





## Welcome

Woohoo!
Are you ready to get get energy wise?
Energy is amazing!
This unit is jam packed with ideas and activities
all about energy,
how we use it, how we make it
and how we save it.

So let's start to get energy wise!

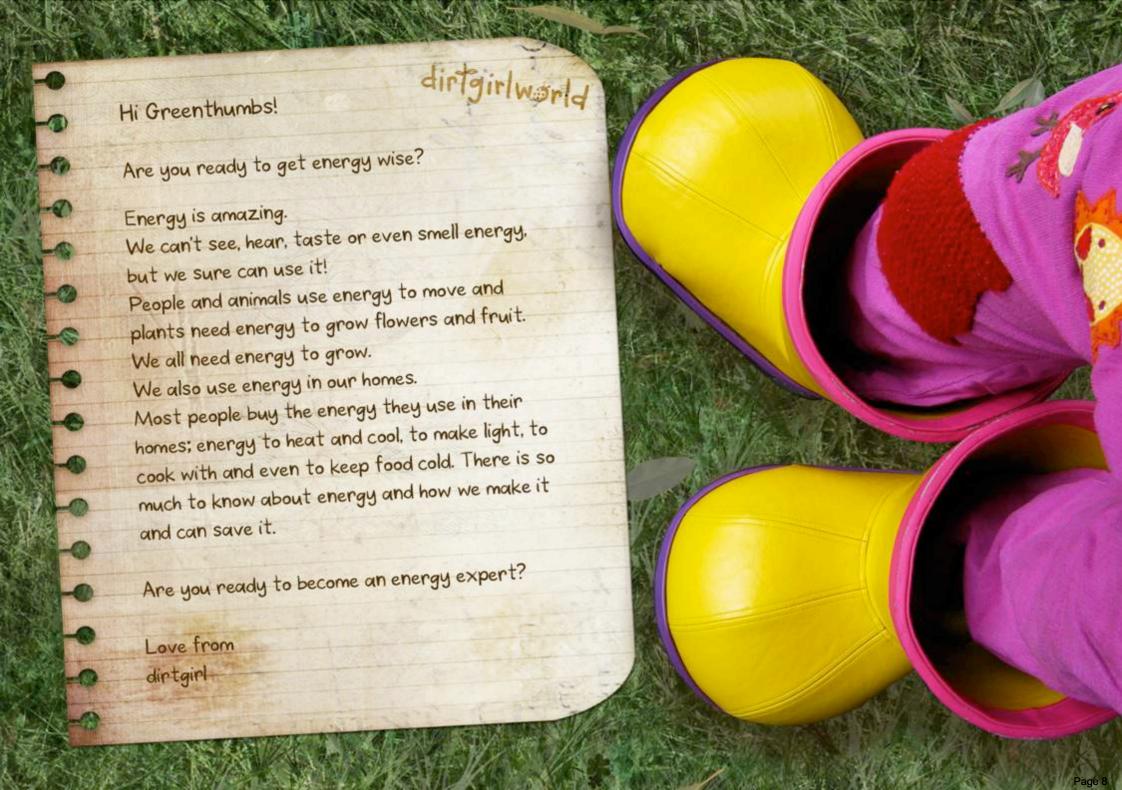




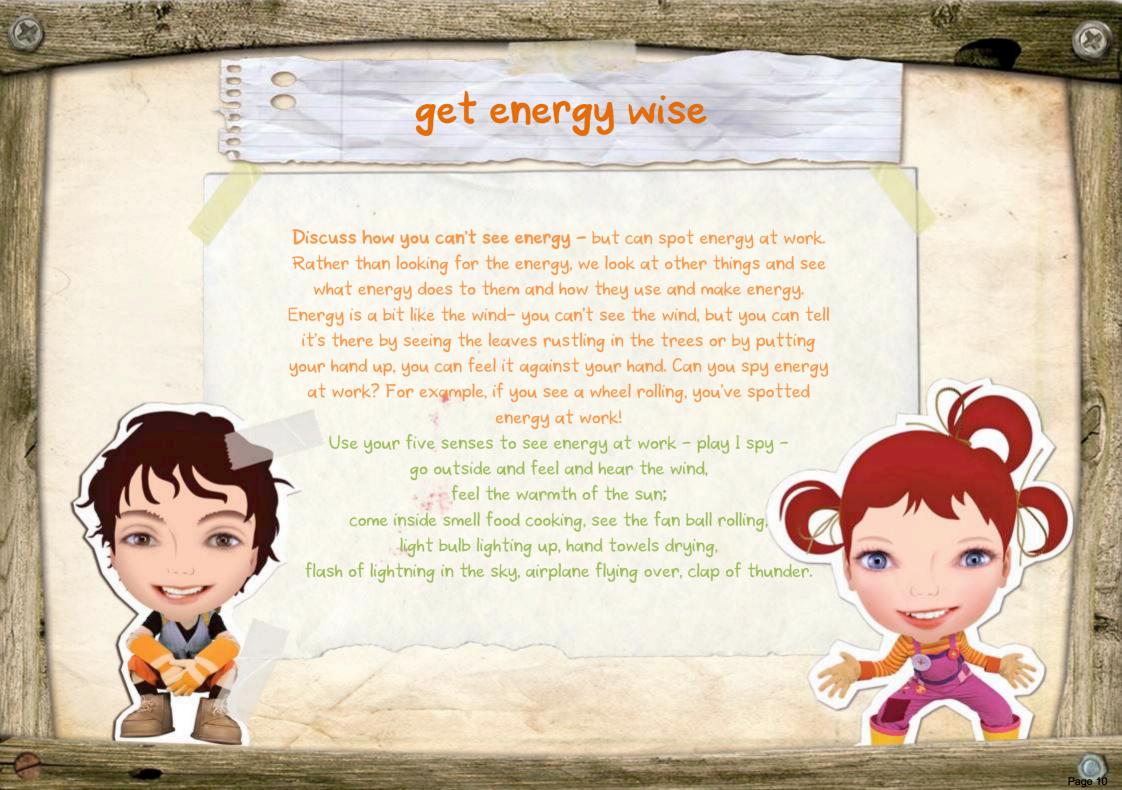












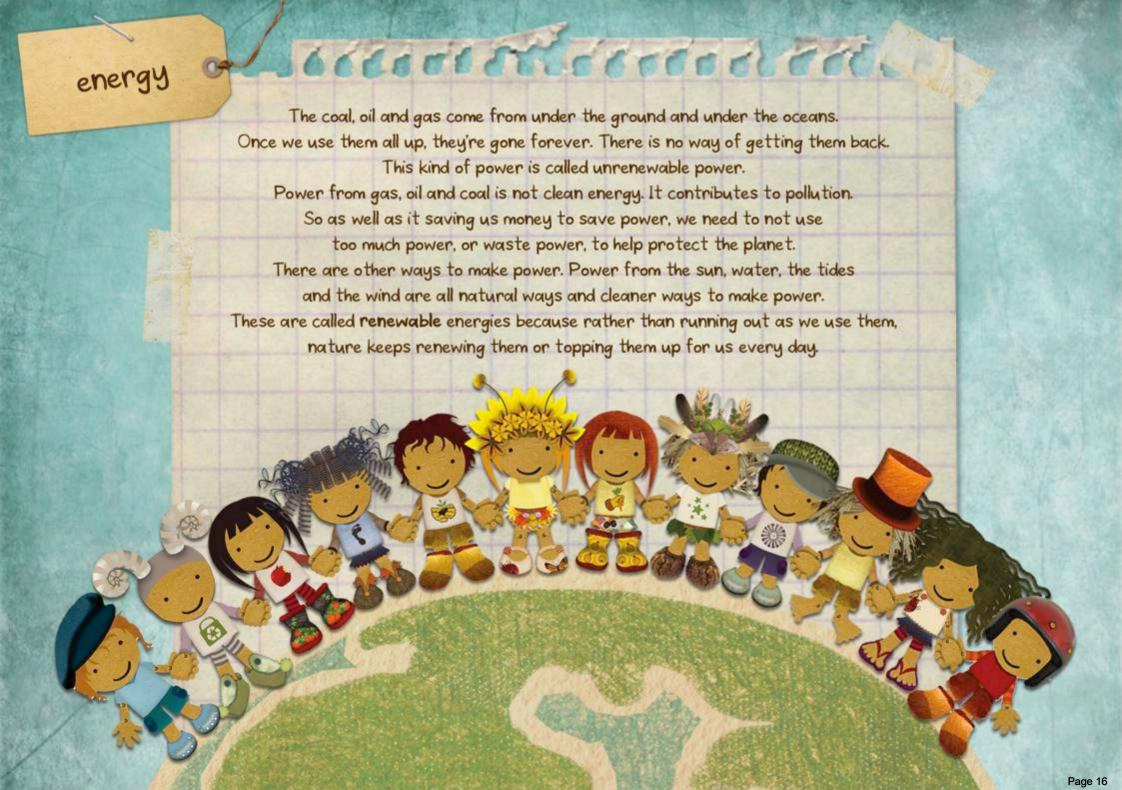


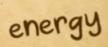














Every time food, water and energy/power reach our homes, it costs the earth something.

Some sources of energy are more 'sustainable' so they cost our earth less,
but some sources of energy are made in ways that hurt our planet for a long time,
so they cost our earth a lot.

We have a lot of people in this world to feed and to supply power to, and it can all add up, and take its toll on our earth.

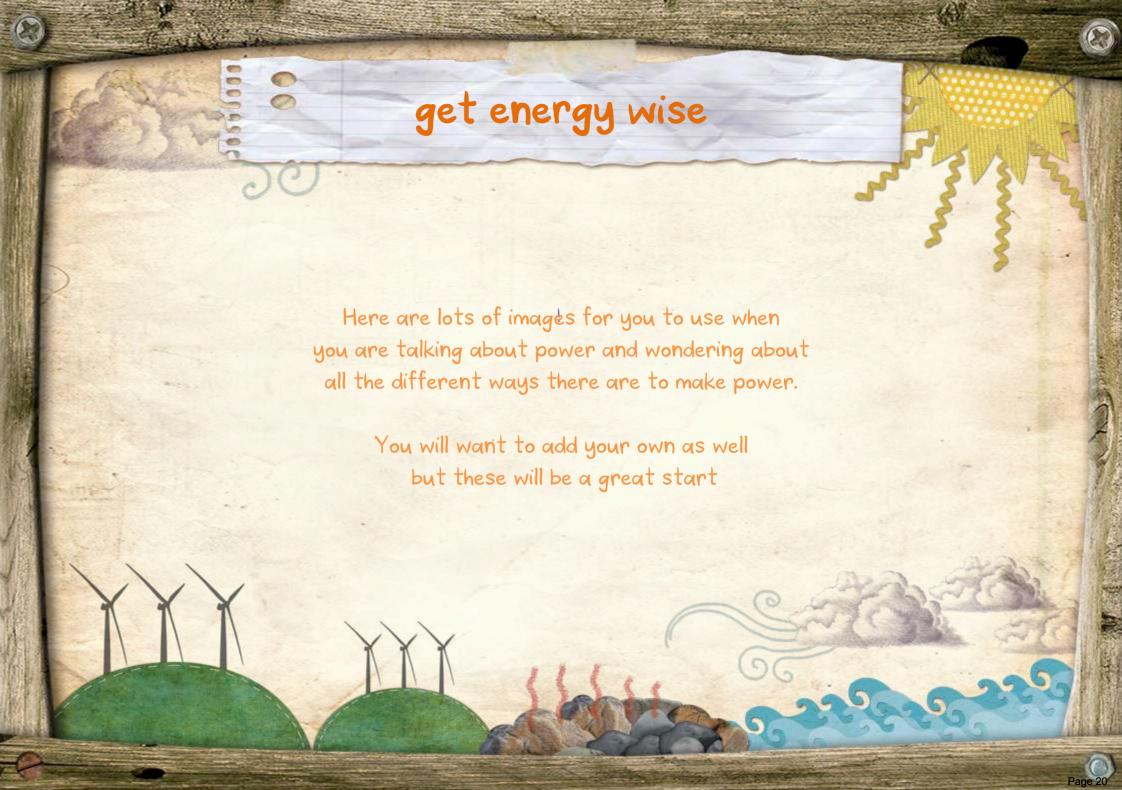
To keep our home -Planet Earth-healthy, it's super important to be smart about energy.

And it's super fun.













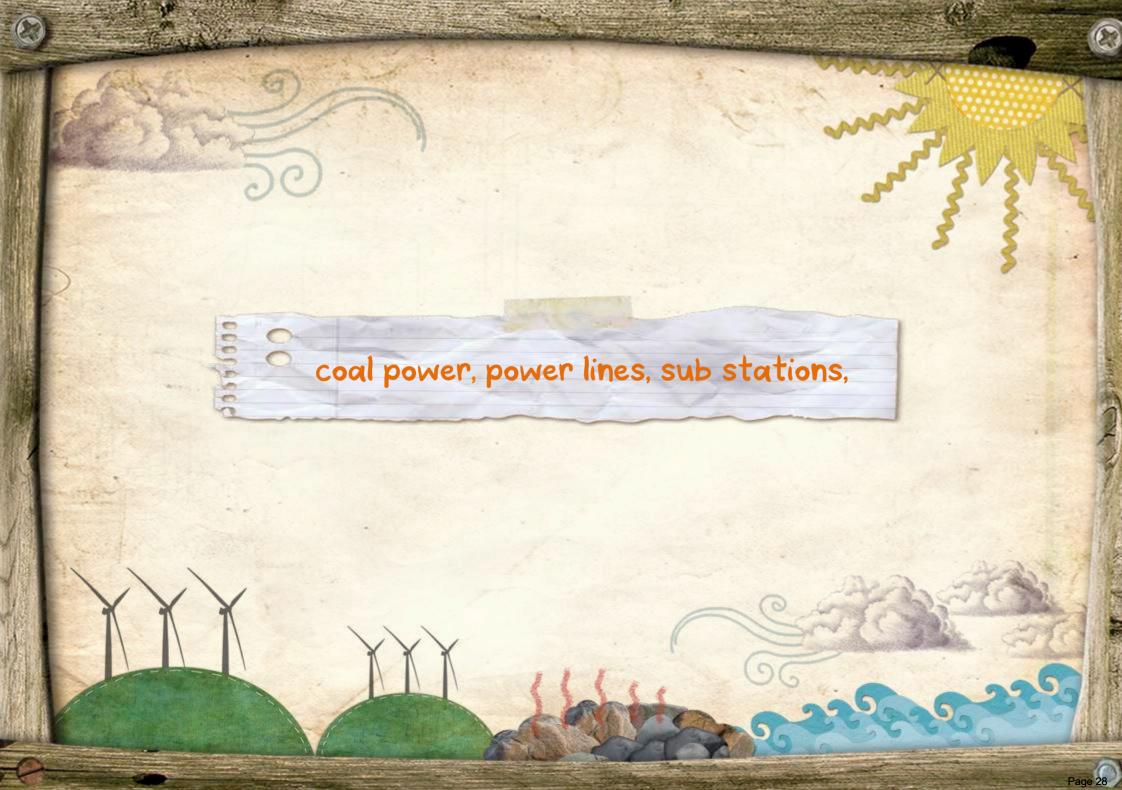






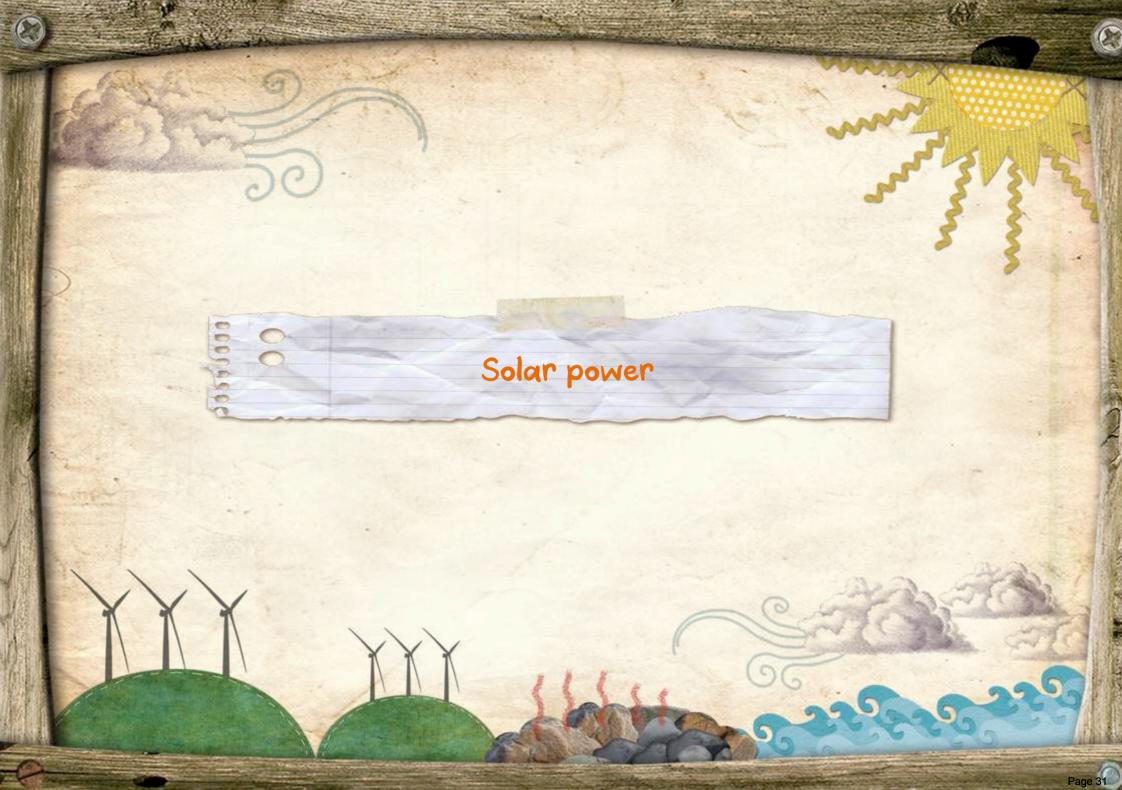






























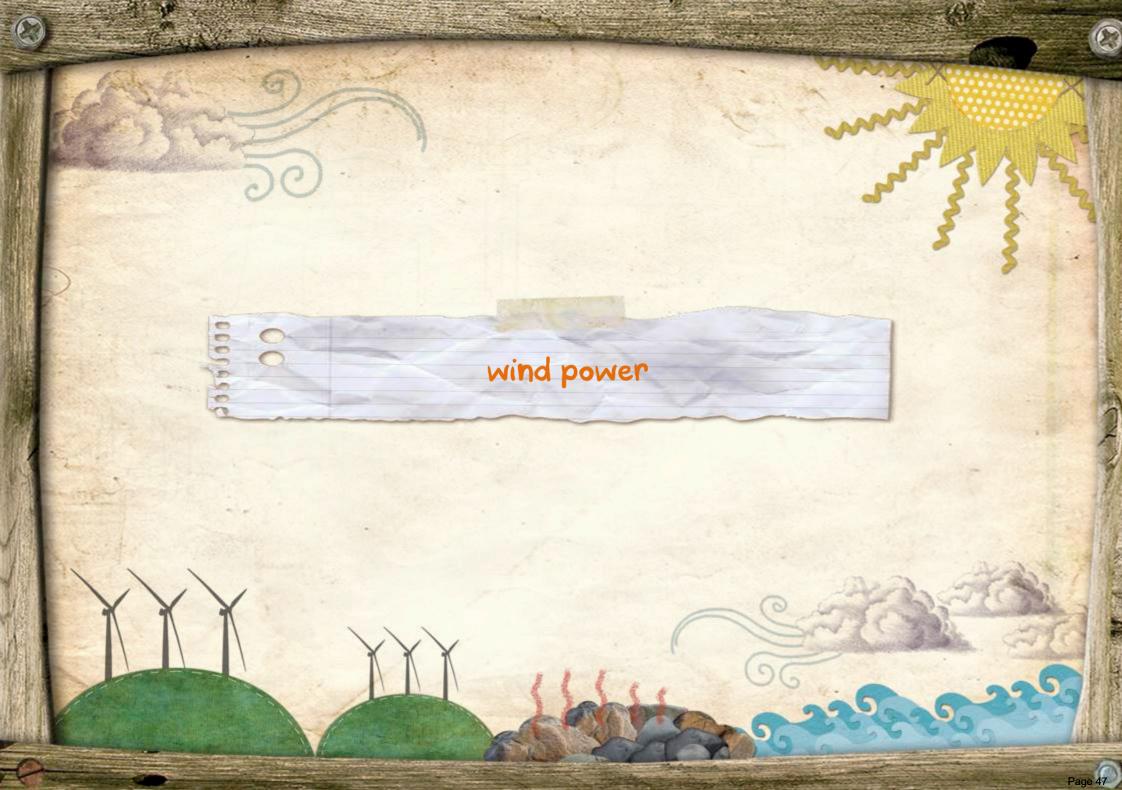








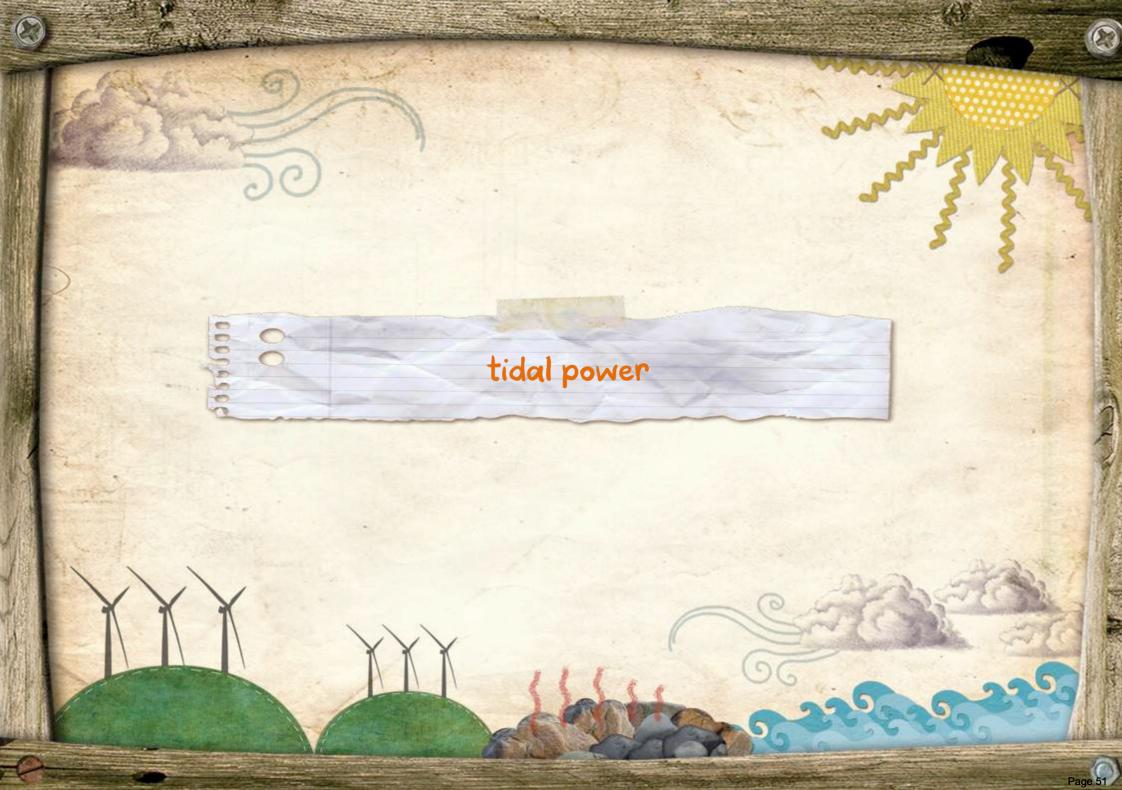




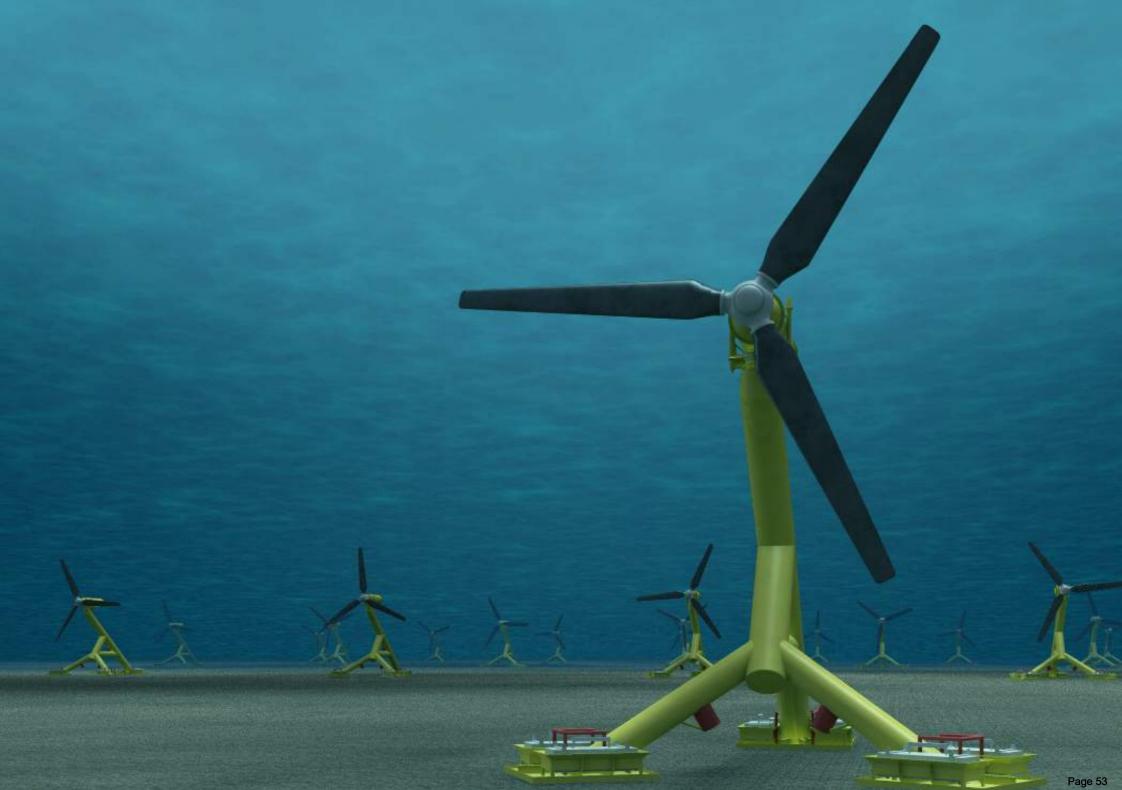












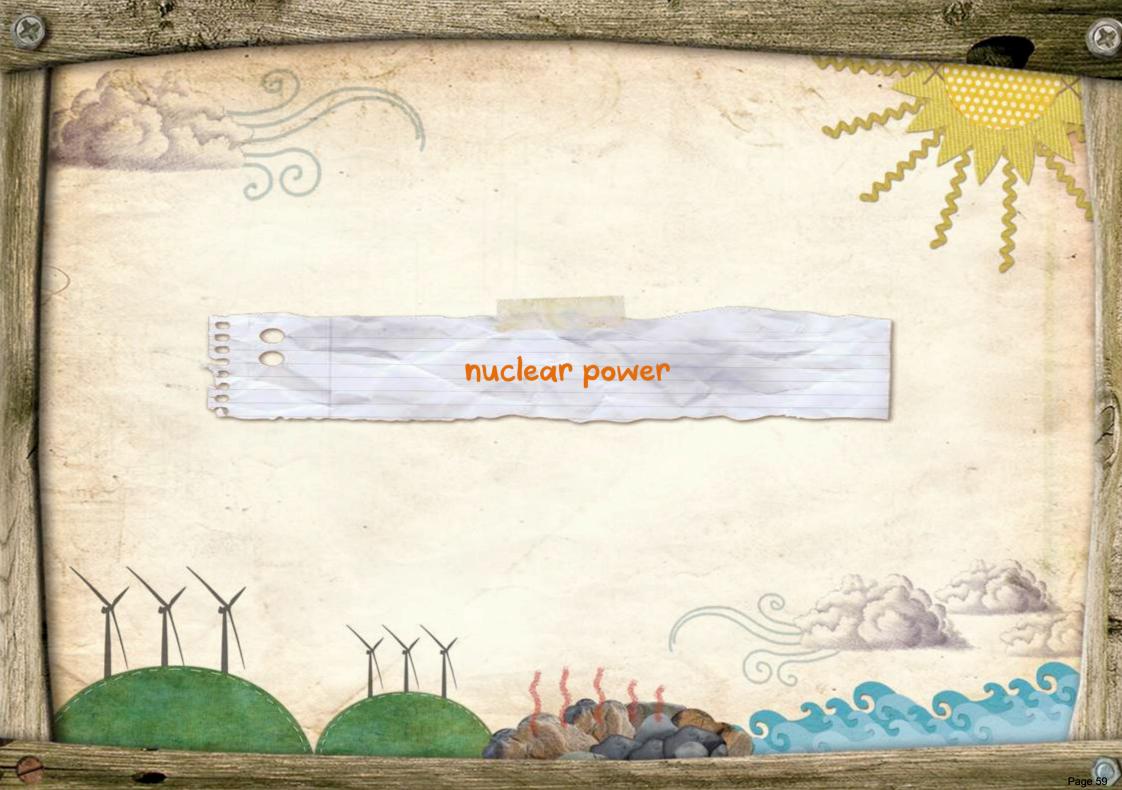




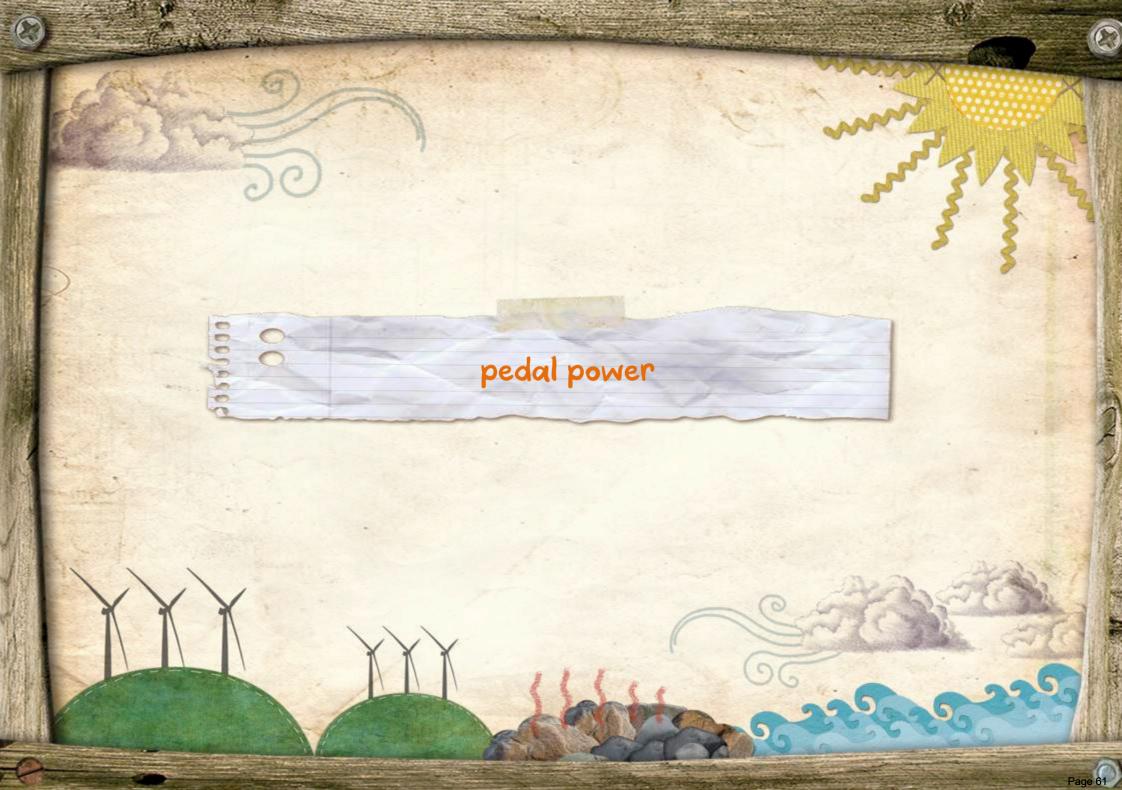






































#### Big Orange Tractor

Driving on my tractor, lots of jobs to do today, go forward - go back, turn left - turn right my tractor, my tractor, my big orange Got both hands on the steering wheel, I'm driving.

Turn left - turn right, tractor, my tractor,

my big orange... turn left - turn right



Driving on my tractor, cutting grass and making hay, go forward - go back, turn left - turn night.

Got both hands on the steering wheel. I'm driving... my tractor, my big orange

Turn left - turn right, tractor, my tractor, my big orange... turn left - turn right

Tractor, my tractor, driving my turn right, TURN RIGHT, ractor, my tractor, my big orange tractor!











You can 'save' something from harm or danger—
to 'save' something can mean to protect it!
When we say we want to 'save' our planet, we
mean we want to protect it from harm!
To 'save' something can also mean to keep it,
store it or put it away for later.

So what can you do in your own home to help 'save' the planet?
You can 'save' natural resources!
A natural resource is a thing that humans need or that they find useful — water is a natural resource.
Soil is a natural resource.
Coal, oil, and even the sun, are resources people use to make energy and power.
A single tree is a natural resource; a whole forest is a natural resource.

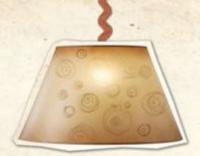




- Turning off the tap to 'save' water!
- Turning of the light to 'save' energy or power!
- Putting a jumper or sweater on, and turning off the heater to 'save' electricity!
- Putting out buckets or containers for when it rains, to catch and 'save' rain water! (You can use them to water your garden!!)
- Rather than using glad wrap/ cling wrap or foil to wrap your sandwiches and lunch, you could put them in containers that can be washed and re-used over and over again!
- You can 'save' old newspapers, wrapping paper or cards for later to use for someone else's presents!
- Rather than buying bottled water, choose a re-usable bottle that you can wash and use over and over again!
- 'Save' water and take shorter showers!
- 'Save' the water from your bath and re-use it to water your garden!



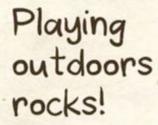
Energy Stick-'em-ups
Cut them out and stick them around the place



I spy something beginning with LIGHT!



CLOSE and SAVE



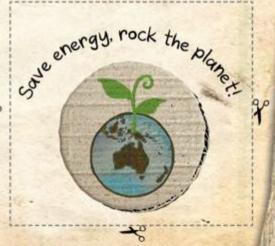


Save power!



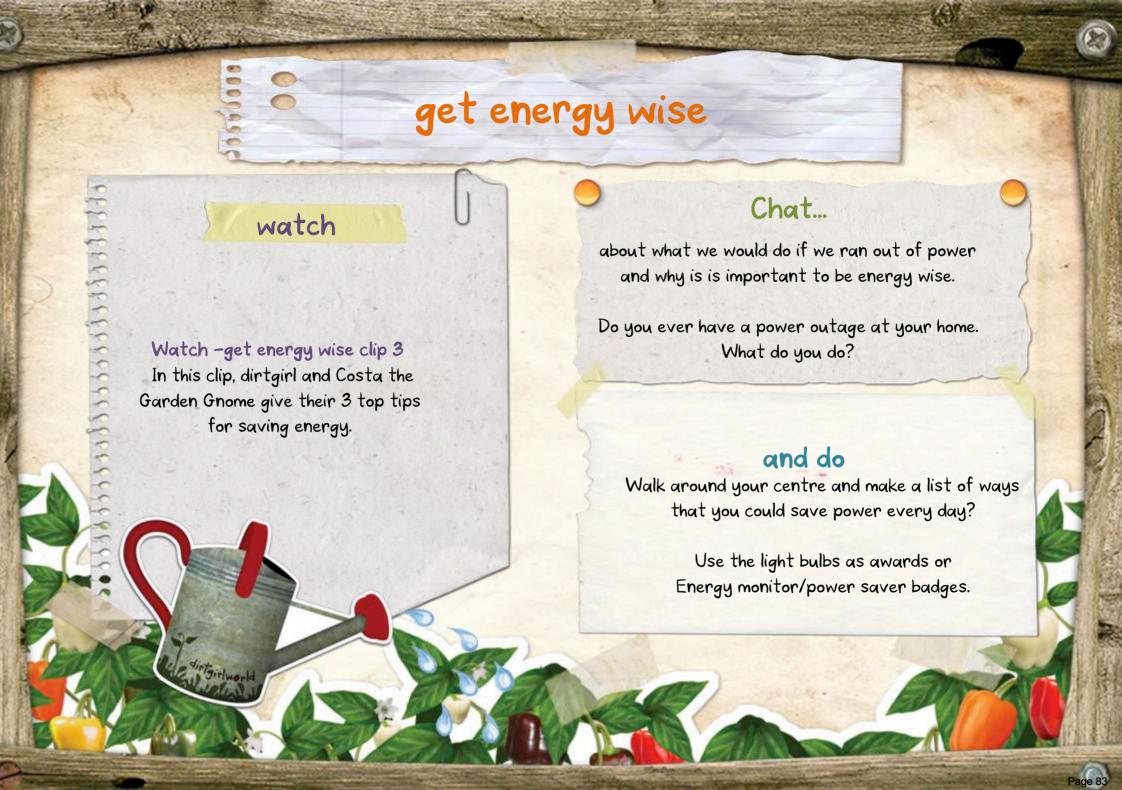


I'm switched on because I switch off!



some activities require big people supervision











## dirtain's for energy savers!

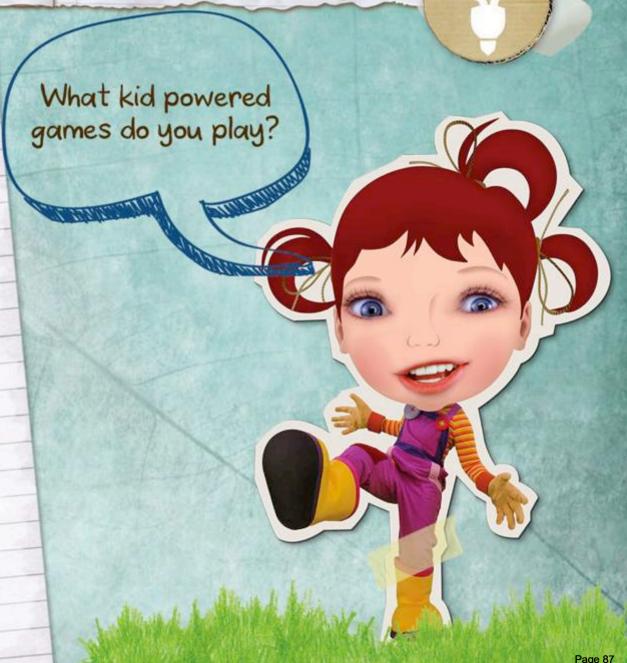


You don't have to be plugged in or powered up to have a great time. There are buckets of games that we can play that don't use any power at allwell, actually, they use kid power! Hehe! Just power up your kid power for at least an hour a day. What's all the buzz about kid powered fun? Usually, we power things at home with 'electricity'. The way electricity is made, before it reaches your house, can be very damaging to our earth. Also, the more electricity we use, the more we pollute the air and contribute to 'global warming'. Kid powered fun rocks our planet for the better!

dirtain's 'top tips' for energy savers!

What kid powered games do you play? Here's some suggestions for battery / electricity-powered games that you can switch for power-free fun!

I could switch computer solitaire for solitaire with real cards! Actually, I could switch lots of online games for board games, (like, Monopoly, Battle Ships or Chess, plus loads more!). Another super fun way to save power is to 'switch' playing indoors for some play time outdoors!



## dirtgirl's 'top tips' for energy savers!





It's called 'I spy with my little eye,
something beginning with... L.
When you spot a light on at your house,
that should be switched of, just say,
"I spy with my little eye something beginning with...
LIGHT!"

What energy do you save by playing this power saver game? Just like with my number 1 'top tip', we cut down on electricity.

Let's recap!

Most electricity in homes

around the world comes from fossil fuels,
like coal, which when burnt for energy, releases nasty
gases and pollution into our earth's atmosphere and
contributes to greenhouse gases and global warming.

# dirtgirl's 'top tips' for energy savers!





My 'top Tip' number 3... is a super easy thing we can all do.

#### Close the fridge door.

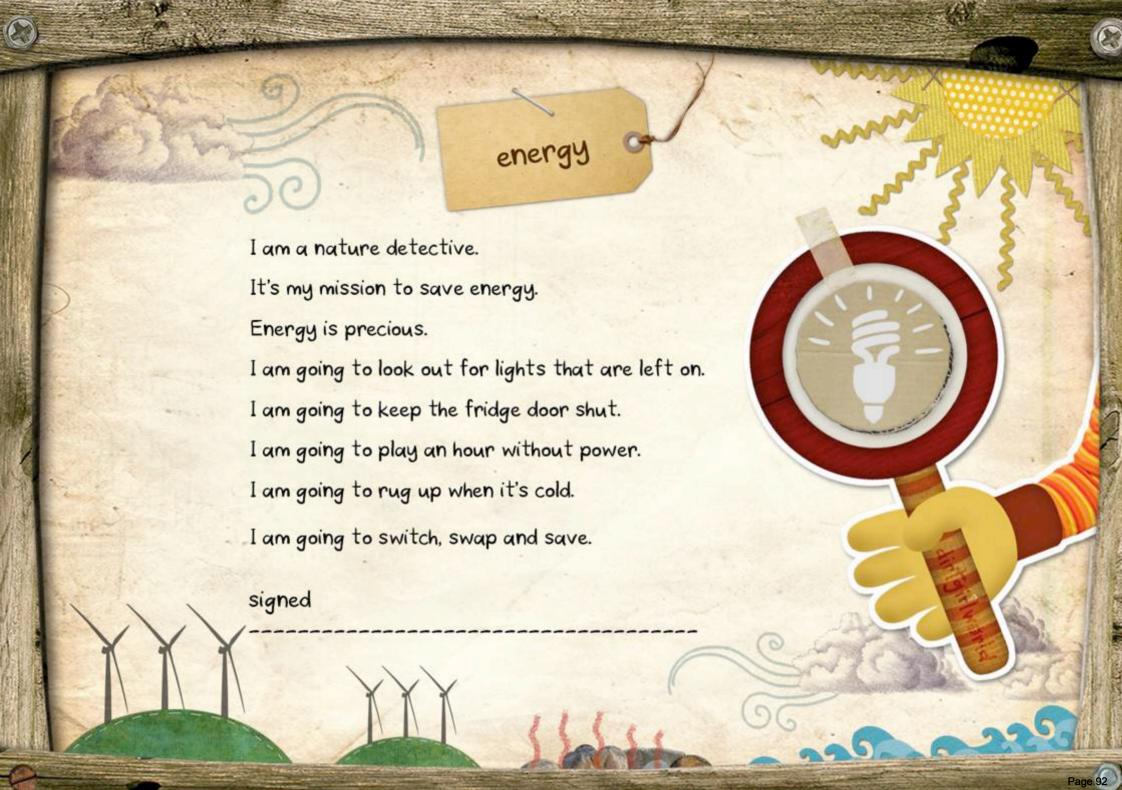
Keeping the fridge door open wastes stacks of energy. Why? Well, you see, the fridge is like a big box, that uses energy-electricity—to keep the inside of the box much colder than the temperature outside of the box. When you leave the door open, you're letting out the cold air that the fridge is using so much energy to keep cool, and you're letting in the warmer air from outide the fridge—this means that the fridge has to work a lot harder to keep the air inside of it cold. This is a waste because if we keep the door closed, it wouldn't need to use so much energy. The more you leave the fridge door open, the harder the fridge has to work and the more energy (electricity) the fridge uses. And remember, the less energy we use, the less we pollute! Got it? You got it! Great work!

So, if creating your own fun saves energy,
And spying a light left on saves energy,
And not leaving the fridge door open saves energy,
Then it's easy.
Little things do make a big difference.

## My actionist score board dirigirlworld Stick little cut-out badges here to celebrate the things I have done to use energy wisely. my actions 1. I closed the fridge door! 2. I turned the light off! 3. I spied energy at work! 4. I played for 1 hour without power!

badges to cut out and stick on my actionist scoreboard colour me in! dirigirlworld

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I switched indoors for outdoors!



Playing outdoors rocks!



switch off & play today!



Ready, set, \*
switch!

Power-free zone!





Good night = lights out!



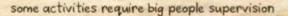


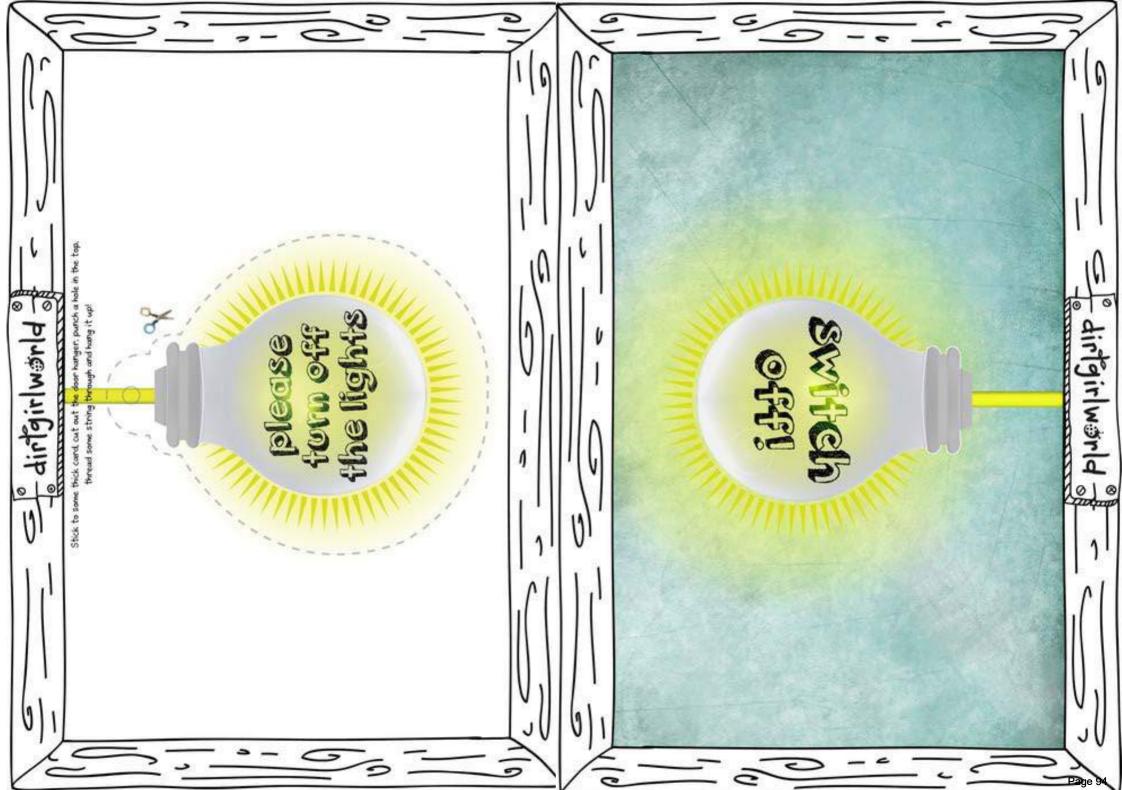
I'm switched-on because I switched off!

Ready, set, switch!

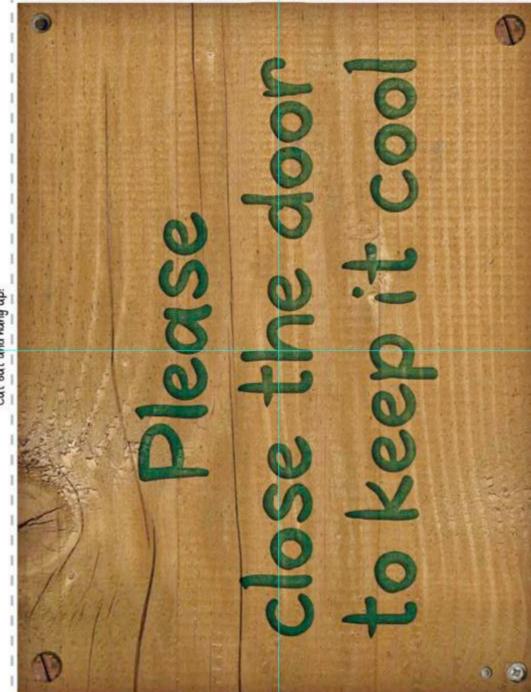


One hour without power!









Imagine it's bed time.

Circle the items that need to be switched off to save power before you go to sleep.



# ewitch



## So what does it mean to 'switch?

I can 'switch' from playing with toys that need batteries, to playing with toys that don't need any power at all.

The less power we use, the healthier our planet is.

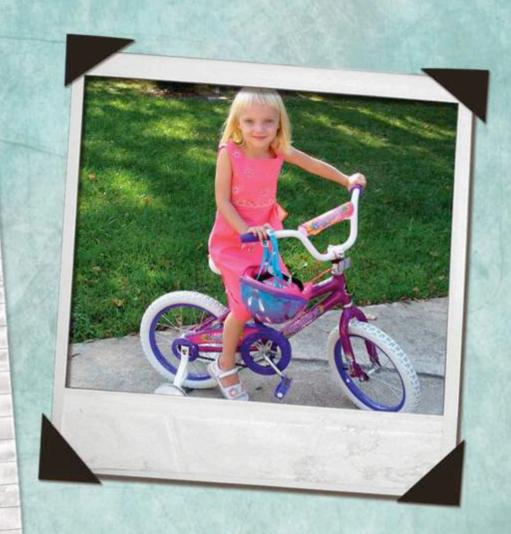
So if we all made this little 'switch',

it would be really great for our planet!

I can also 'switch' from travelling by car (which uses fuel), to travelling by bike - which doesn't require fuel or energy. It only uses 'me' power!

Other words for 'switch' are 'swap' or 'change'.
Switching definitely doesn't mean missing out!
To 'switch' means to change one thing for another.

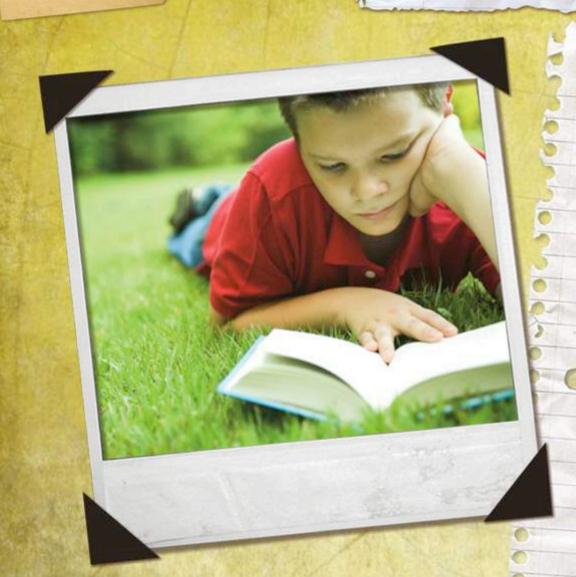
We know that doing little things makes a big difference to our planet.



energy G

### swifch





In this campaign, we'd like to learn what it means to 'switch' the little things that we use or do for more planet friendly things.

'Switch' can also have another meaning:
I can also 'switch' off my light.
I can 'switch' off the television.
So, I can make the 'switch' from doing one thing to another thing, and I can also 'switch' things off.

'Switch' might seem like a tricky word, but in this campaign we have some super fun activities to do that will make understanding the word 'switch' easy-peasy!

Soon, you'll be a 'switched' on expert on what it means 'to switch'!





Usually, we power things at home with 'electricity'.

The way electricity is made, before it reaches your house,

can be very damaging to our earth.

Also, the more electricity we use, the more we pollute the air.

#### So how do we make the switch?

Gaming systems, like DS's, Playstations and computer games, all require batteries and electricity.

Anything plugged into the wall uses electricity. Batteries use power too.

Batteries are one of the most dangerous types of garbage that you can throw out.

They also require electricity to recharge.

'Power-free play' means playing without using any electricity, batteries or power at all!

## swifch



What battery & electricity-powered games can

you switch for power-free games?

I could 'switch' computer solitaire for solitaire with real cards!
Actually, I could switch lots of online games for board games
(like, Monopoly, Battle Ships or chess, plus loads more!).
Another super fun way to save power is to
'switch' playing indoors for some play time outdoors!

## What indoor games can you switch for outdoor games?

Here's some things that I love to play outdoors:
jump rope/skipping rope, hula hooping, trike/bike riding,
hide-and-go seek, flashlight/torch scavenger hunt.
Actually, since we're switching off our battery powered toys, you
could even use a wind-up powered torch!









#### Grubby's energy safety tips

Always ask a big person for help when you need to use something that uses electricity.

Don't yank or pull cords from a wall.

Pulling cords can damage the outlet, the appliance or the plug.

Ask a big person to put safety caps on all unused electrical outlets. This can also help save energy by stopping drafts.

Keep electrical stuff away from water.

Water and electricity don't mix. Most electrical accidents in the home happen when people use electricity near water.

Watch out for power lines. Never touch a power line, especially if there is one that may have fallen down.





Print out a few sets of the card templates, I have left some spaces for you till fill in with some ideas that you have too.

Stick them onto some recycled cardboard - cereal boxes are ideal for this.

Cut out the cards.

Now you have a deck of cards to have some energy wise fun with.

You can play snap

Memory or concentration

Or fish

Or as 'name this', flash cards.

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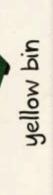








dirigirlworld



red bin



meals on wheels for worms

the bin of last resort

dirtgirlworld

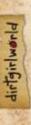
dirtgirlworld

dirtgirlworld

green bin



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skateboard

ferry

shoes

dirtgirlworld

dirtgirlworld



pram



dirigirlworld



train



dirtgirlworld



dirtgirlworld



scooter



dirtgirlworld

bicycle

horse



car



Sng



tran



## Make your own fun fans

If it is a hot day it is very useful
to have a fan handy to make some breeze!
They are very easy to make. You make lovely
ones with recycled present wrapping paper,
or recycled paper that you can paint.



You will need long rectangular pieces of paper about the width of your hand or a bit wider.



First paint or decorate your paper.



Then start folding mountain and valley style, back and forth.



Use a peg to secure the end



Or use some masking tape to secure.

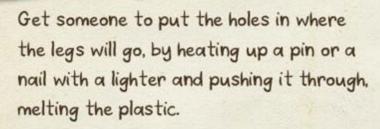




# Fire thy night light with melting to the legs.

This friendly little fire fly is a great alternative to using a night light plugged into electricity.

You will need a container for the body, something round or oval that snaps together. Also, some pipe cleaners, googly eyes, an LED candle, some glue and someone to help you put holes in the plastic.



Cut your pipe cleaners to the right lengths.

Push them into the holes and secure inside by bending over, if you leave more inside it will be stronger. Also if you pull some of the hair off the end of the pipe cleaner you can push it through the hole easier.

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#### Fire tly night light

Then add the antennae.

And glue on some eyes.

With the led candle you might need to take the casing off it so that it fits inside your body, depending on the size of the casing and your body container.

You might also want to glue it in place inside, and make a hole so that you can turn the switch on and off without having to open the body.

Now you have a lovely little firefly night light.











age 112

#### regycled costumes!

Making new things out of old things is fun!
Especially making dress ups, costumes
and accessories. You could have a whole
dress-up day or fashion parade!

Here's how to make a simple newspaper skirt:

Get two sheets of newspaper.

Fold them over long ways.

Place a piece of string that is long enough to go around your waist, (with a bit extra for tying) along the fold of the newspaper.

Use some masking tape to secure it in the fold.

Now you can easily rip the strips of newspaper with the grain up into the waist.

You end up with a fun skirt that moves and swishes.

You can also use this same design but smaller, and wrap it around your head like a feather headdress, or around your shoulders as a very flamboyant cape! If you paint up your newspaper first it will be even more fun!



## regycled costumes!









Other things you can make are bangles and bracelets from the insides of old sticky tape and masking tape rolls. Then if you have enough of those rolls, try sticking them together to make a tiara.

You can make great paper hats using newspaper and masking tape. Or plastic bag tutu's with sticky tape and plastic bags of different colours. You could even try making a wig or cape out of them!

See what else you can make to wear out of anything that is in the recycling!



## energ O

#### Tie dying continued...

continued over page

To tie dye, take a section of the cloth and bunch it up into a long piece. Using the rubber bands make a band around the bunched section. Make sure you get the rubber bands wrapped as tight as possible. You might need some help. Keep adding as many bunched, banded sections as you want for your design. Try putting around sleeves, or in the middle of t-shirts.





Mix up the dye to whatever the specifications on the packet say.



Usually you need warm water in a saucepan, a metal stirrer (like a potato masher is good), and sometimes cooking salt.



Dip your pieces of clothing into the dye pot, give it a stir...



...and leave it there for as long as it says on the dye packet (maybe around 30 mins)



Squeeze out the water and then take out the rubber bands. You might need someone to cut them off for you.



Pull the material apart, and see your wonderful design! Every piece will be unique!

Tie dying continued...

If you want to try some thing really special on large pieces of clothing, you could dye one end with one colour (you can peg it to the side of the pot so that it doesn't all go in), and then when that's done, dye the other end another colour. Experiment with all types of designs.

Hang them on the line to dry.

Now you have brand new clothes that are colourful and original!



#### wester wheel

Water wheels are used in rivers and streams to create energy.

You can make your own small one with some plastic cups (4-7), two plastic plates, skewers or bamboo chopsticks, two old sewing cotton spindles or something else that is small and round, something to pour water with, sticky tape and a little bit of help.



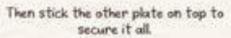
First get someone to help make a hole in the middle of both plates. It is easy for them to heat up a nail and push it through the plastic.

Now sticky tape your cups to the outside edges of one of the plates. The mouths of the cups should face out, and slightly angled.



energy o

#### water wheel confineed...





Now with the two other sticks, secure the sewing spindles to the stick facing across.

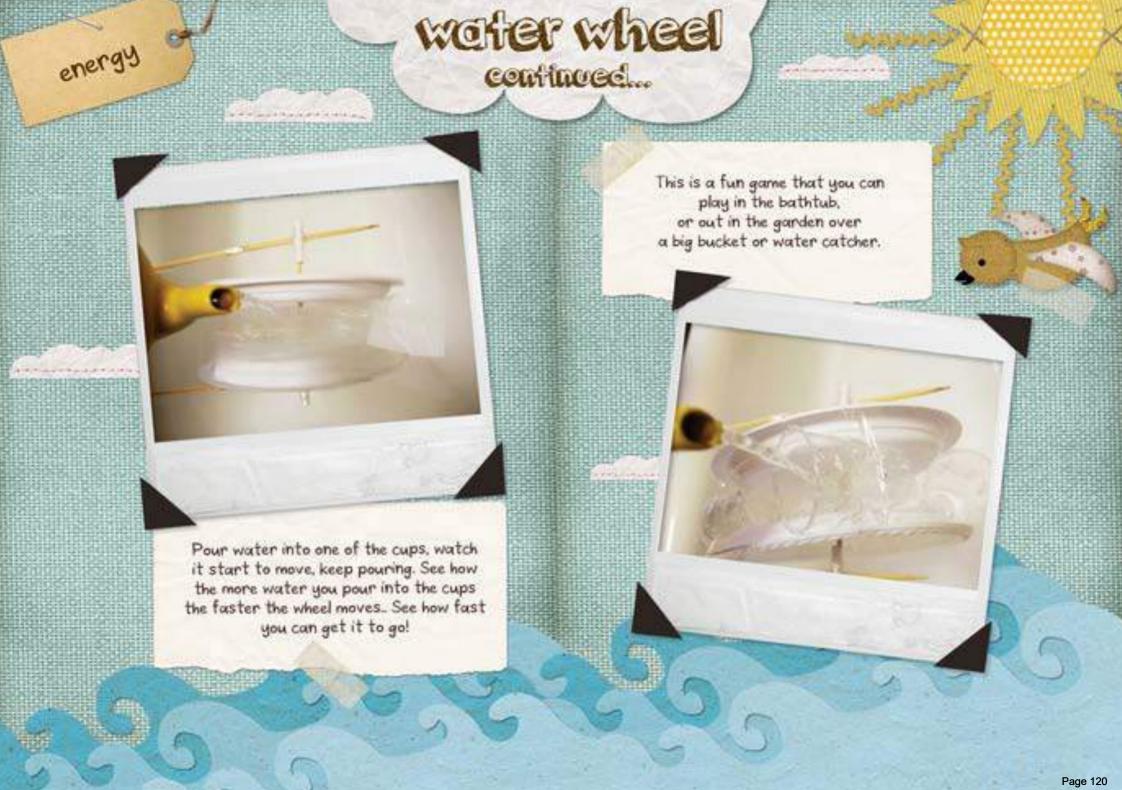


Push the bamboo sticks through the holes in the middle of the plates.



The stick that is through the middle of the plates will fit into these spindles and you can get someone to hold these sticks.



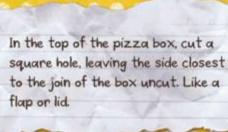


## How to make a

It's easy to make a solar oven to cook things and warm up left overs, all using heat from the sun!



All you need is a pizza box, sticky tape or masking tape, plastic wrap, tin foil and some chopsticks or a rular, or piece of stick







Cover the inner 'lid' section with tin foil bringing the foil around the sides and taping to the other side.





Then cover the hole section with plastic wrap, taping it to the edges of the pizza box on both sides so it is well sealed

continued



### Who's that on my wall?

Step 1: Turn the lights off.

Step 2: Ask a big person to light a candle for you or use a wind-up torch/flashlight to light up your wall.

Step 3: Use your hands' shadows on the wall to tell a story. Let the entertainment begin! Who needs a TV when you have your bedroom wall and your imagination?!

Tip: Switch indoors for outdoors! You could also use an outside wall and use the moonlight to light up shadow puppet stage!







Thankyou to Rachele for these lovely images from her awesome blog! http://messypreschoolers.blogspot.com.au/

#### Grubby's sundried tomotoes



For this yummy recipe you will need tomatoes - Roma and "paste" types will give you the best results salt a drying rack baking paper cheesecloth or muslin or tulle

Try to make them all the same size so they dry evenly.

Now face them cut side up on the baking paper, on a metal rack. Sprinkle a little salt on the top of them.

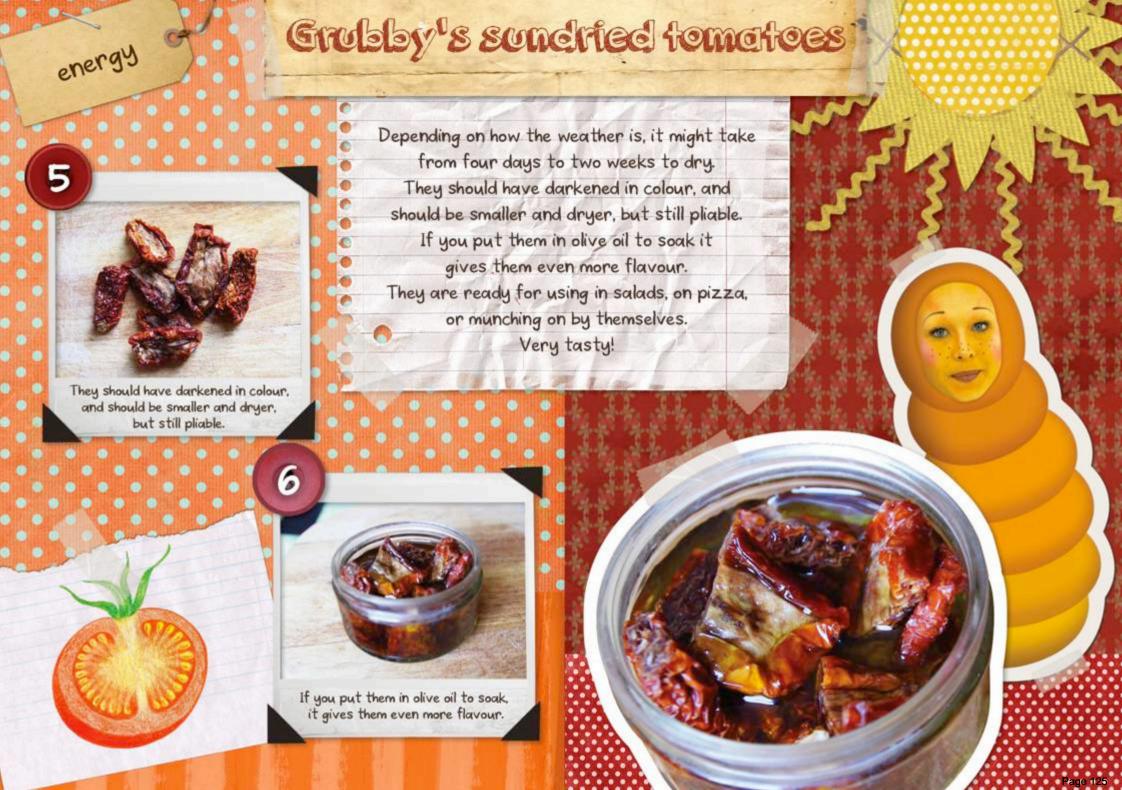


Using sticks or toothpicks, and something to cover them, make a little tent over the top to keep any bugs or flies off them.

Then pop them in a sunny spot.

Then ask your big person to help cut a little slit into the skin, which helps the drying process.

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#### Eco Bingo

#### How to play eco bingo:

You need at least 3 people to play.

1 person is the caller and the others are the players.

The caller uses the set of cards.

Each player receives a game mat.

Each game mat is divided into 4 rectangles.

Each player will need 4 markers. You can use any small object as a marker, such as a button, a small empty bottle,

even a little piece of fruit.

Firstly cut out the set of cards.

Next cut out a game mat for each team player.

The caller shuffles the cards and then places them face down in front of them.

The caller turns one card over at a time, calling out what is on the card,

eg. "the sun - solar power!"

Each player checks their game mat.

If they have the item that has been called they place a marker on the square.

The first player to have a marker on each square calls out "ECO BINGO!".

The caller checks the cards to make sure it is correct and announces the winner.

Start all over again!







