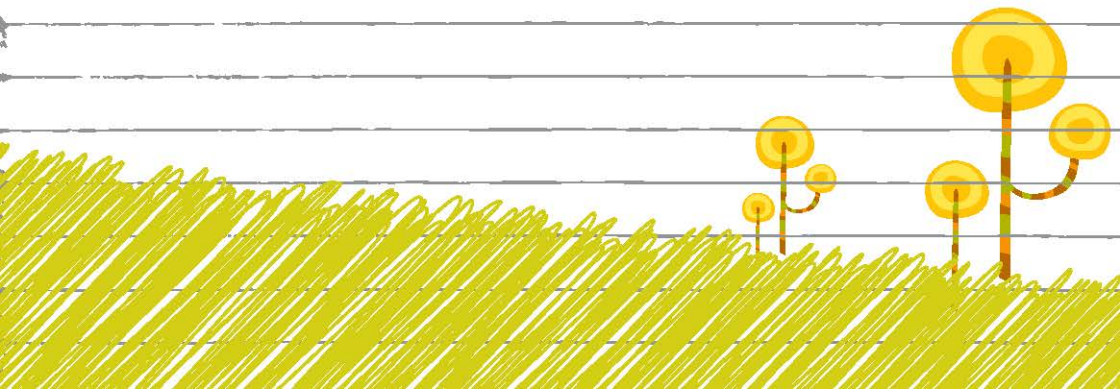
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IS IN YOUR HANDS





# MY NOTES

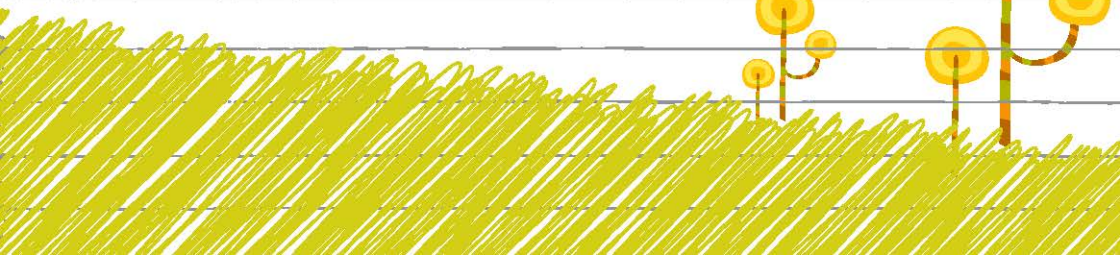




# MY NOTES



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