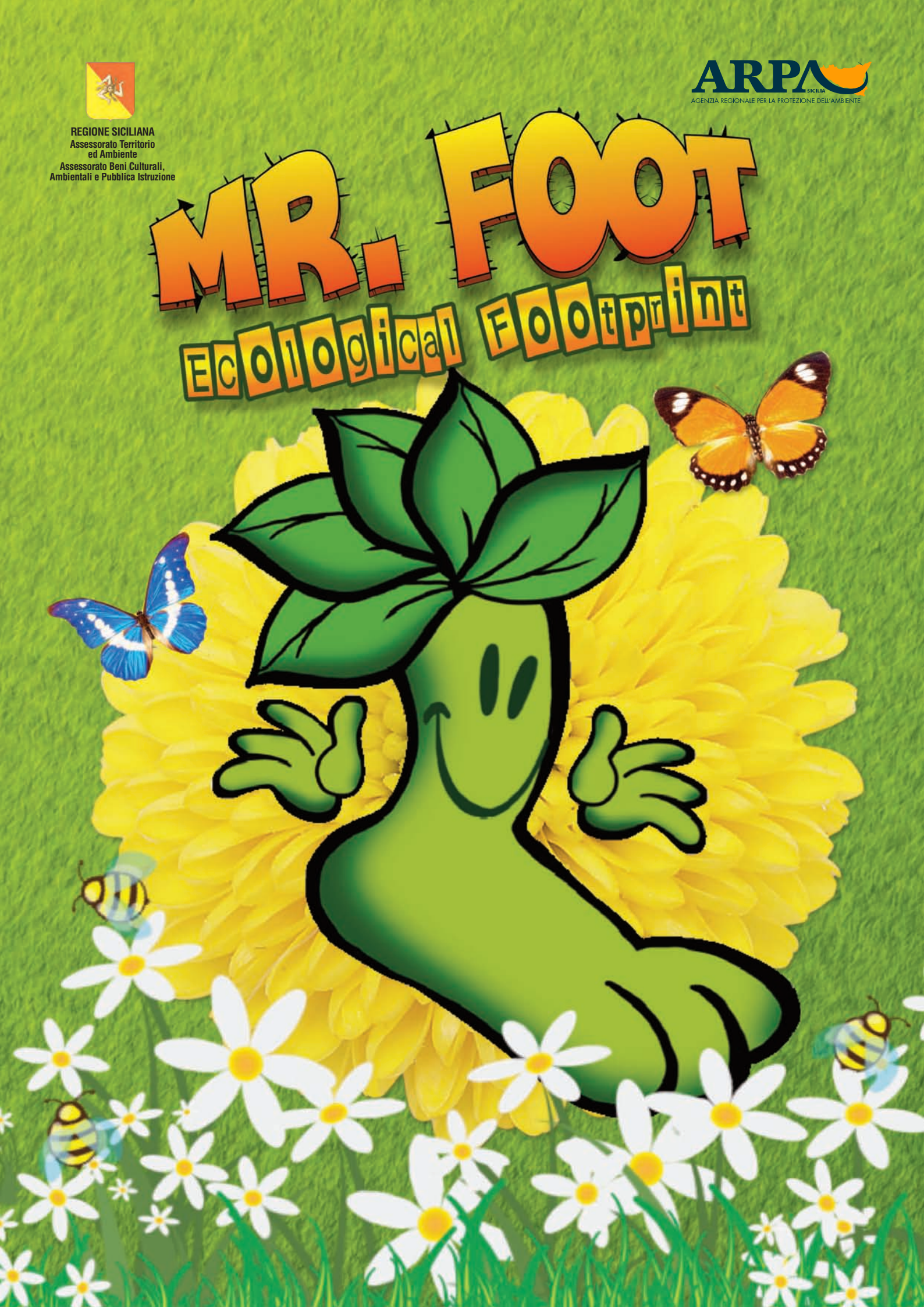
REGIONE SICILIANA
Assessorato Territorio
ed Ambiente
Assessorato Beni Culturali,
Ambientali e Pubblica Istruzione

ARPA SICILIA
AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE

MR. FOOT

Ecological Footprint



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Stampa
SERISTAMPA - PALERMO

Hallo kids!

Welcome to ARPA Sicilia, the Environemental Protection Agency for Sicily.
I am Sergio and I am the director of the Agency.
Our job is to protect the environment in our beautiful island through a series of activities, from monitoring the quality of our air, water, sea, land, to educating kids like you to respect the environment and be considerate about it.
I hope you enjoy reading this book and have fun with all the activities included, but most of all, I hope that by the end, you will have learnend something about your ecological footprint!

take care

SERGIO MARINO

Dear English Teachers,

this book, written in collaboration with two English Science graduates, was created with a double aim in mind: to teach young students about Ecological footprint and, at the same time, to introduce them to the English language through similar instruments used by native English children.

The language used is quite colloquial and could appear at times difficult to grasp, by primary school kids, but I am sure that, with the teachers' support, they will be able to gain a full understanding of the concepts introduced. As you have seen, the book is full of practical activities, to make learning mor fun, but it is not intended as a grammar compendium.

I hope you find the book stimulating and fun to work with.

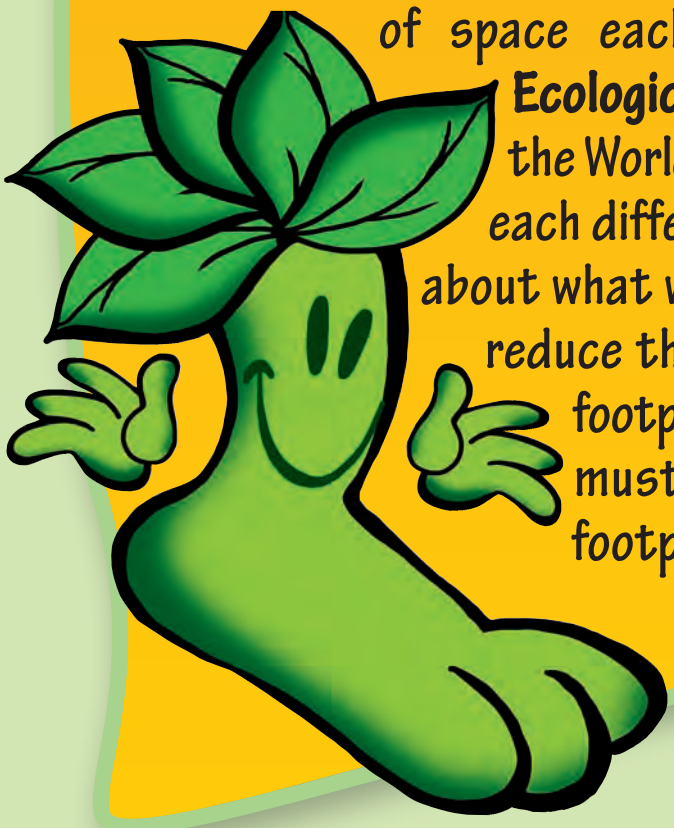
DANIELA SEGRETO

"Mr Foot" project manager

Hello kids, I'm Mr. Foot,

I know all there is to know about Ecological Footprints. I'd like to give you some information so you can also be aware of your **Ecological Footprint**. It would be great if we could all reduce the size of our Ecological Footprints so together we can help protect the planet.

Let me begin by telling you what an **Ecological Footprint** is... Every day we all need things in order to live, from simple stuff like food and water to more complex things such as electricity and computers. What we use, and more, is taken from the Earth in some form. For us to use these things and to survive, an area of land on Earth is needed. The amount of space each person needs is called an **Ecological Footprint**. Everyone around the World has an **Ecological Footprint** but each differs in size. We can make choices about what we use, and do, each day to help reduce the size of our footprint. A large footprint is not good for the Earth. We must all work together to keep our footprint as small as we can.



An Ecological Footprint includes the area of land needed for:

- Forests to grow wood for paper and timber,
- The absorption of CO_2,
- Crops, vegetables, cereals and other food
- Water to drink and use
- Sea and estuaries to absorb pollutants and waste
- Land to build things on e.g. roads and houses

Let me tell you a story of two friends I know who came to realise the many differences in their lives, and how those differences affected the environment and the size of their **Ecological Footprints**.

While working through the book, reading the story and answering questions along the way, you will complete a quiz that will allow you to find out your own **Ecological Footprint**!

So, when you answer the **Ecological Footprint** test questions, do make sure you circle or tick the shape with the answer that matches your daily activities … HAVE FUN!


TRANSPORT
TWO FRIENDS, BEN AND LOUISE, LIVE NEAR EACH OTHER. ONE DAY THEY DECIDE TO GO TO SCHOOL TOGETHER BUT THEY TRAVEL IN DIFFERENT WAYS ...
Let's meet at the end of the road at 7.30 a.m.
Oh, why so early?
Well, if we're going to walk there in time for the start of school, that's when we'll need to leave.
WALK! We drive to school!


It's much healthier for you and the environment to walk. And it can be fun, too! There's a group of us that walk ... and we play games along the way.
Ok, let's walk!
WHY DON'T YOU SET UP YOUR OWN WALKING CLUB TO SCHOOL?

TRANSPORT TEST

HOW DO YOU USUALLY TRAVEL TO AND FROM SCHOOL?

- ❑ BUS
- ❑ WALK OR CYCLE
- ❑ CAR
- ❑ MOTORCYCLE

HOW OFTEN, EACH YEAR, DO YOU TRAVEL BY PLANE?

- ❑ 3+
- ❑ NEVER
- ❑ ONCE
- ❑ 2-3

INTRODUCTION

Every day, all over the world, people travel around, whether by road, sea or air. Journeys can be a short distance, like from home to school, or a long distance, like going on holiday. There are many different methods of transport, ranging from environmentally friendly methods like walking and cycling, to things like flying by aeroplane, which is very bad for the environment and Planet Earth. This is because many of the transport methods we use today, like cars, are powered by fossil fuels. Fossil fuels are substances like coal, oil and gas, all of which were made by the Earth millions of years ago. When they are used or burned they release harmful gases that affect the environment in many negative ways, for example, causing air pollution and damaging the ozone layer. They are also non-renewable, which means when we have used them all up they will be gone forever!

BEST & WORST WAYS TO TRAVEL

WALK OR CYCLE: This is the best way to travel around both for the environment and you. It is best because it does not need to be powered by fossil fuel but instead uses your energy.

PUBLIC TRANSPORT E.G. BUS/TRAIN: Although public transport does use fossil fuels as power, it carries many people around which means less pollution per person.

CAR SHARING: Similar to public transport, as more than one person shares a vehicle, this results in fewer vehicles being on the road and therefore less pollution.

SMALL CAR: Cars are not the best way to travel around. However, it is better to use a smaller car as they give out less pollution.

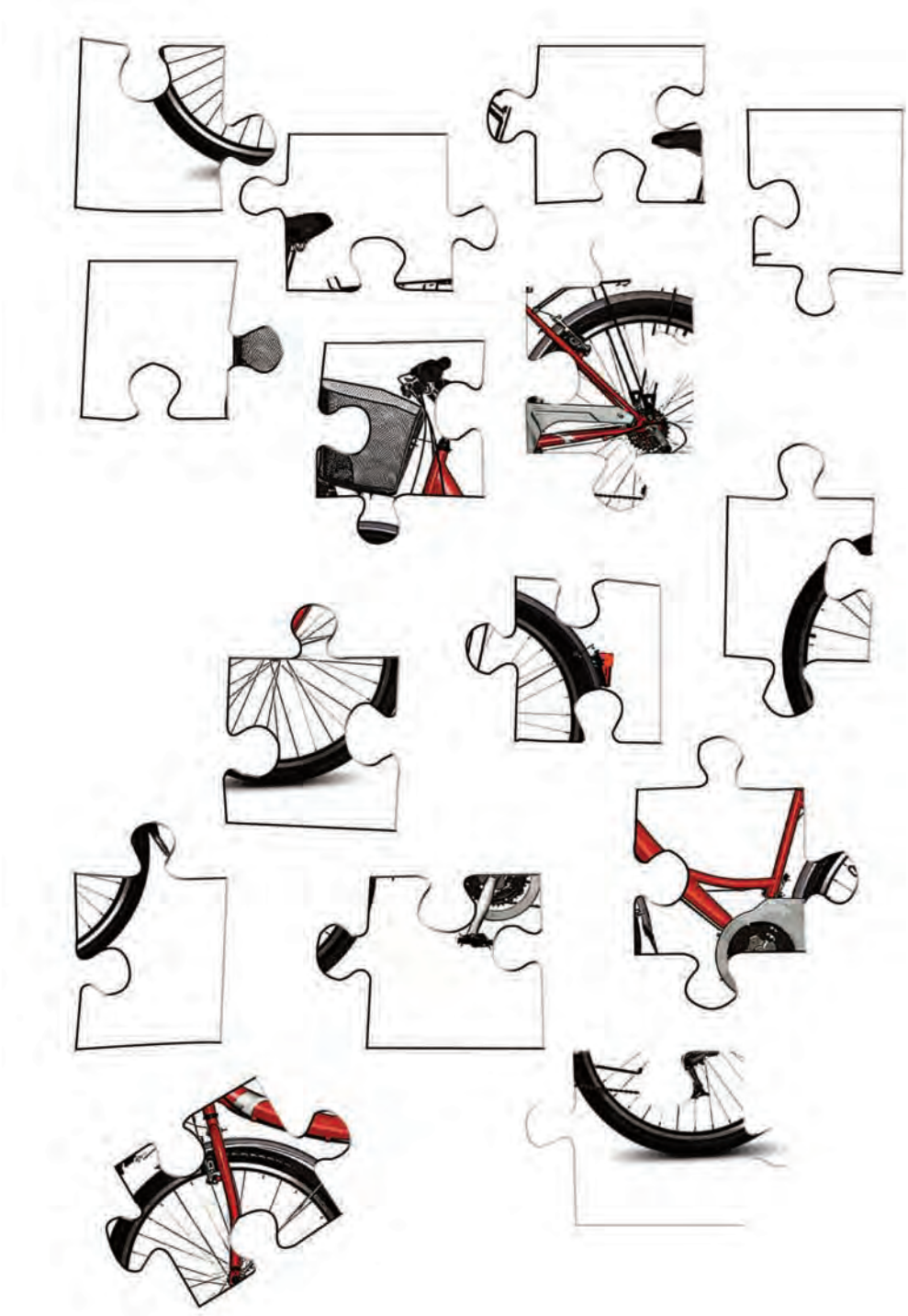
BIG CAR: Bigger cars need a lot of fuel to make them work which means they produce a lot of pollution.

AEROPLANE: Although aeroplanes carry lots of people, they need the most fuel which is bad for the environment.

ACTIVITIES

1 Draw a picture of the method of transport which you use most often.

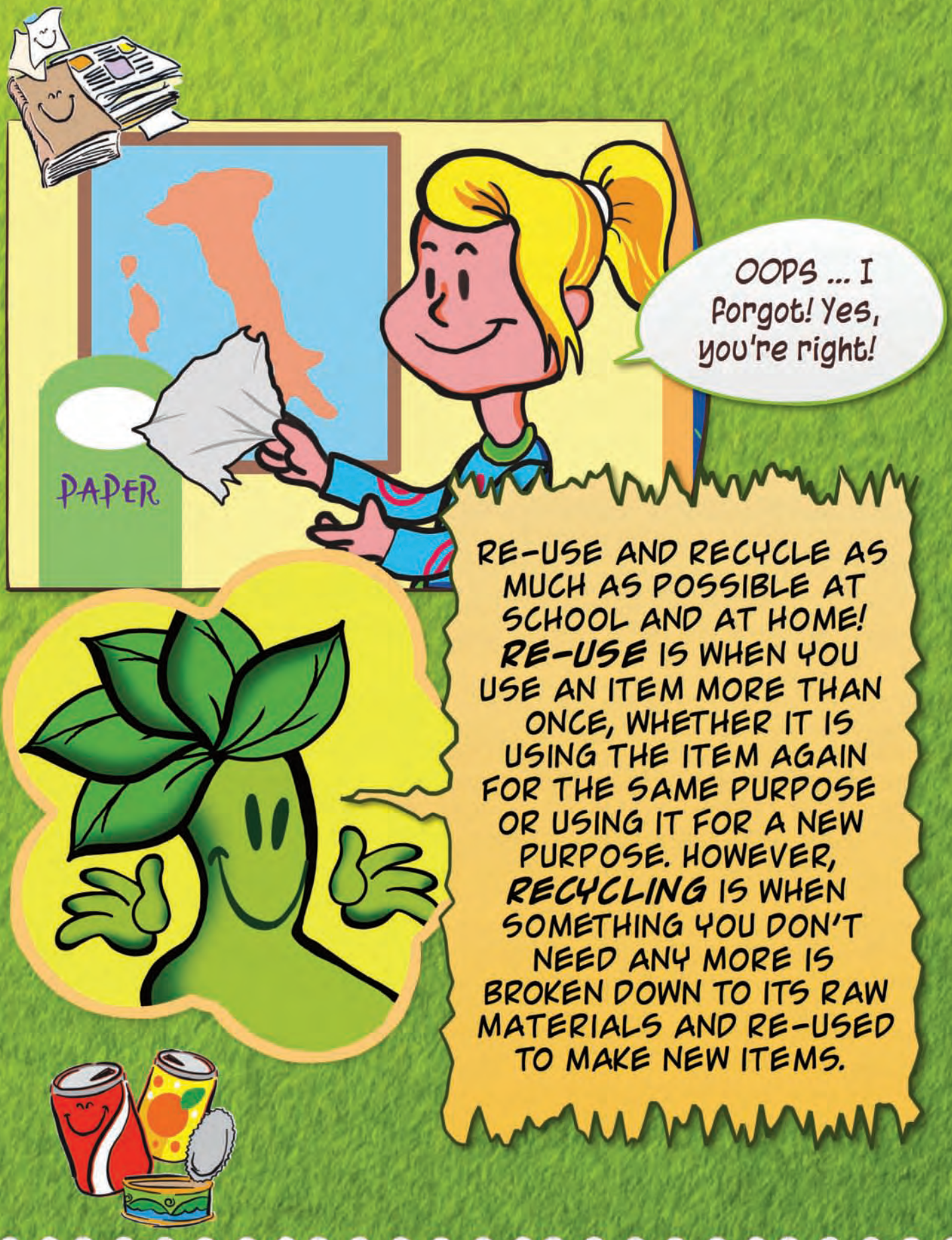
2 Carefully cut out all of the puzzle pieces and then stick them on a blank page to make a picture.
The risult is an environmentally friendly way to travel!



SUMMARY

If you can, you should always try to walk or cycle to the places you need to go. If you need to go further away, public transport is a good way to travel. Cars and aeroplanes should be used the least, especially if you do not have very far to go. Also, do not forget that your food, clothes and other products all need to travel from somewhere to reach you and so these use transport, too. New environmentally friendly ways to power vehicles like cars and buses are being invented. These are known as hybrid vehicles.


WASTE
AT SCHOOL LOUISE AND BEN GO TO CLASS TOGETHER. THEY'RE DOING ARTWORK WHEN BEN MAKES A MISTAKE...
Oh no, I ruined my picture! I'll have to throw it away. Where's the bin?
The bin's next to you, Ben!
Not that bin! The recycling bin is where I put all my paper. It saves trees. But I have to make sure it's in the right bin because things like bottles and cans go in different recycling bins.


PAPER
OOPS ... I forgot! Yes, you're right!
RE-USE AND RECYCLE AS MUCH AS POSSIBLE AT SCHOOL AND AT HOME! RE-USE IS WHEN YOU USE AN ITEM MORE THAN ONCE, WHETHER IT IS USING THE ITEM AGAIN FOR THE SAME PURPOSE OR USING IT FOR A NEW PURPOSE. HOWEVER, RECYCLING IS WHEN SOMETHING YOU DON'T NEED ANY MORE IS BROKEN DOWN TO ITS RAW MATERIALS AND RE-USED TO MAKE NEW ITEMS.

WASTE

TEST

DOES YOUR FAMILY RE-USE ITEMS, FOR EXAMPLE CONTAINERS, CLOTHES ETC.?

- ❑ A FEW THINGS
- ❑ EVERYTHING THAT IS POSSIBLE TO RE-USE
- ❑ LOTS OF THINGS
- ❑ NO, NOTHING

DOES YOUR FAMILY RECYCLE (PAPER, GLASS, METAL, PLASTIC)?

- ❑ NO, NOTHING
- ❑ EVERYTHING THAT IS POSSIBLE TO RECYCLE
- ❑ A FEW THINGS
- ❑ LOTS OF THINGS

WASTE

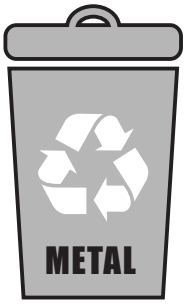
As you now know, lot of things we use in every day life have a huge amount of packaging and most of it is thrown away. Sometimes if we do not eat all of our food it is thrown away, too: this is also waste. Both of these types of waste can be recycled. Paper, plastic, bottles and cardboard can be recycled when put into the correct coloured bins or, if it is leftover food, it can be put in a compost bin to use later when planting things to grow like vegetables. However, waste does not have to be just those things that you put in a bin: water, electricity and more can also be wasted. Every time we leave a tap running, or forget to turn off our lights, computers or TV when we are not using them, energy and resources are wasted.

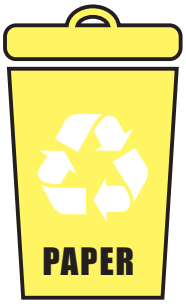
FUN FACTS!

- It's thought that seven out of 10 pieces of litter on streets is food-related.
- Up to 60% of the waste that ends up in the bin could be recycled.
- Every year, the average dustbin contains enough un-realised energy for 500 baths, 3500 showers or 5,000 hours of television.
- It can take just seven days for old magazines and newspapers to be recycled into new ones.
- For every ton of recycled newspaper, we save 17 trees.
- Making one can from raw materials uses the same amount of energy that it takes to recycle 20 cans.
- Recycling one aluminium can save enough energy to power your TV for three hours.
- Glass can be recycled again and again – containers made from recycled glass are of the same high quality as those made from new raw materials.
- Green glass bottles are made with up to 90% recycled glass.
- The glass recycled in the UK each year saves enough energy to launch 10 space shuttle missions.

ACTIVITIES

1 Draw a line connecting the hype of waste to the correct recycling bin.



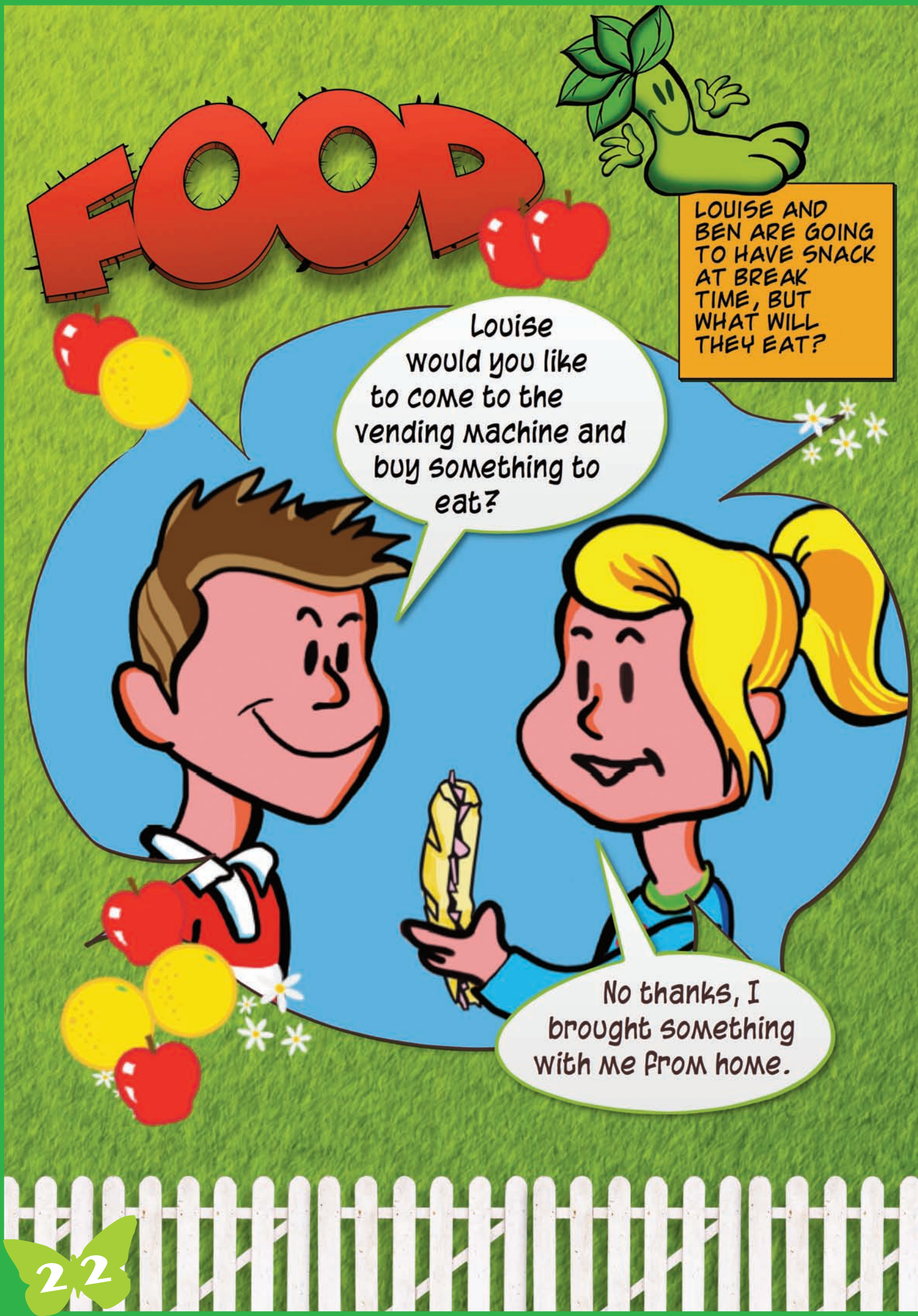


2

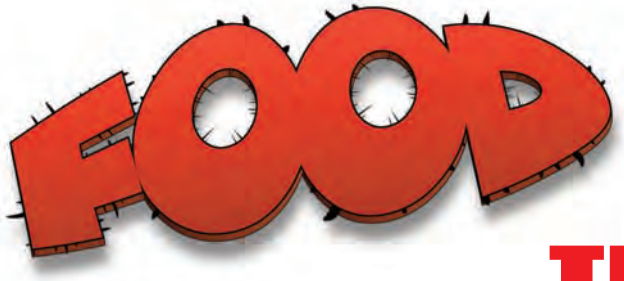
Look around for items in their house or classroom which could be re-used, e.g., you could find empty tins and decorate them to use as pen holders.

SUMMARY

It is important we do not waste resources that may not be able to be replaced in future years. We must recycle all the waste we can - plastics, glass and even food - so less energy is needed to make new things.


FOOD
LOUISE AND BEN ARE GOING TO HAVE SNACK AT BREAK TIME, BUT WHAT WILL THEY EAT?
Louise would you like to come to the vending machine and buy something to eat?
No thanks, I brought something with me from home.


Why? You can buy so many things from the vending machine that are really tasty.
I know but I can make really nice things at home, like this delicious sandwich.
WHY NOT MAKE YOUR BREAK TIME SNACK AT HOME? IT WILL REDUCE WASTE AND, BECAUSE YOU'RE MAKING IT, YOU'LL SAVE POCKET MONEY AND YOU CAN CHOOSE EXACTLY WHAT YOU EAT!



TEST

HOW OFTEN IN A WEEK DO YOU EAT MEAT, FISH OR DAIRY PRODUCTS (E.G. CHEESE, MILK, EGGS)?

- ❑ 3+
- ❑ NEVER
- ❑ 2-3
- ❑ ONCE

HOW OFTEN IN A WEEK DO YOU EAT OUT (RESTAURANTS, CAFES, OR FAST FOOD)?

- ❑ NEVER
- ❑ ONCE
- ❑ 3+
- ❑ 2-3

INTRODUCTION

Although we all need food to survive, where our food comes from, and the way in which this is produced, can affect the environment in different ways. The food we eat has a bigger footprint than just the land on which it was grown: how it is packaged and also how it is transported to the place we buy it from all add to its footprint size.

ORGANIC FOOD

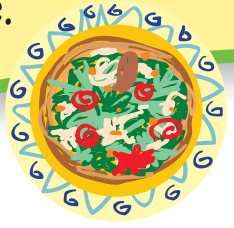
Organic food is special because it is grown naturally without using any chemical fertilisers or pesticides. These chemicals take lots of energy and can have bad effects on the soil in which the food is grown. They can also cause pollution if they leak into nearby rivers and lakes. So, organic food is very friendly to the environment.

LOCALLY PRODUCED FOOD

Locally grown foods are those sold in places near to where they are grown. As they do not have to travel long distances to reach the people who buy them, they cause less pollution through transport and also require less protective packaging. This makes them more environmentally friendly. Much of the food in supermarkets will have travelled thousands of miles by air, road or sea. This transport will have used lots of fossil fuels which increases carbon emissions and the food's Ecological Footprint.

PROCESSED FOOD

Processed food is what has been frozen, canned, or packaged. This is almost all the food you see in shops. A lot of this food, when being transported and in the shops, needs to be kept in a fridge or frozen to make it last longer. Lots of packaging is often used to protect the food from being damaged as well, so processed foods use a lot of energy and create a lot of waste.



MEAT

Most people like to eat burgers and other meat, but to produce the meat you eat needs a lot of energy because the animals need to feed and drink water, too. They also produce lots of waste which creates pollution. Often forests have to be cut down to make space for the animals to live, or to grow the food they eat. This can affect the natural wildlife in the area. All of this adds up meat having a very large Ecological Footprint. So eating lots of meat can increase your own footprint.

EATING OUT

It can be fun to eat out but remember not to do it *too* often. This is because it is hard to know where the food used to make the meal comes from and the effect this will have on your footprint. The food might be processed and have travelled very far or have been produced in a way that is not environmentally friendly. If you have takeaway food, it usually comes in lots of packaging that has taken lots of energy to make. When you have finished with the packaging, often it is just thrown away, but it is best to recycle it!

FUN FACTS!

- Eat less meat: The Ecological Footprint from producing animal protein is typically eight times greater than that from vegetable protein.
- Go vegan and save about 8,888 kg /CO_2 per year.
- Reduce the amount of your meat consume by half and save 3555 kg /CO_2 per year.
- Buy locally grown foods buy and in bulk to reduce packaging.
- Processed food packaging accounts for 133 kg of CO_2 per year for each of us, and a lot of plastic to throw away.

ACTIVITIES

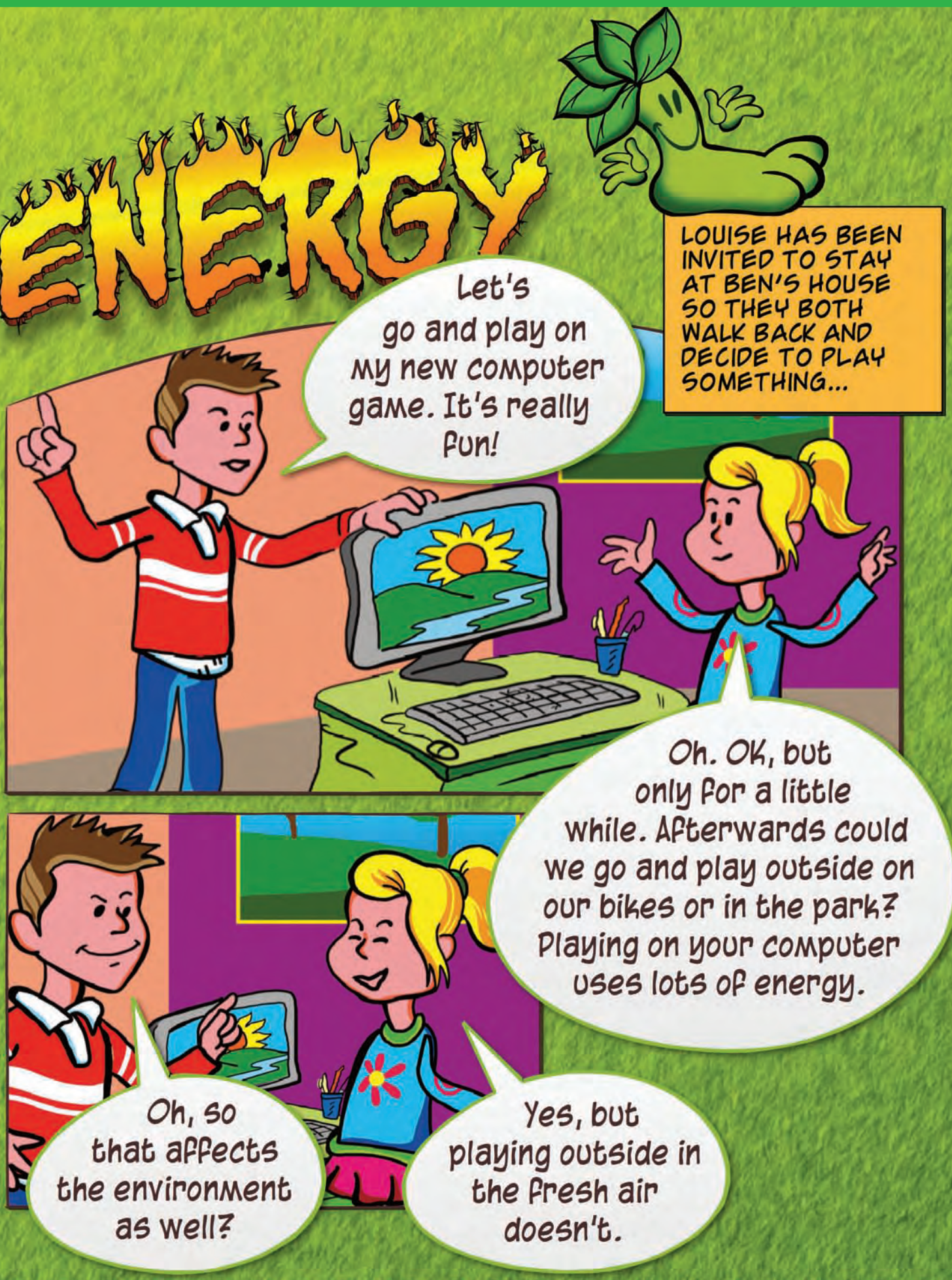
1 Look at the picture below and circle all the foods that are healthy for you and the environment in green, and those which are not so good in red.

Now think about which foods you normally eat, and which good foods you might start to eat to help the environment.

SUMMARY

Much of the food we eat requires lots of energy, water and space and creates lots of waste. Organic and locally produced foods are often best, both for us and for the environment. It is also important to recycle any packaging. We can even recycle leftover food by creating a compost bin!

ENERGY


LOUISE HAS BEEN INVITED TO STAY AT BEN'S HOUSE SO THEY BOTH WALK BACK AND DECIDE TO PLAY SOMETHING...
Let's go and play on my new computer game. It's really fun!
Oh. OK, but only for a little while. Afterwards could we go and play outside on our bikes or in the park? Playing on your computer uses lots of energy.
Yes, but playing outside in the fresh air doesn't.
Oh, so that affects the environment as well?


Let's go and play outside instead then.
OK, but don't forget to turn off the lights when we leave. They use energy as well!
THERE ARE SO MANY THINGS YOU CAN DO OUTSIDE THAT REQUIRE LITTLE ENERGY AND ARE LOTS OF FUN. SEE WHAT GAMES YOU CAN COME UP WITH!

TEST

WHAT DO YOU MOSTLY DO WITH YOUR FREE TIME?

- ❑ PLAY COMPUTER GAMES OR WATCH TV
- ❑ PLAY OUTSIDE E.G. CYCLE, WALK, PLAY GAMES
- ❑ PLAY INDOORS E.G. PLAY GAMES, READ
- ❑ GO TO THE CINEMA, OR SWIMMING ETC

DO YOU TURN OFF LIGHTS, COMPUTERS, T.V. ETC WHEN YOU LEAVE A ROOM?

- ❑ MOST OF THE TIME
- ❑ ALWAYS
- ❑ NEVER
- ❑ SOMETIMES

ENERGY

So many items are powered by electricity, whether we are at home, school, or almost anywhere, in fact! Just a few of the things that need electricity to work are lights, TVs, computers, hairdryers, refrigerators, telephones... the list is endless! As we are so accustomed to using things powered by electricity often we do not think how much or long we use them or how much energy they waste. So, every time we use something powered by electricity we should try and cut down the time we use it for, to stop our Ecological Footprint increasing.

FUN FACTS!

- The energy saved from recycling a single plastic bottle would power a 60 watt light bulb for 60 hours!
- Just one recycled aluminium can save enough energy to run a television for three hours.
- The energy saved by recycling one glass bottle will power a computer for 25 minutes!
- By recycling your daily newspaper you will save more than your own body weight in paper within a year!

ACTIVITIES

1 List all the things you can think of that you use at home and school that might need electricity to work! Tip: you may find it easier if you look at each room and think of the things in it that use electricity. You could also think of everything that turns off when there is a power cut, or those things you yourself turn on and off at school and at home.

Lots of the things we use in our home powered by electricity such as the T.V., computers, DVD players, C.D. players and stereos etc, have something called stand-by and lots of people use this. People put things on standby when they have finished using them but stand-by does not fully turn things off. It just makes them work a lot slower so they are ready to use later. They are still using energy so it is very important to turn things off at the plug. Look out for the red light and if this is on you know to turn things off at the plug.

SUMMARY

When using items powered by energy be careful not to use them too much, or to leave them switched on when not in use. Always turn things off properly and ensure that the amount of energy you use/waste is as low as possible.


WATER
AFTER LOTS OF FUN PLAYING OUTSIDE, BEN AND LOUISE ARE A BIT MUDDY, SO THEY DECIDE TO CLEAN THEMSELVES UP.
I'M going to have a bath.
Would you mind if I just had a quick shower? It saves water.


Ok, good idea! Let's brush our teeth first, and I won't leave the tap on whilst I'm brushing my teeth, because that'll save water, too, won't it?
Yes! What a great idea!
TRY TO SAVE WATER WHEREVER, AND WHENEVER, YOU CAN ...

WATER

TEST

WHEN YOU WASH DO YOU..?

- ❑ HAVE A LONG SHOWER
- ❑ HAVE A QUICK SHOWER
- ❑ I DON'T WASH
- ❑ HAVE A FULL BATH

WHEN YOU CLEAN YOUR TEETH DO YOU LEAVE THE TAP ON?

- ❑ YES, BUT ONLY WHEN I RINSE MY MOUTH
- ❑ NO, I USE A CUP OF WATER TO RINSE MY MOUTH
- ❑ YES, THE WHOLE TIME I AM CLEANING MY TEETH
- ❑ YES, FOR A SHORT AMOUNT OF TIME

WATER

Water is precious all over the world. As everyone needs water to live, it is important we save as much as we can. Often we do not realise when we are wasting water such as when we have a long shower or leave the tap running when we are cleaning our teeth, or washing a car. Only 2.5% of the water on Earth is fresh water we can drink, so we must make as much effort as we can to try and stop wasting water or there will be none left for future generations. Heating water for warm showers, baths or hot drinks also increases our Ecological Footprint, as it requires a lot of energy.

FUN FACTS!

- Once we take away the 2.5% of the Worlds' fresh water, the remaining 97.5% is salt water!
- If people keep using as much water as they do now, in 14 years there won't be enough water for two out of three people.
- A hot water tap that leaks one drop per second can add up to 43.7 litres a month. That's more than one person uses in two weeks.

ACTIVITIES

1 Draw a line to connect each activity water the amount of water go consumed.

ACTIVITY	WATER USED (LITRES)
Taking a shower	34-78
Flushing the toilet	4
Washing the dishes	57-114
Washing clothes	114
Cleaning your teeth (tap left running)	15-27

2 Water Waste Maze

Help Mr. Foot to find his way to turn off the dripping tap as quickly as possible.

WATER WATER WATER WATER

SUMMARY

Many people all over the world do not have access to clean, fresh water and have to walk long distances just so they can have a drink. We are lucky that we have water available and so we should be sensible and not waste a drop!

TEST RESULTS

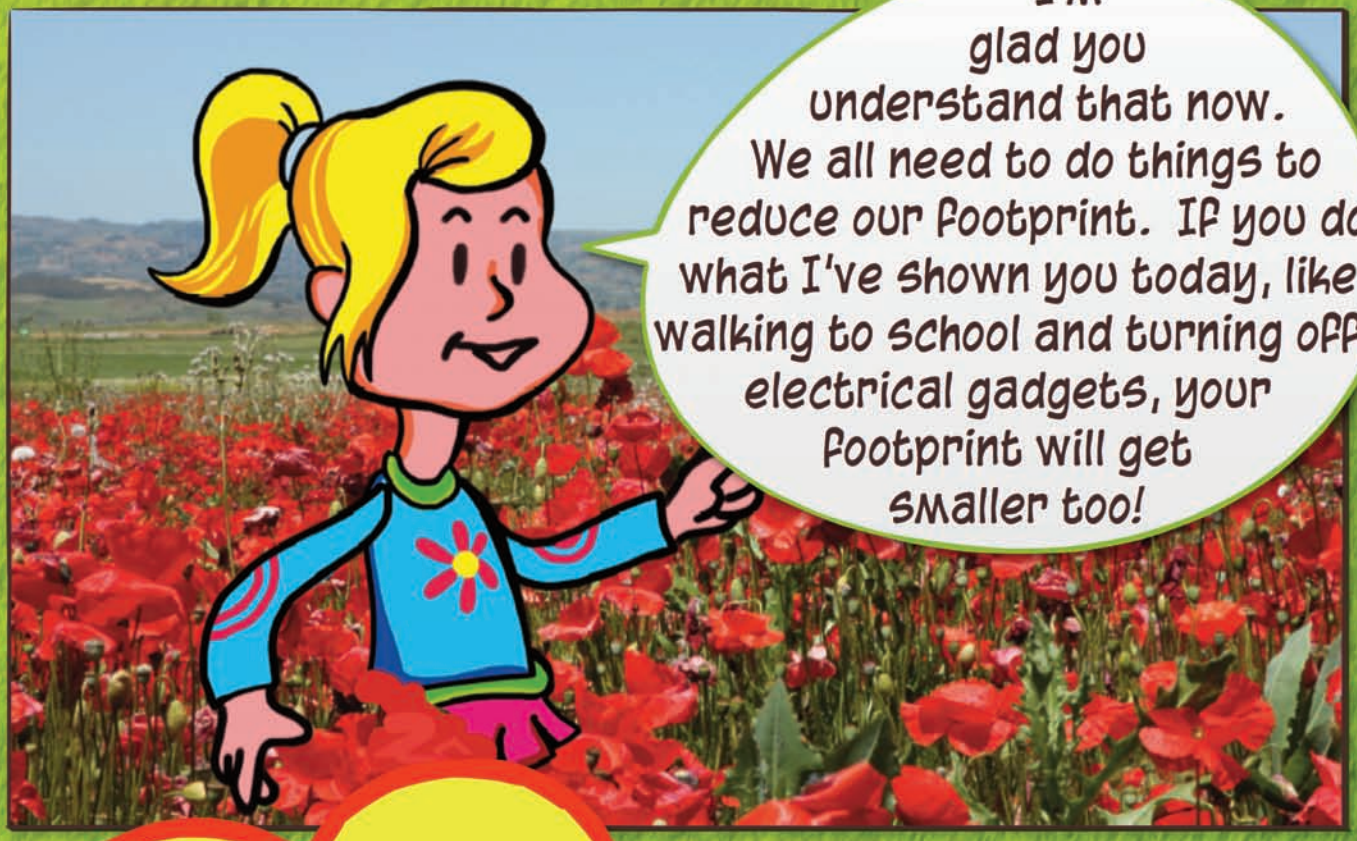
LOUISE AND BEN ARE TALKING. BEN ASKS LOUISE WHY SHE CARES ABOUT THE ENVIRONMENT SO MUCH...

I care because I know about something called an Ecological Footprint. I know a quiz you can do that shows you how much of Earth each one of us needs, based on the things we do and use. This is your Ecological Footprint. It also tells you how many Planet Earths would be needed if everyone lived the same way as you!

BEN AND LOUISE TAKE THE TEST AND ARE SURPRISED BY THE RESULTS...

If everyone lived like me we'd need 1.4 Planet Earths!

Wow! I'd need 3.6 planets... BUT we only have ONE Earth!



BY NOW YOU WILL HAVE COMPLETED YOUR VERY OWN TEST. YOUR ANSWERS AND SCORE WILL GIVE YOU AN IDEA OF HOW YOU CAN REDUCE YOUR ECOLOGICAL FOOTPRINT AND HELP THE EARTH!

YOUR TEST RESULTS

Now it's time to add up your scores to see if you have a small or large Ecological Footprint. To do this, go through the test questions you have answered and see which shapes you circled or ticked. Then match up the shapes you choose to the points below:

ONCE YOU HAVE ADDED ALL OF YOUR POINTS TOGETHER, READ BELOW TO SEE THE SIZE OF YOUR ECOLOGICAL FOOTPRINT:

0 – 6: VERY SMALL

WELL DONE! Your footprint is very small. This is very good news for you and the Earth. Keep up the good work, doing all the things that you already know. Perhaps you could try and add some of the tips in the book to your daily activities to reduce your footprint even further, if you're not doing them already that is!

7 – 12: SMALL

That's Great!!! You have a small footprint! You obviously know quite a lot about being ecologically friendly. Maybe you have learnt more from this book, too. If so, try and do some of the things mentioned to help reduce your footprint even further.

13 – 18: MEDIUM

Good, your footprint is medium sized and if you start to follow the tips in this book it will get even smaller. Don't forget being ecologically friendly can be fun too!!! So see what fun you can have reducing your footprint.

19 – 24: LARGE

You have a large footprint, BUT don't worry – this means you have many opportunities to reduce your footprint. Follow Mr. Foot's tips and your footprint will shrink in no time! Good luck!

25 – 30: VERY LARGE

Your footprint is very large! BUT don't worry – it means you have many opportunities to reduce your footprint. There are lots of things you can do that won't affect your daily life too much but that will make your footprint a lot smaller. Try playing outside more, turning off lights and using less water. Follow Mr. Foot's tips and your footprint will shrink in no time! Good luck!

YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS

ACTIVITIES

1 Ecological Footprint Wordsearch

Z E Q H W O C K S C E R
Y K N A T I F Y J N L E
K E T E N R R L V N E D
I E L A R A A I H N C U
R W G C B G R E S C T C
Z R Q O Y O Y W T G R E
O H X C N C M Y P N I O
B W G M O J E B M I C O
I Q E T S A W R M K I O
V N C Y C L I N G L T U
T J F D N O T J E A Y Q
T N I R P T O O F W Q N

WORDS TO FIND:

CYCLING	EARTH	ELECTRICITY
ENERGY	ENVIRONMENT	FOOTPRINT
ORGANIC	RECYCLE	REDUCE
WALKING	WASTE	WATER

YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS

2 Picture Puzzle

Below is a picture, look at it carefully and circle all the things that are using, or wasting, electricity or water.

YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS

TOP TIPS FOR REDUCING YOUR ECOLOGICAL FOOTPRINT!

- Always recycle anything you can, but make sure you put it in the correct coloured bins! (See Mr. Arp for information)
- Remember to turn off lights when you leave a room, and computers and TVs when you are not watching or playing on them.
- Turn taps off when you are not using them, like whilst you are brushing your teeth. This will save water! You can also try to have quicker showers or smaller baths.
- Re-use anything like scrap paper, plastic bags and boxes.
- Only use what you really need - for example, do not make more food than you can eat.
- If you're cold, put on a jumper before deciding to switch on the heating.
- Use environmentally friendly products and appliances as these often use less energy or water to function than normal products and appliances.
- Walk, cycle or travel by bus, instead of going by car.
- Eat organic and locally produced food with the least possible packaging.
- Eat less meat.
- Give items like clothes away to other people or charities if you don't need them anymore.
- Mend broken objects instead of buying new ones.

The best way you can make your Ecological Footprint smaller is to **USE LESS**, instead of just recycling things which you have used. However, it is still very important that you also recycle all of the things you do use when you have finished with them, if they can be recycled (See Mr. Arp for information about what and where to recycle!).

YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS YOUR TEST RESULTS

3 Activity: ECO-CODE

At home or school you could create your own eco-code. This is a list of guidelines that you and your family or classmates want to follow so that you can help the environment. You could create a poster to be displayed so that everybody is reminded of what they can do to help the Earth and reduce their Ecological Footprint. Here are a few ideas of the types of things you could include on your eco-code poster: Recycling, re-using things, turning things off, walking . . .

INTERNET SITES

KIDS' SECTION

TEST

Impronta Ecologica : http://www.sarasperlascuola.it/improntaecologica/index.htm
Bobbie Bigfoot : http://www.kidsfootprint.org/
Zero Footprint Kids : http://www.zerofootprintkids.com/kids_home.aspx
Powerhouse Museum http://www.powerhousemuseum.com/education/ecologic/bigfoot/bigfoot2007/
General Environmental Information
Eco-friendly Kids : http://www.ecofriendlykids.co.uk/
Tiki the Penguin : http://tiki.oneworld.net/

ADULTS' SECTION

TEST

Earthday : http://www.earthday.net/footprint/index.html
Consumer Consequences : http://sustainability.publicradio.org/consumerconsequences/
WWF: http://www.footprint-wwf.be/footprintpage.aspx?projectId=69&languageId=2
Pandora : http://www.feem-project.net/pandora/scheda.php?ids=6
General Environmental Information
Footprint Network : http://www.footprintnetwork.org/en/index.php/GFN/
My Footprint : http://www.myfootprint.org/
Acqui Ambiente : http://www.acqui-ambiente.it/pages/ideambiente2.htm

Hi kids,

Our names are Laura Barcroft and Katie Main and we are from England and Scotland. We recently finished university in England, doing degrees in Wildlife Conservation because we love animals and the environment. We have now come to Sicily to work with ARPA Kids, helping to give you information on different parts of the environment.

We have written this book, so that you can find out about your 'Ecological Footprint'. It is a really important issue because we each have one, and the size of it affects the entire Earth and everything living on it. We all need to work hard to reduce our footprint, and so we hope that this book will help you and be an enjoyable read too!

Have fun staying green,

LAURA & KATIE

TEACHERS' GUIDE

AIM

For some time we have been using biological resources faster than the Earth can regenerate them and thus human demand is exceeding Planet Earth's capacity.
It is important we are aware of the situation we are in and what we can do to help. This aim of this book is to raise the awareness of younger people as to what they as individuals can do to help limit their footprint. This is important because they are the future generation that will have to live with the consequences of the actions of past and current generations and the effect that these actions have had on the Earth. They can also act as a voice to inform others whether old or young, enlightening them about what we should and should not be doing in order to try an achieve sustainability.

ECOLOGICAL FOOTPRINT

Currently it takes the Earth one year and four months to regenerate the resources used in one year by humanity, and so the use of term 'Ecological Footprint' is ever increasing in its popularity.
The term 'Ecological Footprint' was created in 1990, by M. Wackernagel and W. Rees, and is now widely used in varying fields from scientists to politicians and governments to general members of the public. An Ecological Footprint is a measure of the demand of a person, group or country on the Earth's biological resources. It encompasses aspects concerning the biologically productive land and sea area needed to support human demand for the resources that these areas can produce, including food, timber, fibre, space for infrastructure and energy. It also concerns the area required to absorb all of the subsequent waste products. Biologically productive areas include forest, cropland, and fishing grounds, but not deserts, glaciers and the open ocean.

ECOLOGICAL FOOTPRINT TEST

BACKGROUND

It is possible to calculate the size of your own Ecological Footprint and personal impact by completing an Ecological Footprint test (readily available online). The test aims to assess the biological resources you use and waste you produce within a year. The resources and waste are then converted into the global hectares of productive land that would be needed in order to produce said resources and absorb said waste.
To establish this result, the tests enquire about an individual's daily activities: transport, food, waste, water and energy etc. The answers obtained are then subjected to many calculations to give a definitive answer about how many hectares, global hectares and, ultimately, how many Planet Earths would be needed if everybody lived like the individual completing the test.

BOOKLET TEST

The test in the book uses similar ideas and principles of standard tests, but it is much simpler and does not give the definitive answers that other more complicated tests do. However, in order to gain such results, the answers of all individuals completing the test would be needed so that calculations could be performed: this is a limitation of having the test in the book, as there is no access to the answers that the participants might give. The test in the book does, however, give a general answer as to whether the child's daily actions would lead to a *small* or *large* footprint. This, in turn, allows the child to see his or her impact on the Earth and the things that can be done to reduce it, thus promoting awareness and encouraging eco-friendly behaviour. This book also provides links to tests available (online) aimed at both child and adult audiences, for those interested in finding out their exact Ecological Footprint.

USING THE BOOKLET

The book includes a narrator-type character known as Mr. Foot who introduces the booklet and its topics concerning an Ecological Footprint to the children. Mr. Foot also introduces the story and offers advice, helpful hints and information on reducing your Ecological Footprint throughout.
The story details a typical day in the life of two fictional characters, one that leads a physically healthy and environmentally friendly lifestyle, and another that does not. The eco-friendly child informs and encourages the other child to alter behaviour in order to become environmentally friendly and healthy. By the end of the story, the second child learns many things and awareness and a desire to change lifestyle is evident. The two children then discuss their respective Ecological Footprint.

HOW TO USE

Instruct the children to read through the story, which is split into sections that correspond to those of the Ecological Footprint test. Also incorporated are Ecological Footprint test questions that the children themselves can answer along the way. At the end they will be asked to calculate their score to see whether they have a *small, medium* or *large* footprint. Once this has been completed, the children could be asked to compare their own footprint with those of the characters and also to consider how the daily activities of the characters compare with their own, and the changes they could make personally to reduce their footprint' size.

The book contains a number of activities the children could complete in the booklet itself, or that could be assigned as tasks or homework, etc. Some activities may need to be planned in advance, due to the requirement of resources i.e. scissors and glue. There are also fun facts and links included.

The activities, fun facts and links are designed to encourage the children to think and to make them aware of the consequences their daily activities have on the environment.

ACTIVITIES INCLUDED

TRANSPORT

- Drawing the method of transport they prefer to travel by (discussing why, and the eco-friendly methods).
- In teams, or individually, the children need to cut out the puzzle pieces to make a jigsaw; once completed it will reveal an environmentally friendly way of travelling

WASTE

- Drawing a line connecting an item of waste to the correct recycling bin
- Searching for items in their house or classroom which could be re-used, e.g. they could find empty tins and decorate them to use as pen holders

FOOD

- Colouring in the healthy/eco- friendly foods pictured
- In two columns, listing what they would normally eat and eco-friendly foods

ENERGY

- Listing all the things at home and school that use electricity

WATER

- Fun Facts matching game
- Helping Mr. Foot to find his way through the maze in order to turn off the dripping tap as quickly as possible

GENERAL ACTIVITIES

- Word search: finding all the words relating to an Ecological Footprint
- Eco-Code: In class and/or at home creating an eco code: a list of guidelines and tips for reducing their footprint, they could create a poster to be displayed to remind those involved.
- Cutting out a foot shape and then decorating it with magazine clippings of things that are related to an Ecological Footprint e.g. a shower, a car, a fast food package.
- Circling the things in the picture that are using/wasting electricity and water

FOR MORE INFORMATION PLEASE CONSULT THE BOOKLET ITSELF OR SEE THE LINKS LISTED BELOW:

Earthday : http://www.earthday.net/footprint/index.html
Consumer Consequences : http://sustainability.publicradio.org/consumerconsequences/
WWF : http://www.footprint-wwf.be/footprintpage.aspx?projectId=69&languageId=2
Pandora (Italian website) : http://www.feem-project.net/pandora/scheda.php?ids=6

General Environmental Information
Footprint Network : http://www.footprintnetwork.org/en/index.php/GFN/
My Footprint : http://www.myfootprint.org/
Acqui Ambiente (Italian website) : http://www.acqui-ambiente.it/pages/ideambiente2.htm
Links for children's sites both English and Italian can also be found in the booklet.

ANTONELLO BLANFI

ARPA SICILIA
AGENZIA REGIONALE PER LA PROTEZIONE DELL'AMBIENTE