

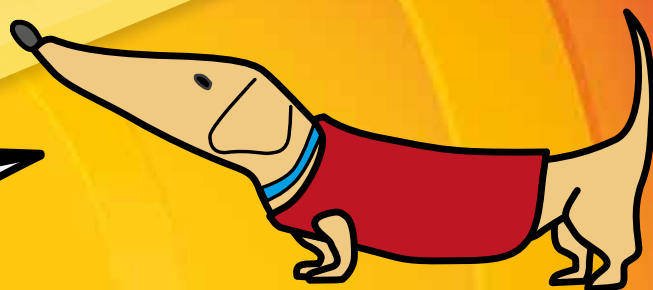
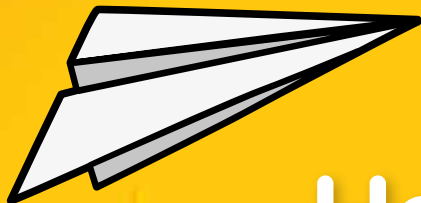
# The Pod and Eco-Schools student ezine

Autumn 2013 Issue

PDF 'lite' edition

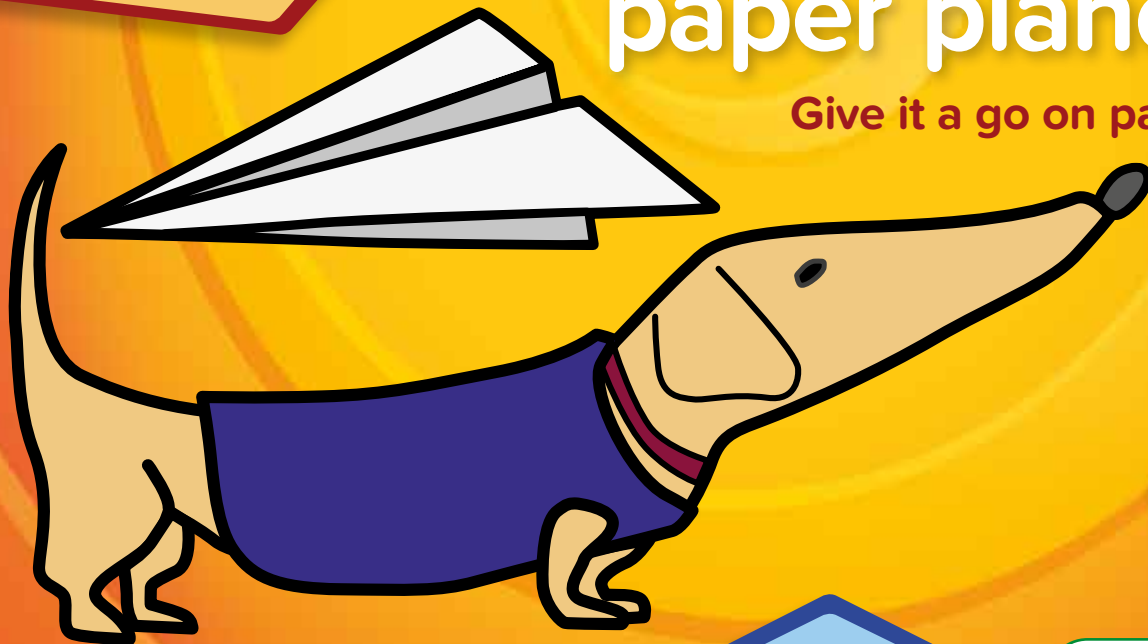
Find the  
energy guzzlers  
on page 8

Busta and  
Pong are back!  
See page 2



## How far can paper planes fly?

Give it a go on page 6



Campaign  
for change  
on page 5



TEACHERS:

See pages  
12-16 for your  
Staff Room  
section



Energy | Science | Sustainability

# Welcome

To a new school year and your latest ezine! This is the 'lite' edition that you can read on the move or without a web connection. Don't forget to read the full ezine when you're back online, as it contains lots more interactivity.

This term, we are focusing on saving energy. See pages 4-5 for Switch-Off Fortnight ideas to try at home – or why not play our game on pages 8-9 to guess the most energy-hungry devices?

## How this PDF works



Click on this symbol to go to the full ezine



Click here to go to the Pod website

## Teaching staff:

Visit your **Staff Room** section at the back of the ezine.

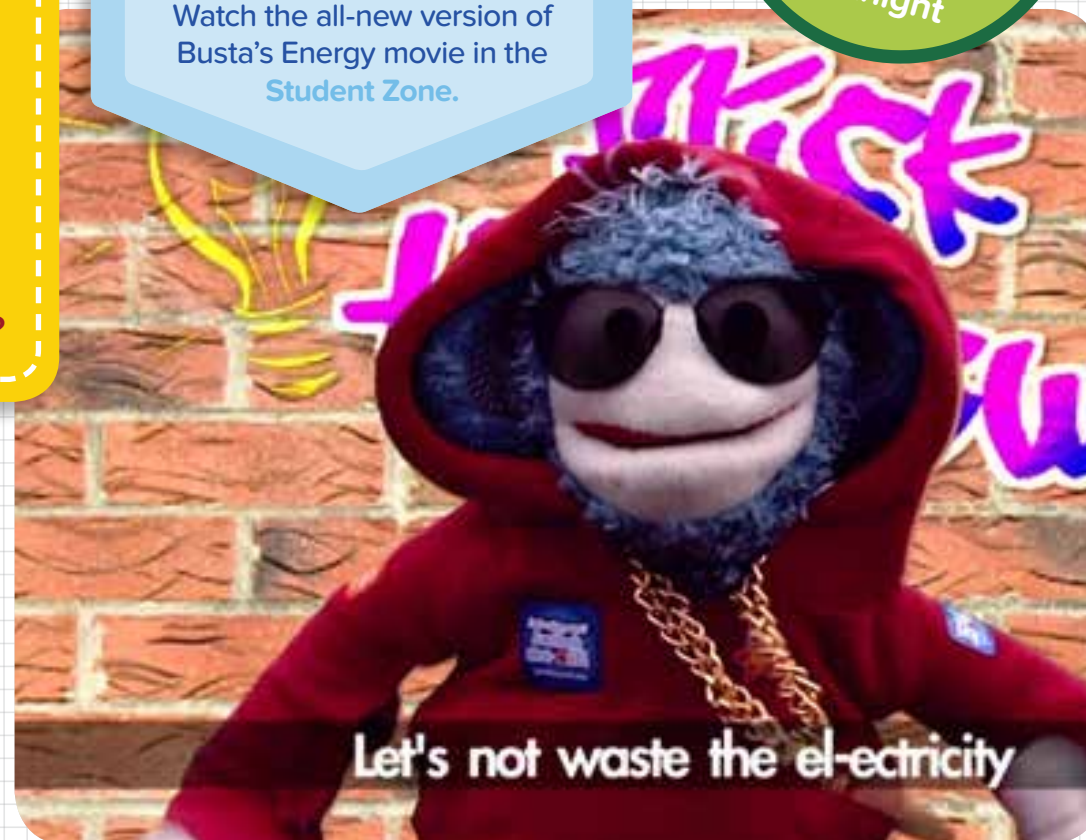
Here you can read all about the new features on the Pod and how to share the ezine with students and colleagues.

Click here for the full ezine

## Busta returns to planet Earth!

He's back with the Earth News team to remind us humans why we need to stop wasting energy. Watch the all-new version of Busta's Energy movie in the **Student Zone**.

See pages 4-5 for what you can do to save energy at home this Switch-Off Fortnight



5 years old

17,000 schools signed up

The Pod in numbers

10 million students engaged

22 countries on the Pod

## Shout out to the Scouts!

Community groups – like Scouts, youth groups and holiday or after-school clubs – can now join the Pod. Why not ask your leader to **sign up** so you can use the activities with your group pals too?

## Inside:

Your Autumn term ezine

Your student pages

## Podcast

Spread the energy-saving message this Switch-Off Fortnight

p4-5

## Podcast extra

Eco inspiration from other schools and friends of the Pod

p6-7

## Activity spotlight

Which appliances are energy guzzlers and which are energy lite?

p8-9

## The big picture

Learn about climate change and try three new quick activities

p10-11

The teachers' section

## Staff room

Our guide to getting the most out of the Pod

p12-13

## Planning for the next term

Key Pod campaigns and national events to include in lessons

p14-15

## Funding and offers

Green deals and discounts for schools

p16

Forgotten your password?

You can find the latest ezine and past issues in the **Student Zone**





# Podcast

Take your Switch-Off Fortnight campaign home this year and encourage even more people to save energy



## Imagine this scenario:

you get home from school, open the front door and discover... that there's no power! The whole street has had a power cut – that means there's no electricity to watch TV, for mum to cook dinner or to play on your Xbox! Plus it's getting dark soon, so that means no lights or heating too.

Think about all the ways in which you use electricity around the home – you may be surprised how reliant you and your family are on power for everything you do. Did you know the amount of energy used by homes in the UK accounts for over a quarter of the country's total CO<sub>2</sub> emissions?

This Switch-Off Fortnight we want you to encourage your families, friends, neighbours and local businesses to think about how much energy they use – and commit to reducing it. **Read each light bulb for ideas to get you started.**

## 1. Go undercover

Spy goggles at the ready? Then download the **energy-saving mission** and enlist the help of siblings in carrying out a secret investigation of how many appliances and lights have been left on around the home. Watch out for your parents... you don't want them to discover what you're doing (but don't switch anything off yet!)

How do schools in Singapore celebrate Switch-Off Fortnight? Find out in this issue's **Pod School Report** featuring Tanglin Trust School from Singapore.

**Click to read the interview**

p2-3

p4-5

p6-7

p8-9

p10-11

p12-13

p14-15

p16

## 4. Keep up the good habits

Download and place **'you left this on' appliance cards** next to any appliances always left on at home – or stick the **light switch designs** around the switches people regularly forget to turn off. Why not also put the **energy efficiency tips factsheet** on the front door to remind everyone to use energy more wisely?

## 3. Campaign for change

Take your campaign into the community and recruit energy-saving pledges from friends, family and other people. Secure five or more pledges at [www.jointhepod.org/energypledge](http://www.jointhepod.org/energypledge) and you could win an iPad Mini\*. Get started with our **campaign challenge take home sheet**.

## 2. Tell off your parents

Once you've gathered the results of your undercover mission, it's time to call a family meeting and reveal your findings! Tell them where they were wasting energy and encourage everyone to make a pledge to start saving it together at [www.jointhepod.org/energypledge](http://www.jointhepod.org/energypledge).

\* Terms and conditions apply

Has your school signed up for Switch-Off Fortnight yet? **Don't miss out – sign up today**



# Podcast

Be inspired by what other schools and friends of the Pod are doing in energy, science and sustainability

## High up in the sky

Could buildings one day be able to fly? An artist called Tomas Saraceno in the Netherlands has created a 'hovering observation tower', which is powered by solar energy and takes off on a windy day. It's not a 'real' building as such; but a piece of art created to accompany the expansion of Rotterdam port. Yet it raises questions about how buildings, maybe whole cities, could look in the future, and how you defy gravity to make things fly.

Have a go at making and flying paper planes in our new Flight Test Engineers activity – like this group of students from Breakfast Club at Chudleigh Primary School.

Download the activity for your age group

## Textile time!

Liven up science lessons with some new kit and equipment by arranging a Science into Schools collection this term.

Find out more on the Pod

## The Pod meets...

Games developer and quantum physicist, Dr Mark S. Everitt

### Q. What do you do?

A. I program for the web. It sounds like I spend all day at a keyboard, but I build things so different devices can 'talk' to each other. And this is really powerful because when you can do that you can tie things in your life together: for example, a tweet could tell your TV to record a show when you are out!

### Q. Do you think a lot of jobs in the future will be in technology?

A. Absolutely! The problem is that relatively few people can program for the web, so it's a well-paid job.

### Q. How did you get to where you are now?

A. I studied theoretical physics at university,

which is like physics with no lab work and extra Maths. This was my first introduction to programming for the web. I then did a PhD in a physics lab, which taught me how to get devices to talk to one another.

### Q. What did you want to be when you grew up?

A. I wanted to be a physicist!

### Q. What was it like working abroad?

A. Japan was my first experience of living abroad. It sounds like I jumped in the deep end, because not many people speak English there and the culture is very different. But the people are very friendly and in Tokyo you are never

more than a ten-minute walk from a convenience store, where you can buy anything from a sandwich to an aeroplane ticket!

### Q. Do you wish you'd done anything differently at work or school?

A. Probably my number one annoyance with my school days is that I was not exposed to programming in lessons. It really should be featured in the curriculum, along with English and Maths.

### Q. What careers advice would you pass on to today's school children?

A. Be adventurous: try everything you can get your hands on. The internet means that there's no excuse not to teach yourself new things.

Are your friends on the Pod?

Search our map

## Toot your horn to save polar bears!

After learning how polar bears were being affected by climate change, Hurst Green Primary School in Sussex led a demonstration asking cars to beep their horn in support of saving energy. Watch the movie to find out how many people tooted their horn!

Spotlight on careers

p2-3

p4-5

p6-7

p8-9

p10-11

p12-13

p14-15

p16



# Activity spotlight

What's the most power-hungry gadget in your home? Which devices are greedy guzzlers and which are energy-lite?

Put your power knowledge to the test by ranking this list of appliances in order of 1 to 9, with 1 being the least energy hungry and 9 the most.

(See page 15 for the answers).

**How much?!** Guess what UK homes spend every year on powering appliances that aren't even switched on! (See page 15 for the answer). Now zap those red dots with the **Energy Vampire Slayer** quick activity in Teaching Resources.



All details correct as of 4 September, 2013: www.johnlewis.com, www.appliancesonline.co.uk, http://uk.playstation.com, http://support.apple.com/kb/HT3559?viewLocale=en\_US&locale=en\_US, www.trendnet.com, www.samsung.com/uk, http://www.energysavingtrust.org.uk/Take-action/Start-saving-money/Changing-your-habits-room-by-room/Laundry-tips, http://www.energysavingtrust.org.uk/Electricity/Products-and-appliances/Energy-Saving-Trust

**What are your energy guzzlers?** Every appliance has a power rating, which tells you how much electricity it needs to operate. Why not download our **What is a kilowatt-hour information sheet** to work out which is the most energy-hungry appliance at home or school, then **tell us in a blog?**

Energy-lite



Energy-hungry

1	2	3
4	5	6
7	8	9

p2-3

p4-5

p6-7

p8-9

p10-11

p12-13

p14-15

p16





# Big picture

The first decade of this century was a record-breaking scorcher! Every year (except 2008) was one of the 10 warmest on record\*. But hotter temperatures aren't the only change we're going to have to adapt to as a result of global warming. Read on to discover some of the challenges and opportunities climate change may present us in the future.

## Water

As air temperature rises, the air can hold more water. This causes heavy rainfall, which can lead to flash flooding. One way of dealing with flash flooding is to put in place more 'sustainable drainage' – essentially 'natural' ways of absorbing water, such as parks and 'green roofs' in urban areas; wetlands, wildflower meadows, reed beds and ponds in the countryside.

## Homes & offices

Warmer temperatures could influence the way new homes are designed: from painting roofs white to reflect energy back into space; to using building materials that maintain consistent indoor temperatures and allow ventilation (without leaving properties vulnerable to burglars).

## Green spaces

"Cities are often warmer than the surrounding countryside. But if you plant parks, you provide an area for people to escape the heat, as it provides shade," says climate scientist, Felicity Liggins. "Trees also cool the area through the process of 'evapotranspiration' and act as air purifiers, so the air around them is cleaner."

Want to make people stand up and take notice about climate change? Try our **Design an infographic quick activity**.

This is the **LAST** of the student pages – there's only **boring Teachers' stuff** over the page...

## Wildlife

"Plants have already shown they can adapt to their surroundings," says climate scientist, Felicity Liggins. "In very dry regions, for example, some have developed waxy leaves to retain moisture." While some species will inevitably disappear with climate change, we could see new and existing wildlife adapting and surviving.

## Our bodies

Initially, warmer weather could cause more people (particularly the old, very young and sick) to become ill and suffer as a result of the heat. But over several generations, our bodies could adapt – meaning fewer people suffering from heat stress – in the same way our bodies gradually adjust to the heat if we move abroad to a hot country.

# Small steps

Learn with one of these quick activities – exclusive to the ezine

## Energy adventure

You choose the outcome of this story based on the energy-saving decisions you make along the way.

[Download the quick activity](#)

## The power of 3

Apply the 'rule of three' in this energy quiz by coming up with three answers to each question in just three minutes!

[Download the quick activity](#)

## Battle for power

If you ran the country, how would you balance government budgets with persuading households to save energy?

[Download the quick activity](#)

When you've finished these, why not **download another quick activity?**

p2-3

p4-5

p6-7

p8-9

p10-11

p12-13

p14-15

p16

Working in collaboration with the **Met Office**










# Staff room

How to get the most out of the Pod

## Switch-Off checklist

Want to take part in this year's Switch-Off Fortnight? Here's your five-point checklist to get involved:

-  **1** Sign up to Switch-Off Fortnight – be one of the first 4,000 schools to sign up and you'll receive a free **campaign pack**.
-  **2** Download some more **campaign resources** including an **energy assembly**, **posters**, **bunting**, **finger flowers** and more – to inspire students to save energy.
-  **3** Run either the **Goodbye Standby** or **Switch On to Switching Off activities** to teach students about the importance of not wasting electricity.
-  **4** Blog about your **campaign** – it'll earn you Pod Points and could win your school a great prize.
-  **5** Spread the **campaign message** by sending younger students home with the **energy-saving mission take home sheet** and older students the **campaign challenge**. Encourage all ages to make an **energy-saving pledge** with families and friends.



### Share the ezine with colleagues

The Pod ezine is cross curricular, so you can share it with other teachers in Science, Geography and other subjects too. And don't forget: more than one teacher from your school can join the Pod. **Click to share**



## How to share the ezine

We don't have students' email addresses, so you need to share the interactive ezine with them. Here are some ideas for distributing it to everyone:

**Email the link** direct to your students and eco clubs.

**Read the ezine** on a web-connected whiteboard.

Ask the eco club to **present the ezine in assembly**.

Download and print out this 'lite' **PDF version**.

Email students a link to the **Student Zone**.

Share the **ezine link** on your website or social media.

### DON'T FORGET

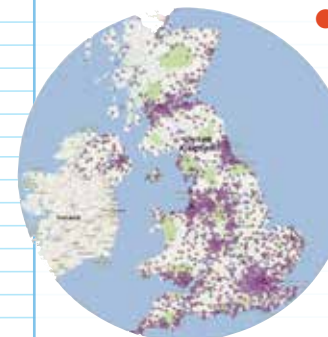
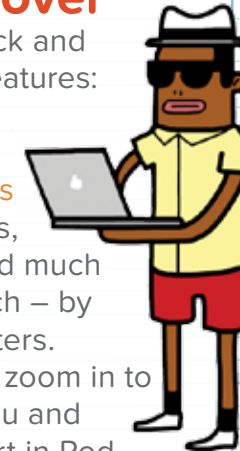
The Student Zone contains lots of great resources especially for students: such as games, movies and ideas for eco clubs. If students want to post a blog, they'll need a blog code. Find it in your My Account page. **Click here for it**

## New-look Pod

### We've had a makeover

We've listened to your feedback and added a great new look and features:

- A new search function helps you find the **teaching resources** you need, such as lesson plans, assemblies, quick activities and much more. Narrow down your search – by age, subject etc – using the filters.
- Take a look at the new **map**: zoom in to find other Pod schools near you and discover who else is taking part in Pod campaigns. Perhaps you could join up on some activities or projects?
- In our **Pod Community** section you can read the latest **blogs**, be inspired by other people's **pledges** and read some **case studies**.
- We've now opened the Pod to **community groups** too, so if you lead a group, why not sign up?



### P-p-p pick up Points!

Pod Points is our new award system. You can earn Points by downloading resources, signing up to campaigns, blogging and more. When you run an activity, make sure to tag any blogs with the activity name to win Points and an activity award. For selected activities, we'll send your class some pin badges too (limited time only). All the Points you earn go towards your school's overall total, which can be found on your school's homepage.

Find out more

## Your view

Here's your feedback on the new site so far:

"The new Pod website is looking great and very user friendly."

"I really like the [search] filters as it made it so much quicker and easier to find what I wanted."

"The children will love earning Pod Points, especially as they can see points accruing and what rewards they get."

"The videos and games are great; cool and clear design."

p2-3

p4-5

p6-7

p8-9

p10-11

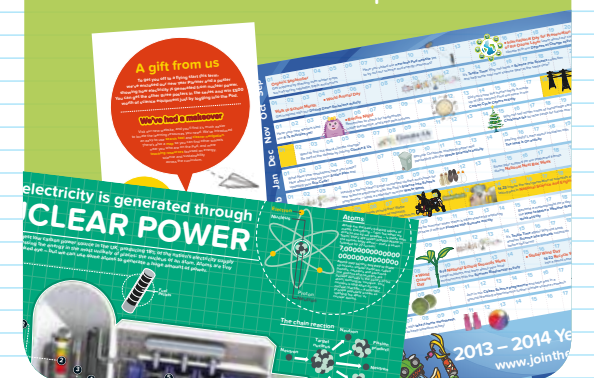
p12-13

p14-15

p16

### Did you receive your Pod Engagement Pack in the post?

Tell us what you thought of it in this short survey – and we'll enter you into a prize draw to win a £50 Love2shop voucher.



# Staff room

Plan next year's activities  
with the Pod's resources

Download  
the new  
2013/2014  
Year Planner  
out now!

JANUARY

01

## What's coming up

Get a term ahead and plan your lessons for 2014 with our list of events focused on energy, science and sustainability.

### January

Kick off the new year by asking the Eco-Committee to review the school's Action Plan and update the school's Eco Code if necessary.

There's a lot of waste after the festive season. Why not recycle Christmas wrapping paper and packaging with the [Waste Scientists activity](#)?

Feeling chilly? Learn about insulation with [The Heat is On activity](#).

**20-31** Take part in [Big Schools' Birdwatch](#) with one hour of birdspotting. Why not combine it with the Pod's [Spring Biodiversity activity](#)?

Look out for the [Spring term ezine](#) – and don't forget to share it with students.

### February

Having a spring clean? Swap unwanted clothes and shoes for new science equipment with [Science into Schools](#) – book a collection now for next month's [Waste Week](#).

**14-20** Show your support for our feathered friends during [National Nest Box Week](#).

### Don't forget...

[Waste Week](#) takes place in March 2014 and is now in its third year! Sign up to next year's campaign and we'll send you a free campaign pack with lots of great resources to help you encourage students and their families to 'Reduce, Reuse and Recycle'.



### March

Need a rainy day activity? Teach aerodynamics and fire up students' competitiveness with our latest Science activity, [Flight Test Engineers](#).

This year we're encouraging schools to hold their [Waste Week](#) at any time during March. It's a great opportunity to teach students about the importance of the 3R's with the Pod's [waste activities](#) and [take home resources](#).

**14-23** Inspire the next generation of scientists and engineers by taking part in [National Science and Engineering Week](#).

**22** [World Water Day](#)  
Show your support by running our [Lose your Bottle activity](#).

## Quiz answers from pages 8-9



### 1 DVD player

A Blu-ray and DVD player uses about 3kWh a year ( 7 hours a week usage).

### 2 Broadband router

Despite being on 24x7, a wireless home router only uses about 26kWh a year.

### 3 Hair straighteners

If used 30 mins/day, hair straighteners consume about 27kWh a year.

### 4 TV

A 42-inch Smart TV with Freeview consumes about 69kWh a year.

### 5 PlayStation 3

Playing 10 hours a week equates to an annual power consumption of 98kWh.

### 6 Desktop computer

An Apple iMac used for 21 hours a week consumes 99kWh a year.

### 7 Kettle

Brewing two cuppas, four times a day, uses a surprising 146kWh of power.

### 8 Fridge

An A+ tall family fridge uses about 149kWh of electricity annually.

### 9 Washing machine

An A++ washing machine uses about 205kWh a year, based on 220 washes.

Setting up an eco club this term?  
Read our [top tips](#) on getting started  
and recruiting members.

## Don't miss out

If our feature on adapting to climate change on page 10 sparked students' interest in our planet, download the Pod's [climate science assembly](#) and we'll send you a [carbon cycle poster](#) (below left).



Get your hands on some cool new science kit by booking a [Science into Schools collection](#). You'll receive a free campaign pack, including a [textiles recycling poster](#) (above right).

Did our story about flying buildings on page 6 pique your class' imagination? Get them to create their own flying structures with the Pod's [Flight Test Engineers activity](#).

### Explore electricity!

Did you know you can now book a trip to one of the visitor centres at EDF Energy's nuclear power stations through the Pod?

[Find out more](#)



**Answer (page 8)** UK households spend £50 to £86 a year on standby. Turn off devices at the plug and you'd save enough money to buy a new scooter!

p2-3

p4-5

p6-7

p8-9

p10-11

p12-13

p14-15

p16



# Funding and offers

For the latest freebies, special offers on cool green kit and funding to get your eco plans off the ground, try one of these quick links:

- It's textile time! Exchange unwanted clothes, shoes and textiles for new science equipment with our **Science into Schools initiative**.
- **EDF Energy's Green Fund** has now given more than £2 million to 129 educational projects to develop renewable energy and sustainability initiatives. Apply, and your school could be one of them!
- Inspired by our electricity generation posters? Bring renewable energy to life in the classroom with **10% off renewable energy kits**.
- **Live Unltd** is helping budding scientists and entrepreneurs aged 11-21 with up to £5,000 in funding and support to develop their great ideas.
- **Grimple's Green Grants** are offering grants of up to £1,000 to support green projects, like St Paulinus School's new butterfly garden.
- Loved our science stories this issue? Encourage young Einsteins with **10% off interactive science workshops** for schools.
- If you enjoyed learning about life at a school in Singapore, consider creating your own partnership with a school in China or elsewhere in the world, with support from the **British Council**.

**Did you enjoy the ezine?**  
**Click here to send it to a friend**

