



for a living planet®



**LEARNING
FOR SUSTAINABILITY**

**can
recycling
make a
difference?**

“Lives, like money, are spent. What are you buying with yours?”

Roy H. Williams, marketing consultant



Learn

Welcome to Learn

WWF's termly free poster resource for schools

This edition of Learn focuses on 'Purchasing and Waste', one of the 'Doorways' or access points identified in the National Framework for Sustainable Schools, published by the Department for Children, Schools and Families (formerly DfES) in January 2007. It is also part of the Waste Minimisation Topic in the Eco Schools Scotland Programme. See the 'In focus' section for more details.

This issue of **Learn** focuses on the issue of plastic, particularly its impact on the marine environment. We hope that you learn something new and find it a topic that is of interest to you and your pupils. We always value your feedback on our resources, so do let us know what you think of this issue and if/how you have used the activity ideas. Contact kgates@wwf.org.uk

INSIDE THIS ISSUE

- A2 full colour poster with inspirational quotation
- Questions to explore the poster image and quotation with pupils
- Starter activity ideas with links to further online activities
- 'In focus' – an insight into the issues of purchasing and waste and how it relates to school life



Velvet Young Nature Photographer of the Year

Nine year old Brendan Harper from Suffolk won the Velvet Young Nature Photographer of the Year competition, in association with WWF. Celebrity judge Philippa Forrester said of his photograph of a frog: "The light is just perfect and gives the frog a twinkle in the eye." To see all photos, visit www.velvetbabymd.com/wwf. The website also contains fun games, interesting facts and information on how everyone can get a WWF baby panda soft toy from special promotional packs.



The competition was launched to celebrate the partnership between Velvet toilet tissue and WWF. Velvet manage their forests in a way that benefits both people and nature and are also helping WWF in its work to protect the planet.



Our thanks to Velvet for sponsoring this issue of Learn.

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'I am rich – I've got everything I need'

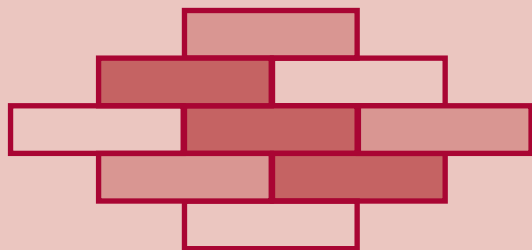


Show the short video on www.messageinthewaves.com to pupils and discuss the meaning of some of the quotes from the film, e.g. 'I am rich – I've got everything I need' and 'If you have the privilege of enjoying something, you have the responsibility to protect it'. Pupils can then make a collection of images representing two different interpretations of being 'rich'.

And/or

Facilitate a brainstorm to produce a collection of words associated with being rich and use a diamond ranking diagram to work out which out which are the most important to pupils, e.g. health, fashion, family, iPod, friendship, wildlife and habitats, mobile phone, money, computer games.

Most Important



Least Important

What's wrong with plastic bags?



Pupils can produce an outline plan for a BBC Newsround or Espresso News Bites report about the environmental problems associated with the use of plastic bags. They should include information about the nature and scale of the problem and efforts made to tackle these problems.

www.plasticbagfree.com/facts.php

www.plasticbagfreehebdensbridge.co.uk/content/blogcategory/17/36/

www.mcsuk.org

Olive ridley turtles

Pupils can explore the 'movies' and 'images' section on the www.arkive.org website to create a Factfile about the Olive ridley and other species of marine turtle. They should include information about appearance, behaviour and predators. The 'more information' section will help them find out about threats and conservation. Finally, pupils can produce an explanation of how sea turtles are affected by plastic litter and pollution

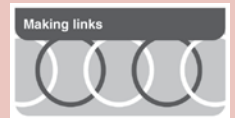
School footprint

With your pupils, explore the Carbon detectives' lab and the Schools' Global Footprint calculator to find out how purchasing and waste effects your school's carbon dioxide emissions. Pupils can be encouraged to make notes about the different ways that your school community can reduce its purchasing and waste footprint:

www.carbondetectives.org.uk/thelab/

www.ltscotland.org.uk/schoolsglobalfootprint

The very hungry school



Pupils can visit the stockroom and/or kitchen to look at some of the items that are consumed by the school. Ask them to make notes to answer questions such as what is the item is made from, where was it made, how was it transported, how is it packaged, what happens to the packaging, what happens to the item at the end of its use, can it be reused or recycled, how long will it take to decay. Encourage pupils to draw a mapping diagram to show how the items that are bought and used by your school are linked to environmental problems such as habitat loss, endangered species, toxic pollution, litter and global warming

Audit



Pupils can explore the following websites and then conduct an audit to identify areas where your school can become more sustainable by:

Reducing consumption, Reusing & Recycling
www.recyclezone.org.uk/iz_fightwaste.aspx

Buying Greener

<http://shop.wwf.org.uk/eco-household>

Buying Recycled

www.recycledproducts.org.uk/view/index.cfm

Buying Ethically

www.ethicalconsumer.org/aboutec/tentips.htm

Plastic bag free living

Your pupils could organise a campaign to reduce the number of plastic bags used by you/your class/household/school/street and/or town. Throughout their campaign, they should think about how they will persuade people to take part and monitor progress:

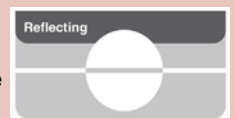
www.plasticbagfree.com/howto.php

www.plasticbagfreehebdensbridge.co.uk/content/view/22/42/

Declaration

Your pupils could create a 'Sustainable purchasing and waste declaration' – a statement of intent that's been developed and accepted by your school community. Send a copy of your declaration to kgates@wwf.org.uk and we will publish the best examples on our website.

Purchasing and waste



Ask pupils to reflect on the following:

- When I look at the photo of the turtle on the poster I think...
- When I look at the photos of marine pollution I feel...
- This topic has helped me realise that...
- In future I will...

Espresso Links

As you maybe aware, WWF has a partnership with Espresso Education. If you are a subscriber to Espresso Education, you can find WWF's Sustainability Module under the Geography 2 Channel.



Using the poster on the reverse as a stimulus, the following questions will allow pupils to explore a range of issues related to issues of purchasing and waste. Please note: Question 6 requires printed copies or online access to photos of marine litter – these include images of animal suffering:

www.messageinthewaves.com/gallery.php

- 1 What can you see?
- 2 What do we know about marine turtles? What sort of things do we need to know if we want to conserve this endangered species? How could we find this information?
- 3 What immediate dangers do turtles face once they've hatched?
- 4 What does this turtle need when it's born? What will it need during its lifetime? How will these needs affect the environment? [NB It is important to distinguish between 'wants' and 'needs']
- 5 Compare the needs of the baby turtle with those of a newborn human baby: What do human babies need and/or want? How will these 'needs' and 'wants' affect the environment during its lifetime?
- 6 Look at the following images – What sort of materials is the litter made from? How do these photos make you feel? www.messageinthewaves.com/gallery.php
- 7 Do you think that you or your family could be responsible for any of the marine litter shown in the photos?
- 8 How does plastic waste affect marine creatures?
- 9 In what other ways is the marine environment affected by the things we buy, the things we use and the things we throw away?
- 10 Think about how you might create a sustainable purchasing and waste plan for your school:
 - What do you need to know? How will you find out?
 - How can your school reduce its use of natural resources?
 - How can your school increase its reuse of materials?
 - How can your school increase its recycling of materials?
 - How will you know if you've made a difference?
- 11 How might you persuade your parents, friends and other people to become more sustainable when it comes to buying, reusing, recycling and waste?
- 12 Look at the quote at the bottom of the poster.
 - What do you think it means?
 - List some of the 'hidden extras' that are included with the things you buy (e.g. loss of natural resources, pollution and CO₂ emissions from energy use and transport, waste, etc)
 - List examples under the following headings 'Sustainable ways to spend your life' and 'Sustainable ways to spend your money'.

ANSWERS AND INTERESTING FACTS
 1. Olive ridley turtle hatching from egg on beach in French Guiana. 2. Information about feeding, breeding, relationship with other species in habitat, behaviour, threats. 3. Predation from range of animals as they cross the beach and enter the ocean – rats, jackals, seabirds, crabs, fish. Hatchlings born at night instinctively move towards the brightest horizon – light pollution from coastal development means that hatchlings often move inland by mistake. See www.rakive.org. 4. Food, safety in numbers. 5. In the UK we throw away a third of the food we buy and create our own body weight in rubbish every 49 days. 7. 80% of marine litter comes from the land; the average UK resident creates about 50 kg of plastic packaging waste per year. Plastic takes between 450 and 1,000 years to degrade. 8. Over one million seabirds and about 100,000 seals, sea lions, whales, dolphins, other marine mammals and sea turtles choke or get tangled in plastic debris every year. Plastics break down into small toxic particles – microplastics – which enter the food chain. In some parts of the ocean, microplastics outnumber plankton by a ratio of 30:1. 9. Fishing – turtles, whales and dolphins killed as bycatch. CO₂ emissions from transport and energy use associated with the things we buy – the huge amounts of CO₂ absorbed by the oceans has made them more acidic. Chemical pollution – household and other cleaning products washed into seas through household drains etc.

Purchasing And Waste

“By 2020, the Government would like all schools to be models of sustainable procurement, using goods and services of high environmental and ethical standards from local sources where practicable, and increasing value for money by reusing, repairing and recycling as many goods as possible.”

National Framework for Sustainable Schools, Department for Children, Schools and Families, 2007

We've been using plastic since the 1950s. Current production stands at about 200 million tonnes per year and is set to double in the next 20 years. Around half of this is used for disposable items of packaging that are discarded within a year. About 80% of marine waste comes from land based sources – homes, schools, shops, take-away restaurants – and around 100 million tonnes of plastic has already ended up in the oceans. A further 100 million tonnes is now being added every three years. Plastic lasts between 400 and 1,000 years and breaks down into smaller and smaller particles of plastic and a residue of toxins. The oceans are rapidly becoming a plastic soup in which particles of plastic outnumber zooplankton by a ratio of about six to one; plastic now forms part of the diet of nearly all marine wildlife. Plastic accounts for 80% of all marine litter and is responsible for the deaths of at least one million seabirds and about 100,000 seals, sea lions, whales, dolphins and sea turtles every year. These animals either choke on items like balloons and plastic bags or become entangled in the plastic debris. Many young seabirds become so full of plastic litter that they stop eating and starve to death. The full effects of the toxins that plastics release into the marine food chains are still not fully understood.

Rebecca Hosking in Modbury and the ‘bag ladies’ of Hebden Bridge have been at the forefront of the battle against the plague of plastic bags: one million plastic bags used in the world per minute; 200 million plastic bags littering UK beaches, streets and parks ever year. Rebecca's reaction to the plastic pollution that she saw in Hawaii was to persuade people in her home town of Modbury to become the UK's first plastic bag free town. The Hebden Bridge ‘bag ladies’ helped their town to become part of the Plastic Bag Free community, pointing out that we've only been using plastic bags for the last 30 years and that if we managed to survive without them in the past then we can learn to manage without them now! Similar campaigns are taking place in cities, towns and villages around the world, and schools and young people are playing an active role, finding out what shoppers think about plastic bags, searching for the best site for a bag recycling bin, spreading the plastic bag free message, creating murals out of plastic bags and making their own bags for life.

So how can schools help?

UK schools spend about £1 billion on resources and create approximately 700,000 tonnes of waste each year. Average recycling rates are only 32% despite the fact that 45% of school waste is paper based. Catering accounts for approximately 21% of all school waste. Purchasing and waste is responsible for the largest share of carbon dioxide emissions in primary schools (32%) and the second largest in secondary schools (23%).

Sustainable schools need to address purchasing and waste at three different levels:

- **Curriculum** – what the school teaches through the content of its lessons, the attitudes that it fosters, the values that it promotes and the action that it takes.
- **Campus** – what the school buys, how it uses what it buys and how it disposes of these things when it's finished using them.
- **Community** – what the school does to promote sustainability within its local community.

Most schools have made some progress in the 3Rs – reduce, reuse and recycle and are now beginning to address a number of other questions related to the issues of purchasing and waste:

1. What more can we do to reduce the amount that we consume?
2. What's the point of recycling if we don't buy recycled goods?
3. What does this mountain of lost property say about our attitudes?
4. How can we reduce the amount of packaging in our packed lunches?
5. Are plastic bottles and water coolers the most sustainable way to provide water in the classrooms?
6. What sorts of cleaning chemicals are we pouring down the school drains and are there any eco-friendly alternatives?
7. Should we/Can we/Do we have a sustainable purchasing policy that gives preference to goods such as fair trade, locally produced, eco-friendly, green, ethically traded, organic?

Visit the Marine Conservation Society's website – www.adoptabeach.org.uk – for a full list of bag free towns and access to Rebecca Hosking's film.