One Sun
One World

A cross-curricular resource for primary and secondary schools
In One Sun One World, the oak tree, the panda, the polar bear and the tiger remind us of the great wonders and beauties of the earth and the intricate threads of life linking every living thing. The children of the world tell us about the amazing web of trade and communication which has produced our exciting modern world with its global transport systems and its ever-changing technology.

But as the musical unfolds, the characters become more and more worried by changes beyond their control. The children of the world wonder how they can help to protect this wonderful life we all know.

One Sun One World was given its premiere performance in the Royal Albert Hall on 22 October 2009. The English Chamber Orchestra, augmented by senior students from the Royal College of Music, London, accompanied a combined choir of over 1,500 children from schools throughout the Royal Borough of Kensington and Chelsea, accompanied by the choir of St Augustine’s RC High School, in Blackburn.
# One Sun One World — A cross-curricular resource for primary and secondary schools

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INTRODUCTION

The intention of this pack is to support a school choosing to perform some or all of One Sun One World by providing a wider school experience through the curriculum, with activities and action for the whole school community.

This pack seeks to help teachers and students explore and appreciate the wonder of our world. It aims to:

- develop a sense of a living planet with a complex ecosystem shared by all living things
- develop a sense of the great forces that created and dynamically change the planet
- foster a caring attitude towards the one world that we all depend on
- support action to safeguard the natural world, tackle the threat of climate change and help people to change the way they live

Who is the resource pack for?

- Teachers and their pupils of 7 to 11 year-olds
- Teachers and their pupils of 11 to 14 year-olds
- Schools of all types in all areas, including schools with specialist Performing Arts status and Performing Arts schools.
- School communities including all school staff, governors, parents and the wider community in which the school is situated

What does it offer?

- Assemblies, activities, resource sheets, extension work, ideas for action, hyperlinks to further information.
- Curriculum links to areas of learning and subjects in the curricula of England, Northern Ireland, Scotland and Wales. The activities are cross-curricular in their approach but can also be used to fit with the schemes of work of many subjects. The main subjects that the activities relate to are sciences, geography, history, social studies, religious and moral education, literacy, expressive arts, personal and social education.
- Support for learning for sustainability for the whole school community.

How to use this resource

This resource is intended to be flexible. It was written to be used in a variety of subjects and in a cross-curricular way. Teachers and other adults in the school community can choose to use an assembly, activities and actions as appropriate to the school circumstances. The main activities are designed to fit into 40 to 60 minutes – the length of an average lesson. (See the Curriculum Links below.) There are also shorter activities and extension activities.

All the activities can be used

- in subject lessons or as part of an inter-disciplinary approach
- as part of a tutorial programme, or form-time
- as workshops on ‘off-timetable’ or ‘focus’ days and weeks
- as sessions at school or community events
Curriculum links

**England**
The One Sun One World activities fit with the National Curriculum requirements of the subjects below but there are many opportunities for cross-curricular approaches.

Key Stages 2 and 3
- Art and design
- Citizenship
- English
- Geography
- History
- Music
- Science
- Personal, social and health education
- Religious education


**Northern Ireland**
The One Sun One World activities fit with the Northern Ireland Curriculum areas of learning below but there are many opportunities for cross-curricular approaches.

Areas of learning at Key Stage 2
- Language and literacy
- The arts
- The world around us
- Personal development and mutual understanding
- Religious education

Areas of learning at Key Stage 3
- English
- The arts
- Learning for life and work
- Environment and society
- Science and technology
- Religious education

Find out more at [www.nicurriculum.org.uk](http://www.nicurriculum.org.uk)

**Scotland**
The One Sun One World activities fit with the Curriculum for Excellence requirements in the curriculum areas below but there are many opportunities across the curriculum.

- Sciences
  - Planet Earth
  - Biodiversity and interdependence
- Social studies
  - People, place and environment
- Expressive arts
- Languages
- Religious and moral education

Wales
The One Sun One World activities fit with the Curriculum requirements in the subjects below but there are many opportunities across the curriculum.

Key Stages 2 and 3
- English
- Welsh
- Science
- History
- Geography
- Art and design
- Music

Find out more at http://wales.gov.uk/topics/educationandskills/schoolshome/curriculuminwales/arevisedcurriculumforwales/?lang=en

What is sustainable development?
Sustainable development is a way of thinking about how we organise our lives and work – including our education system – so that we don’t destroy our most precious resource, the planet.

Sustainable development means inspiring people in all parts of the world to find solutions that improve their quality of life without storing up problems for the future, or impacting unfairly on other people’s lives. It must be much more than recycling bottles or giving money to charity. It is about thinking and working in a profoundly different way.

[Source of definition: Sustainable schools website on Teachernet]

The Teachernet website has now been decommissioned. Relevant content can be found on the Department for Education website. The Teachernet site has been archived and is accessible via The National Archives website.

How does this resource support learning for sustainability?
This resource has been designed to support curriculum work that can enhance the staging of a production of One Sun One World. It aims also to raise awareness of sustainability issues and to support education for sustainability. Within each activity there are resources and questions which focus on aspects of sustainability. Teachers will find other opportunities to use the activities and resources to support education for sustainability.

The One Sun One World musical contains many themes that can be developed to explore issues of sustainability. These themes include:

- food
- energy
- oceans
- consumerism
- climate
- wildlife
- ecology
- global connection

- drink
- water
- waste
- environment
- biodiversity
- habitats
- biosphere
- change and development
**What are sustainable schools?**

A sustainable school prepares young people for a lifetime of sustainable living, through its teaching, its fabric and its day-to-day practices.

It is guided by a commitment to care:

- for oneself;
- for each other (across cultures, distances and generations); and
- for the environment itself (far and near).

Above all, sustainable schools contribute to sustainable development. They make a positive effort to demonstrate responsible practices for their young people and communities, and engage them in learning about the issues and potential responses.

**England**

You can find out about education for sustainable development and the National Framework for Sustainable Schools as a whole school approach and linked to the curriculum at The Teachernet website.

The National Framework for Sustainable Schools help schools understand what they need to do to achieve this aim. It sets out:

- a commitment to care
  - care for oneself
  - care for each other
  - care for the environment
- an integrated approach to campus, curriculum and community
- eight ‘doorways’ or sustainability themes which are entry points or places where schools can establish or develop their sustainability practices.
  - Food and drink
  - Energy and water
  - Travel and traffic
  - Purchasing and waste
  - Buildings and grounds
  - Inclusion and participation
  - Local well-being
  - Global dimension

Find out more at Teachernet.

**Scotland**

Sustainable development is identified in the Curriculum for Excellence as an important theme, along with enterprise, citizenship, international education and creativity, which needs to be developed in a range of contexts. Learning relating to these themes is therefore built in to the experiences and outcomes across the curriculum.

Learning and Teaching Scotland has provided resources to support learning and teaching on sustainable development and action is being taken by the Scottish Government and partners as part of the UN Decade of Education for Sustainable Development. Learning for Change sets out the Scottish government’s approach for the second half of the UN decade as we work to integrate the principles of sustainable development into all forms of education in Scotland – both formal and informal.

Find out more: [www.scotland.gov.uk/Topics/Education/Schools/curriculum/ACE/susdev](http://www.scotland.gov.uk/Topics/Education/Schools/curriculum/ACE/susdev)

**Wales**

In Wales, the Education for Sustainable Development and Global Citizenship
(ESDGC) strategy is now firmly embedded in policies, guidance and school inspection. ESDGC offers an overarching concept for schools to be able to see the links and interrelationships between aspects such as energy use, the loss of biodiversity, the impacts of global poverty and how culture and identity affect the way we interpret and value things.

Find out more at www.esd-wales.org.uk

N Ireland
In Northern Ireland, Education for Sustainable Development (ESD) should infuse the whole school ethos. Schools could demonstrate their commitment to diversity, social justice and environmental responsibility through a range of activities. For example: waste management strategies, healthy eating initiatives, local community links, outdoor learning opportunities, global links and partnerships, ethical purchasing policies and practices, promotion of biodiversity in the school grounds, links with environmental and development non-governmental organisations and participation in competitions and awards.

ESD features in Connected Learning and is a Thematic Unit in Key Stage 3. There are strong links between ESD and elements of Local and Global Citizenship. While Citizenship and other subjects such as Geography, Science, Technology and Design and History may be seen as the drivers of ESD, it can be developed in all learning areas.

Find out more at the Northern Ireland Curriculum website www.nicurriculum.org.uk/connected_learning/thematic_units/sustainable_development/index.asp
The resources and activities are organised in the five journey themes below. There is also a ‘Starting out’ section which contains generic activities which can be used to develop any theme within the musical or as introductory activities before setting out on one of the journey themes. These generic activities fall mainly within the expressive arts curriculum area.

Teachers and those leading activities can choose to take one or more journeys. The journeys follow the order of the story of the musical but teachers can pick the journey or journeys that fit their purpose.

The activities and information in this resource pack enable the school community to make journeys through space and time to discover one world – our world. Journeys of discovery take us through history and around the world to find out how our lives came to depend on the resources of our planet and why our planet is so precious.

In making these journeys, the whole school will enjoy the build-up and experience of a performance of One Sun One World and learn more about the ideas behind the songs, the narration and the music. After performances of the musical, the enthusiasm and fun can be harnessed and the learning can continue.

The resources and activities use characters and songs from the musical but the musical is so rich with ideas and concepts that teachers and pupils will be able to think of many more activities than those contained within this pack.

1. One Sun One World journey through the elements
   - world, eco and climate systems
   - water, ice and oceans
   - fire, sun and hot places
   - air, wind and global warming
   - Earth and continents.

2. One Sun One World journey of life
   - evolution
   - plant-life (oak tree)
   - biodiversity
   - animals (polar bear, tiger, panda)
   - people
   - complex web of life.

3. One Sun One World journey of development and discovery
   - civilisations
   - explorations
   - trading and sharing (cacao)
   - the quest for knowledge and power
   - development
4. One Sun One World journey of today and tomorrow

- process of change
- consumption
- limited resources
- values and vision
- alternative futures
- uncertainty
- justice and equity

5. One Sun One World journey of one wonderful world

- global citizenship – safeguarding the natural world
- global citizenship – tackling climate change
- global citizenship – changing the way we live
- celebrating one wonderful world
- taking action for a one planet future
STARTING OUT

This section sets out some ideas and activities for getting the whole school community involved with the excitement of the producing One Sun One World and the themes that it presents.

In this section are:

• Preparing for the musical – ideas to include the whole school in supporting a production
• Assemblies for 7-11 year olds and 11-14 year olds
• General activities – these are types of activities that can be adapted by teachers to fit different age groups and a variety of themes and resources

Choosing the scale of production

The musical is a wonderful opportunity to involve large numbers of the school community in a production but it is not necessary to present a complete performance. Some schools may decide to focus on part of the musical or choose one or more songs to present in a concert performance. Others may decide that one or two classes will learn just one or two of the songs. Some schools may choose to do both. The way in which the musical is written allows schools extensive flexibility in what they choose to do.

Activities to support a production

There are many opportunities to involve pupils and the school community who may not be singing in the musical in other ways to support a production. Why not get the school council involved?

• Communicate
  
o Write press releases and contact the media to let them know about the production.
o Use notice boards to tell the school community what is happening, use photographs and interviews.
o Use a corridor to present a timeline of the musical production from first ideas to the aftermath – use photographs and quotes.
o Use the school website to present information and develop interest, use blogs, interviews, photos, video and podcasts of rehearsals, interviews with characters in the musical.
o Have a poster competition to advertise the performance, include the One Sun One World logo.
o Make visits to tell people what you are doing – sing a song in the community.

PREPARING FOR THE MUSICAL
Create
- Design and produce programmes for the performances.
- Rewrite the narrations that tell the story of One Sun One World so they can be easily understood by younger pupils and so that the environmental message is clear for them.
- Make certificates for those involved – use recycled or home-made paper.
- Design stickers and badges to promote One Sun One World – make it into a competition.
- Create costumes for the characters out of recycled materials. Use materials from a scrap store – find one near you at www.childrensscrapstore.co.uk/Directory%20of%20Scrapstore.htm.
- Bake and ice some One Sun One World biscuits or cup cakes for the interval.
- Make a special gift for everyone who attends the performance to take home.
- Make a ‘goody bag’ for everyone to take home, containing something made from recycled materials, a homemade treat, a homemade badge and a ‘challenge leaf’ with one way to become more green and conserve the Earth's resources.

Construct
- Build a set for the musical using recycled material.
- Make a One Sun One World installation in the school foyer or playground.

Collect
- Collect bottle tops and create a One Sun One World mosaic from them in the playground or on a large wall.
- Recycle pieces of fabric and create a One Sun One World patchwork quilt with members of the school community supplying a square each.
Assemblies are a good way of introducing the One Sun One World musical to the whole school.

**Assembly – 7-11**
- Present one or two songs from the musical to the assembly.
- Ask a group of pupils to prepare a PowerPoint presentation based on one of the activities in this pack that they have been involved in.
- Present a drama based on one of the scenarios in this unit.
- Ask the school council to make a presentation to the school about the ways in which they will support One Sun One World.

**Assembly – 11-14**
- Present one or two songs from the musical to the assembly.
- Ask a group of pupils to prepare a PowerPoint presentation based on one of the activities in this pack that they have been involved in.
- Ask a group of pupils to give a presentation about actions that they are taking on green issues.
- Ask pupils to choose some poems or extracts that relate to the title One Sun One World and present them and explain the One Sun One World theme.
- Ask a group of pupils to prepare excerpts of music that reflect the themes of One Sun One World.
- Ask the school council to make a presentation to the school about the ways in which they will support One Sun One World.
Types of teaching and learning activities
These are the type of active-learning activities that work well with learning for sustainability for the whole school community. These approaches can be applied in a range of learning contexts.

- Pupils taking responsibility for researching different aspects of a topic
- Presenting research findings and other information to the rest of the class or a wider audience
- The use of group work, collaborative tasks and peer learning
- Encouraging pupils to be part of the decision-making process
- Critical thinking (using questions such as ‘why is it like this?’, ‘how did things get to be this way?’) and systems thinking (using questions such as ‘how is this linked to other issues?’, ‘how does this affect other things?’)
- Use of role playing to develop understanding of different perspectives and experiences
- The use of reflective thinking
- Different ways in which pupils can individually or collectively take action to address sustainability issues
- Organising of special projects or events related to sustainability
- School grounds provide opportunities within a safe environment for pupils to develop an understanding of, and affiliation with, other living things
- Growing food and other plants
- Parental or community involvement in learning for sustainability
- Linking beyond the local community to the wider world and the development of a ‘local to global’ progression providing further opportunities to explore the interconnected nature of the world
- The involvement of outside experts in learning for sustainability activities to increase pupils’ understanding of ‘real world’ issues

Drama activities
To enable students to further explore the issues raised in One Sun One World, they could:

- Participate in some ‘hot seating’ sessions in small groups in which one person takes on the role of a character from One Sun One World and the others ask questions about aspects of his/her life they would like to know more about. They could also work in pairs, one taking on the role, the other being him/herself. They take it in turns to ask questions about the environment to explore their own attitudes and views.

- Work in pairs to develop a small scene based on some aspect of the musical. Select pairs to perform the scene once and then again. During the replay, any member of the audience is allowed to shout ‘Stop!’, step forward and take the place of one of the characters, showing how they could change the situation to enable a different outcome. Several alternatives may be explored by different members of the audience. A facilitator is necessary to communicate between the players and the audience.

Activities using drama and optional music
These activities were written by Marilyn Groves and developed with schools who were preparing for the premiere of One Sun One World. They also originally involved the English Chamber Orchestra, so music was very much a part of these activities.

However, it is quite possible to carry out the activities without music. Or to include recorded music or songs and pieces that the children already know, as well as songs and music from One Sun One World.
You can develop these activities as much or as little as you wish. You may like to run through the story and then ask children to improvise actions in groups and leave it at that. Or you may wish to rehearse and produce something more polished and finished, perhaps giving a performance to the whole school, teachers and parents.

**Pandas in the Misty Mountains (for 7-11 year olds)**

Use Resource Sheet 1 with the narration, actions and music for the story of the Pandas in the Misty Mountains.

This story provides an imaginative extension to the role of the Panda in *One Sun One World*. The children could learn to sing *Silent Pawprints*, and you can discuss the situation of the giant pandas, whose habitat is being encroached on so that they have to range further to find bamboo to eat.

The children will need to be divided into three groups. You will probably want to tell the story first and then work with the groups on their actions. If you choose to use a variety of music, you can build it up gradually and work with the class using instruments and voices as appropriate. Adapt the story, actions and music to fit with the circumstances and the age group you are working with.

**Polar Bears and Tall Tales (for 7-11 year olds)**

Use Resource Sheet 2 with the narration, actions and music for the story of Polar Bears and Tall Tales.

This story provides an imaginative extension to the role of the Polar Bear in *One Sun One World*. The children could learn to sing *Silent Pawprints*, and you can discuss the situation of polar bears whose habitat is being affected by climate change so that they have difficulty ranging on the ice floes to find food.

The children will need to be divided into three groups. You will probably want to tell the story first and then work with the groups on their actions. If you choose to use a variety of music, you can build it up gradually and work with the class using instruments and voices as appropriate. Adapt the story, actions and music to fit with the circumstances and the age group you are working with.

**Three Tales of Cacao (for 7-14 year olds)**

Use Resource Sheet 3 with the narration, actions and music for the story of Three Tales of Cacao.

This story provides an imaginative extension to the role of Cacao in *One Sun One World*. The children could learn to sing *If the winds had never blown*. To prepare for the drama work you may wish to discuss the history of cacao and how it was brought to Europe by explorers in the 16th century. You could carry out some project work on chocolate, where it comes from and how it is traded (see the activities in Unit 3.)

For the drama activities, children will need to be divided into three groups. You will probably want to tell the story first and then work with the groups on their actions. If you choose to use a variety of music you can build it up gradually and work with the class using instruments and voices as appropriate. Adapt the story, actions and music to fit with the circumstances and the age group you are working with.
Music activities

Using the songs of One Sun One World
Here are some suggestions for using one or more of the songs of One Sun One World:

• Clap the rhythms
• Accompany on available instruments
• Write additional verses

Using a variety of music

• Choose and play music that has some connection to the themes of One Sun One World. Be as eclectic as you like! Ask pupils for their own suggestions. For example:
  o Sinfonia Antarctica by Ralph Vaughan-Williams
  o The Planets by Gustav Holst
  o The soundtrack to the film of Lawrence of Arabia by Maurice Jarre evoking the desert
  o Sun arise sung by Rolf Harris
• Pupils could make PowerPoint presentations to go with music – use photos, paintings, wordscapes and so on.
• As inspiration, use YouTube to find different short films related to One Sun One World themes. Some suggestions:
  o Terra Nova: Sinfonia Antarctica

This is the trailer for DJ Spooky/Paul D Miller's large scale multimedia performance work: an acoustic portrait of a rapidly changing continent. There are plenty of visuals and lots of pieces of information and statistics about ice and water and environmental change. Suitable for 11-14 year olds.

www.youtube.com/watch?v=zCpPNxCnixY&feature=related

DJ Spooky – Terra Nova: Sinfonia Antarctica
A live performance with a trio and DJ on stage. Suitable for 11-14 year olds
www.youtube.com/watch?v=zJ7Y7GzxWZM&feature=related

  o The Polar Bear Song

The Polar Bear Song is a catchy tune by science teacher Tom Rugg, which contains a gentle message about climate change. The Polar Bear Music Video forms part of the BBC Wales Green Season of programming.

• Make a musical washing line using all sorts of scrap materials. Find out how to do it at
Art activities

• Inspiration!

You can read about art activities that schools have carried out in connection with One Sun One World here:

wwf.org.uk/what_we_do/working_with_schools/one_sun_one_world Musical/curriculum_links/literacy/art222222/art_projects.cfm

• Make pictures and collages based on shapes in nature – circles in a tree, ripples on a pond, different leaves.

• Make pictures and collages based on colours in nature – berries in the hedgerow, flowers around the school, leaves on different trees.

• Make special outdoor art pieces from leaves, stones, rocks, snow and sand. Consider how permanent or temporary they will be and how important that is.

• Animals are not rubbish – make animals from waste materials. Have a look at the website www.animalsarenotrubbish.co.uk for inspiration.

• Have a competition to design a poster for One Sun One World.

• Use the One Sun One World logo as a starting point for some animal pictures or sculptures – give them some descriptive names!

‘Our whole school is getting involved with the ‘One Sun One World’ project. All classes from nursery to year 6 are creating artwork which will combine together to make our rainforest installation. We are looking forward to turning our new school library into a rainforest with snakes, lizards, jaguars, gorillas, parrots, frogs and many more!’

Bevington Primary School
Photo activities
Photo activities make excellent starter activities. Use photographs included as resources here or use photos from the websites suggested in the resources section. These activities can be used with the 7-14 year old age range.

Photo activity 1 – Exploring perceptions through photographs
• Print out 15 to 30 photographs. Put the photographs around the room.
• Put the pupils into pairs. Give each pair three sticky shapes or counters or provide somewhere beside each photo where they can put a tick. Ask the pairs to walk round and look at the photos and place their markers beside the three that they find most interesting. Ask the pairs to get together in fours and discuss which pictures they chose and why. Then ask each four to report back to the whole class.
• Discuss with the class (depending on the age of the pupils):
  o Which photo was the most popular choice? Why?
  o What do the photographs tell us about life on Earth [or whatever topic you choose]?
  o What changes or action might these photos prompt?
  o Can the photos tell us all the topic? If they only give a partial view, how could we find out more?

Photo activity 2 – Learning to look
• Divide the class into groups.
• Print out enough photographs for each group to work with a different set of four photographs. Alternatively, each group can have the same set.
• Groups can do one or more of the following activities and groups can swap photos.
• Groups will need pens, paper and scissors.
• You can choose one, some or all of these activities for the groups.
  1. Groups lay out their four photographs and look at them for a short time. Then all but one of the pupils closes their eyes. The one with open eyes turns over one of the photographs. The rest of the group open their eyes and then try to agree from memory what was on the photo. Each group member has a turn to keep their eyes open.
  2. One of the group secretly chooses one of the four photographs and describes it to the others who cannot see it but have to draw it. When finished they compare with each other and the original.
  3. Groups choose the photograph that they find most interesting and make a list of everything they can see, either while looking at the photograph or from memory.
  4. Groups lay out the four photographs and one pupil secretly chooses to be a person in one of the photographs. The pupil then describes their surroundings as if they are the person, saying “I can see...”. The others guess which person they are. Then another group member has a turn.
  5. Depending on the age and ability of pupils, groups choose one or more photographs to cut up into three or four piece jigsaws. They then swap the jigsaws with another group and must make the jigsaws up.
  6. Stick one of the photographs in the middle of a large sheet of paper for each group. The pupils discuss what might be beyond the picture frame. They should then draw a continuation of the photograph on all four sides.
**Photo activity 3 – Speech bubbles**

- Print out a selection of photographs. Choose photographs with one or more people in – at least two is best.
- You will need paper, scissors and Blu-tack.
- Put pupils in pairs or small groups.
- Give each pair or small group a photograph. Ask them to cut out a speech or thought bubble from paper for the people in the photograph and write in the bubble what they think each person is saying. They can stick the bubbles onto the photograph with Blu-tack. They can then go on to role play conversations between the characters or write a short play based on the picture. Display the pictures. Some of the class may like to perform their role plays. This could form the basis of an assembly too.

**Photo activity 4 – Ranking**

- Depending on the age and ability of the pupils, use five or nine photographs.
- Photocopy a set for each pair or group.
- Divide the class into pairs or groups.
- Ask each pair to rank the photographs according to criteria you choose, such as which is the most or least surprising or which is the most or least beautiful. They should rank the photographs in a diamond pattern:

```
1
2   2
3   3   3
4   4
5
```

- Ask pairs to report back to the whole class. Discuss which photographs were at the top or bottom and why. Discuss which elements were surprising and why they picked particular photos.
- Encourage critical thinking by discussing the reasons they give in relation to the criteria for judgement.
Photo activity 5 – Questioning
• Print out photographs with plenty of detail.
• Divide the class into groups. Each group works with a different photograph. Stick each photograph on a large sheet of sugar paper so that there is a large margin of blank paper all round the photograph.
• Groups discuss the photographs and then write questions that they have about what they can see and what they would like to know more about, around the photograph. Ask each group to give their photo a caption. Display the sheets and talk about the types of questions and possible answers with the whole class. Discuss the difference between questions that can be answered with factual information and others that will be a matter of opinion. At this point you can choose to answer the questions or ask pupils to research more about the environments, animals and people in the photographs.

Photo activity 6 – Matching
• Divide the class into pairs.
• Print about 10 or 12 photographs and put them around the room.
• Make your own simple captions. Cut the captions up singly.
• Give each pair one or more captions and ask them to walk around, look at the photographs and match up the correct caption and photograph. If they have chosen the same photo as another pair they should negotiate which one is likely to be the correct one. Alternatively, you can put pupils into groups and give them six photographs and captions to match up. Discuss whether it was easy or difficult. Do the pupils have any further questions? They should note these down and then they can revisit these when they have undertaken more research.

Evaluation activities
Evaluation activities can be carried out to assess the learning that has taken place. Here are some ideas
• Pupils create learning diaries.
• Draw large topic webs to show connections, consequences, solutions and perspectives at the beginning of the work and then at the end. Note any changes in understanding.
• Involve pupils in monitoring, recording, reporting on the progress of the production and their involvement in it – create a timeline of the production.
**PANDAS IN THE MISTY MOUNTAINS**

MUSIC: Suitable intro music – can be from One Sun One World – or some music which children can join in with percussion instruments.

Some or all children sing The Panda song from One Sun One World (Silent Pawprints)

Chi-Chi and Ho-Shing, two giant pandas who live in the Sichuan Province in China, were walking through the mountains to find some fresh bamboo. Men have been cutting down their forests, so it can be hard to find new food and sometimes the journey can be very long.

“I’m getting tired,” Chi-Chi complained. “Where are we going anyway?”

“We are going to find an ancient city, a Lost City, one where, it is said, there are two wonderful surprises” replied Ho-Shing.

The two friends had been walking through the mountains for many hours but they wanted to continue, so that they would reach the city before nightfall. Ho-Shing knew that there were many dangers in the mountains and so he encouraged his friend to keep on going.

[MUSIC: Mountain music – drifty, spacious and a little bit menacing]

ACTION: Each little group rises up and makes a mountain shape which they hold till the narration or music stops.

“We should be at home, sitting in the bamboo right now, eating until our tummies are full. Is there bamboo in the Lost City?” Chi-Chi asked. He was extremely glad when his friend replied that he was sure there would be plenty.

“Good,” he said “Let’s hurry up then. I’m starving.”

After several hours, Ho-Shing stopped.

“See those shining green walls ahead?” he said to his friend, “There it is! There is the Lost City! We are almost there at last.” They both smiled.

“It is magnificent,” said Chi-Chi.

The walls of the Lost City were high and the roofs of the buildings sparkled in the afternoon sunshine. They were made of jade.

[MUSIC: Majestic music.]

ACTION: Form a large circle with hands joined in arches, which are the city walls.

“We must go through this gate,” Ho-Shing said “Inside we will find all the bamboo we can eat.”

The walled city was everything Ho-Shing had imagined.
“But where is the bamboo? And where are the two surprises?” Chi-Chi wanted to know!

“You must be patient,” laughed his friend. “We will soon see.”

When they reached the centre of the city, they saw a magnificent sight. There was a shrine with a huge golden gong hanging from poles. Around it were Chinese statues of dragons, tigers and monkeys. In all the animals’ eyes there were precious jewels.

In the dragons’ eyes there were fiery red rubies;

[MUSIC: Chinese dragon music]

ACTION: Dragons in flight statues
the tigers’ eyes flashed with deep green emeralds;

[MUSIC: Prowling music]

ACTION: Prowling tiger statues
and the monkeys’ eyes glowed with blue sapphires.

[MUSIC: Jumpy rhythm music]

ACTION: Monkey statues
In front of the shrine were chests heaped with treasure: jade, gold, silver, pearls and ivory.

“Look at their eyes!” Chi-Chi said. “Can I bang the gong?”

“Yes,” replied Ho-Shing, that is how we will let the spirits of the past know that we have arrived.”

Then Chi-Chi picked up the stick and banged the gong.

[MUSIC: Cymbal and melodic motif on single instrument]

ACTION: One child (Chi-Chi) steps into the centre and mimes the gong strike. A Second child can step in beside the first and cover ears with hands (Ho-Shing). Both return immediately to their group.

ALL children put their hands over their ears.
When the magnificent sound of the gong stopped, silence filled the air and then came their first surprise.

From far away they heard the sound of a whispering wind. It came closer and closer and closer.

MUSIC/ACTION: All children create the whispering of the wind with their voices while the narration continues.
The pandas were a little afraid. Now the sound was all around them, soft and magical. Then they saw it; a little whirlwind, blowing through the statues, rising and falling, swirling among them. And as the wind passed each group of statues, they came alive and their eyes were no longer shining jewels but real eyes.

First the mighty dragons flew overhead.

[MUSIC: Chinese dragon music]

ACTION: Dragons in flight moving
The tigers prowled, watching.
[MUSIC: Prowling music]
ACTION: Prowling tigers moving
And last of all the monkeys sprang around.

[MUSIC: Jumpy rhythm music]
ACTION: Monkeys jumping about moving
The two pandas were amazed, and Chi-Chi even forgot how hungry he was!

“We must bang the gong again, I think,” said Ho-Shing.

[MUSIC: Cymbal and melodic motif on single instrument]
ACTION: One child (Chi-Chi) steps into the centre and mimes the gong strike. A second child can step in beside the first and cover ears with hands (Ho-Shing). Both return immediately to their group.
ALL children put their hands over their ears.

And when the sound of the gong faded this time, the little whirlwind appeared up from behind one of the statues and blew all around again. Then, all the animals became statues once again, and their eyes turned back into beautiful shining jewels. This time the pandas thought they could hear whispering in the wind.

[MUSIC] ACTION: All children to whisper three times.
“We are the spirits of the past. Welcome honoured pandas.”
Then the little whirlwind rose above the jade walls of the city and blew softly away until it disappeared.

[MUSIC] ACTION: All children create the blowing of the wind with their voices quietly while the narration continues.
“Now we have had one surprise!” said Chi-Chi “Can we take some of the treasure away with us? That would be a very good second surprise!”

“No, we must not touch anything here,” said Ho-Shing. “It belongs to the people who once lived in this lost city: the spirits of the past, the ones we heard in the magic whirlwind. All the treasure and jewels must stay here within the city walls. But you can eat all the bamboo you want.”

Chi-Chi had forgotten how hungry he was, but now he remembered and was about to begin searching for bamboo when he was startled by the second surprise.

Right in front of their eyes, behind the statues, bamboo shoots began to push up through the ground and they grew and grew and grew, until soon the pandas were surrounded by a forest of the tastiest bamboo they had ever seen.

[MUSIC: music which starts low, then climbs and sways then climbs down again!]
ACTION: All spread out around the space and grow from the ground like bamboo, climbing up through the air, swaying and returning to the ground to curl up in groups.
The two pandas ate as much bamboo as they could and then slept for the rest of the night in the lost city.
[MUSIC: Something soothing and sleepy!]

ACTION: Chi-Chi and Ho-Shing come out of their groups again and lie down in the centre by the jewels.

In the morning, when the sun rose over the walls, they walked back outside the walls of the city, leaving the magical place behind them and all the precious treasures safe where they belonged.

[MUSIC: Majestic music.]

ACTION: All form a large circle with hands joined in arches, which are the city walls. Two pandas walk under and away from the circle up through a gap in audience.

As they turned to look back at the beautiful jade walls, the pandas thought they saw the little whirlwind high above the lost city, and once again they thought they heard a whisper in the air.

[MUSIC] ACTION: All children to whisper three times:

“We are the spirits of the past. Farewell honoured pandas.”

Some or all children sing the panda verse of Silent Pawprints from One Sun One World

Story and activities © Marilyn Groves, 2010
MUSIC – some or all children sing The Polar Bear song from One Sun, One World (Silent Pawprints)

Through the long and dark Arctic winter, the mother Polar Bear slept or sat quietly in her snow den near the edge of the land, listening to the sounds of the black Arctic ocean with its pack ice, icebergs, gulls and the winds which sometimes swept across the vast expanses.

ACTION: Make jagged shapes of the Arctic landscape: icebergs, ice cliffs, flatter ice floes. Use different heights. Create the Arctic’s physical scenery all around the space.

IMPROVISE: sounds using voices only – cracking ice, still water, gulls.

She had given birth to two cubs, and was waiting for them to grow strong enough to follow her out to the ice sheet that floats over the Earth’s northern pole. Along its edges of cracked and broken ice live the Polar Bears’ food: seals, walruses, narwhals and bowhead whales. In the spring, when the pale sun was beginning to light the sky, the mother knew it was time to go out of her den and search for food. But when she stood on the shore, she saw that so much ice had melted that she would have to swim across the black Arctic ocean for many miles to reach food.

So she left her cubs behind on the shore and tried to make the long swim herself. The cubs stayed on the shore watching and waiting for her return.

[MUSIC: sad music]

ACTION: All uncurl from frozen positions and make their way quietly towards their group position during the following narration.

She had made her den close to an Inuit village on the shores of the icy Arctic ocean. All the men of the village were hunters and fishermen; they caught mackerel, cod, herring, seal and other creatures of the snow to feed themselves.

[MUSIC: suitable music with a chopping and cheery rhythm]

In the evening everyone gathered to prepare their food. First they chopped wood.

ACTION: chopping wood

Then they built a fire and warmed their hands.

ACTION: building fire and warming hands.

At last they fried their fish in little black pans and ate it hungrily.

ACTION: eating.

When they had finished they gathered up their plates, washed them and packed them away.

One day, when warmth from the spring sun had grown stronger, Sura, a girl from the village, was walking by the sea. She spotted the two tiny white polar bear cubs, sitting all alone by the shore looking out to sea. Their mother was nowhere in sight.
ACTION (GROUP 1): The Polar Bear Cubs’ chant – stand to chant.
“Help us, help us,
Hear our cry
If we don’t find our mother
We’ll starve and die.”

Sura waited and watched to see if the cubs’ mother would return, but she did not. When night fell, Sura brought the cubs home with her. She gave them names: Nanuq, which means polar bear in the Inuit language, and Miki, which means little.

The next day, Sura returned with the cubs to the shore, to look for their mother. On the way they passed a snowy owl who was afraid because a pack of gulls were trying to steal the eggs in her nest.

ACTION (GROUP 2): The Snowy Owl’s chant – stand to chant.
“Help me, help me,
Please don’t delay –
The birds want my eggs!
Drive them away.”

So Sura, Nanuq and Miki chased away the gulls and carried the nest back to safety beside their house.

A few weeks later, Sura and the polar bear cubs were walking further inland together, in search of berries and leaves for food, when they heard a young arctic fox call out. He was caught in a trap.

ACTION (GROUP 3): The Arctic Fox’s chant – stand to chant.
“Help me, help me,
Or else I die
Free me from the trap before the
Hunters come by!”

Sura, Nanuq and Miki freed the arctic fox from the trap and helped him back to their home. When they arrived home they found that the snowy owl’s eggs had hatched. The children from the village loved to play with the animals and birds.

[MUSIC: happy circle dancing music]

ACTION: Village Children Dance – all dance but stay in their own circle so there are three different circles.

Possible dance steps: each group performs this alone and then all together:

1. Join hands and walk into centre x 8 small steps / back out x 8 steps.
2. 8 claps standing on the spot.
3. Side walk one way x 8 / side walk back in opposite direction x 8.
4. 8 claps standing on the spot.
5. Flutter arms, walk into centre x 8 steps / back out x 8 steps.
6. 8 claps standing on the spot.

So the spring passed and the summer came but the mother did not return. Nanuq and Miki learned to swim and hunt for food.
ACTION (GROUP 1): dance in a circle
The baby snowy owls learned to fly.

ACTION (GROUP 2): dance in a circle
And the arctic fox grew strong and learned to hunt.

ACTION (GROUP 3): dance in a circle
The winter closed in again and the sky grew dark and the villagers stayed inside to keep cosy and warm.

ACTION: Huddle down together in own circles
Then one night, towards the end of the winter, the villagers were wakened from their sleep by the sound of drums and marching feet. It was the evil trolls from the mountains away in the south.

[MUSIC – Hall of the Mountain King, perhaps, or drumming!]

ACTION: Trolls march up and down in some formation – all can join in
Everyone was afraid of the trolls, because they stole money and food from anyone they could find.

<table>
<thead>
<tr>
<th>TROLL KING</th>
<th>I'm the Troll King</th>
</tr>
</thead>
<tbody>
<tr>
<td>TROLL QUEEN</td>
<td>I'm the Troll Queen</td>
</tr>
<tr>
<td>TROLL PRINCE</td>
<td>I'm the Troll Prince and I WANT A WIFE</td>
</tr>
<tr>
<td>TROLLS (All)</td>
<td>And we're the Trolls</td>
</tr>
</tbody>
</table>

This time, the trolls were looking for a bride for the horrible, nasty troll prince. They captured Sura and stole her away to their cave full of stolen gold and jewels.

[MUSIC: triumphal music or troll singing]

In the morning, the villagers gathered together to make a plan to rescue her. The elders of the village knew from legends that if trolls are touched by sunlight they will turn to stone. And they knew that the spring sunlight was not long away.

So they began the journey south to the mountains and, on the second day, they saw the first glimmer of sunshine on the horizon and knew that their plan would work.

The northern lights glowed in the sky as they approached the mountain cave of the troll king. They sheltered close to the cave and the next morning, as the pale spring sun rose in the sky, they set up a dreadful noise.

The polar bears growled in anger.

ACTION (GROUP 1): Growling.
The snowy owls screeched loudly.

ACTION (GROUP 2): Screeching.
The arctic fox howled.

ACTION (GROUP 3): Howling.
All together the noise they made was deafening.

ACTION (ALL): Growling, screeching and howling!
The terrified trolls looked at each other in fear and pushed open the great gates to see what was happening.
ACTION: Trolls push open gates and stagger out.
They forgot that the spring was upon them and the sun would be shining! It flooded into the cave, making the gold and jewels shine brightly.

[MUSIC: sunny, glittery music.]
As for the evil trolls; they were all turned to stone where they stood.

ACTION: Statues of mean and angry trolls turned to stone by the sunlight.
Sura was rescued from the cave and everyone began the journey home.

[MUSIC: soft and thoughtful]
ACTION: villagers and animals walk up the length of the space towards their own places.
They were nearly home in the village when they saw in the distance three shapes coming towards them. It was a Polar Bear with two tiny cubs. As the travellers came closer, the two polar bears recognised their mother! She had been rescued from drowning in the ocean the year before by a fishing boat from a town much further north. It had taken her a whole year to make her way home since she had to stop and make a den for the winter to shelter her new babies.

Now they had even more reason to feast and celebrate.

[MUSIC: celebratory, children can play instruments]
ACTION: feasting and dancing

(Chants from BBC material)

Story and activities © Marilyn Groves 2010
The Cacao growers of Na Luum Ca

[MUSIC: all sing Cacao from One Sun, One World]

[If instruments are available these can be laid out ready.]

In the Maya Mountain village of Na Luum Ca (Mother Earth Village) in the beautiful rainforest, lives a little girl named Ix-Chel (Moon Goddess). She lives with her mother and father, brothers and sisters in a hut with a thatched roof. Through her village runs a river on its journey from the high mountains to the Caribbean Sea. Ix-Chel’s family live simply: bathing in the river, waking and sleeping with the daylight, and eating things which they can grow or hunt around them. At night Ix-Chel listens to the sounds of the rainforest as she falls asleep in the little bed she shares with her sisters.

[MUSIC: all can play rainforest music on instruments using a gentle rhythm or make rainforest sounds with their voices.

Group 1 – bird sounds

Group 2 – animal sounds

Group 3 – water and natural sound,

Then collect the instruments.]

ACTION: AN OLD MAN  I am Ix-Chel’s father and I have worked on the cacao plantation since I was six years old.

ACTION: THE VILLAGERS (GROUP 1) We are the villagers of Na Luum Ca.

The fruit of the cacao tree grows on the tree trunk, in a pod which starts off green and then ripens to red and yellow or even purple.

In Ix-Chel’s village, the villagers tend their own cacao tree plantation which grows under the rainforest canopy of taller trees. It grows well in the warm, damp, shady rainforest.

Everyone from the village works together.

ACTION: GROUPS 2 and 3 stand

When the cocoa pods are ripe we cut them down with sharp blades attached to long poles.

ACTION: Reaching up with the poles, cutting down the fruit

The women and girls collect the pods into baskets.

ACTION: Gathering up pods into basket in centre of group (girls)

The men split the pods open with machetes.

ACTION: Splitting (boys)

take out the seeds,
ACTION: De-seeding (boys)
and spread them on mats to dry in the sun.

ACTION: Spreading on the ground (boys)
To make chocolate to drink, the seeds are roasted in large blackened trays over open
fires.

ACTION: Roasting (all)
Finally we grind the beans into a sticky sweet-smelling paste,

ACTION: Grinding (all)
roll it in the palms of our hands into egg size shapes, and leave it out to dry.

ACTION: Rolling shapes (all)
When we want to make our thick chocolate drink we grate it into the pot of milk or
water,

ACTION: Grating (all)
and then we gather round with our mugs and enjoy it together.

ACTION: Drinking (all)
After we have drunk, we celebrate with music and dancing in our village.

MUSIC: Choice of music from One Sun, One World
ACTION: GROUP 1 – Dance
Forward four counts – Back four counts
Turn on spot as birds for four counts – Turn on spot for four counts
Forward four counts – Back four counts
Turn on spot as monkeys for four counts – Turn on spot for four counts
MUSIC: CLAPPING RHYTHMS
ACTION: GROUPS 2 and 3
Forward four counts – Back four counts
Turn on spot as birds for four counts – Turn on spot for four counts
Forward four counts – Back four counts
Turn on spot as monkeys for four counts – Turn on spot for four counts
ACTION: IX-CHEL. It was the drink our ancestors the great Maya Kings
used to drink.
MUSIC: Section of Cacao from One Sun, One World
ACTION: Groups go back to their places
THE COURT OF THE MIGHTY LORD PACAL VUTAN

[MUSIC: Courtly music e.g. La Mourisque by Susato]

ACTION: Group 2 stand tall like courtiers. The King and Queen go to centre and all bow and remain standing. Groups 1 and 3 stand up, turn and bow also then sit.
The great Maya kingdoms were in what are now Guatemala, Belize and Southern Mexico.
The Maya studied mathematics, the stars and planets, and created a system of writing using hieroglyphs. They understood how sound travels and their pyramids, temples and caves are found to have amazing echoes.
Two people, standing at either end of one of their great halls, can speak in normal tones and hear each other from the other side of the court.

ACTION: One child at the far end of the hall among the audience speaks and the groups echo.
CHILD: Popocatepetl Groups echo in turn – Group 1, Group 2, Group 3: Popocatepetl
If you clap your hands while standing in front of the temple of Kukulcan, you will hear the sound of chirping birds echoing off the walls. The chirping sounds like the song of the sacred Quetzal bird.

ACTION: Same child at the end of the hall claps. Others respond with bird calls (using voices)
CHILD: Claps hands. Groups echo in turn – Group 1, Group 2, Group 3: bird calls (using voices)
One of the most fascinating of the ancient Maya mysteries is the legend of the Crystal Skulls which may be thousands of years old. It is said that if all 13 of the skulls are found and put together, the secrets of the world would be revealed.

ACTION: GROUPS 1 and 3 make low humming sounds, mysterious sounds rising to high humming sounds, with scary faces.

ACTION: GROUP 2 mystical movement sequence –
Start by lying on floor
Rise up and walk backwards
Walk forward with arms extended fully and scary faces

The Maya cared for the rainforests and learned to make the wonderful drink which came from the cocoa pods on the cacao tree. They believed that the tree was sacred and had come from the heavens.

ACTION: LORD PACAL VUTAN I am the Lord Pacal Vutan and I like to drink chocolate.

ACTION: QUEEN SAK K’UK And I am his wife.

ACTION: HIS SERVANTS We are the servants who make the hot chocolate in golden goblets.
The drink is made in a beautifully decorated golden cauldron. Water is mixed with cocoa powder, chilli, vanilla and a little maize.
When the drink is ready the servants form two long lines in front of the great Lord and his Queen.
MUSIC: Courtly music e.g. La Mourisque
ACTION: Lord and Queen to back stage
GROUP 2 – form top of lines on both sides
GROUP 1 – line up on Lord Pacal Vutan side
GROUP 3 – line up in front of Queen Sak K’uk
The golden cauldron is carried into the great hall.

[MUSIC: Courtly music e.g. La Mourisque]
ACTION: Two children from GROUP 2 carry the goblet down to the end of the line.
The servants pour the chocolate in two golden goblets, back and forth from a great height so that the chocolate will froth.

ACTION: All pour chocolate from hand to hand from a height
The golden goblets are passed up the line of servants until finally they reach the Mighty Lord and his Queen.

[MUSIC: Courtly music e.g. La Mourisque]
ACTION: Pass the goblet from child to child until it arrives at Lord and Queen who drink from it. They pause and nod approval.
All applaud.
The secret of making chocolate from the cacao tree passed from the Maya to the Aztec civilisation and in time on through Latin America.

[MUSIC: Courtly music e.g. La Mourisque]
ACTION: The groups go back to their places – centre, left and right.
The mighty Aztec empire lay in southern Mexico in sight of the smoking volcano of Popocatepetl.

[MUSIC: Suitable volcano music or all sing Popocatepetl]

ACTION: CORTÉS  I am Cortés and I will bring the cacao plant back to Spain.

ACTION: SPANISH SAILORS  We are the Spanish conquerors.

In 1519 Cortés sailed with his fleet down the side of the Aztec empire, through the Caribbean Sea.

ACTION: GROUP 3 sailors with ropes

Pulling ropes x3

Climbing rigging x3

Using telescopes x 3

ACTION: GROUPS 1 and 2 stand to attention with spears

They set foot on the land at the exact same time it was prophesied that the powerful serpent god Quetzalcoatl would return.

The Aztec Emperor mistook Cortés for the serpent god and welcomed him and his men.

ACTION: GROUP 3 bow to the other groups who are still standing with spears.

But Cortés and his sailors behaved badly and were rowdy, so the Emperor began to think he was not this god after all.

They drank heavily and staggered around.

ACTION: GROUP 3 drinking and staggering

They laughed too loudly and then collapsed in sleep.

ACTION: GROUP 3 laughing and falling to the ground.

ACTION: GROUPS 1 and 2 still standing to attention again, disapproving.

Hoping that gifts would make the Spaniards go away, the Aztecs presented Cortés and his crew with gold and jewels.

ACTION: Presenting of gifts with extended arms

But this only made Cortés and his sailors greedy and they waged war on the Aztecs and the neighbouring Maya until they had wiped them all out.

[MUSIC: Fighting music]

ACTION: Slow motion warfare. Non contact! Aztec spears against Spanish guns.

GROUPS 1 and 2 throw Aztec spears

GROUP 3 firing Spanish guns

GROUP 1 fall to ground

GROUP 2 throw Aztec spears

GROUP 3 firing Spanish guns

GROUP 2 fall to ground

GROUP 3 stand triumphant

Sadly, Cortés and his sailors burned libraries as well as land and temples.
They destroyed nearly all traces of these great civilizations. They filled their ships not just with cacao, but also with corn, chilli peppers, vanilla and tomatoes and sailed back to Europe.

**ACTION: GROUP 3 sailors with ropes**
- Pulling ropes x3
- Climbing rigging x3
- Telescopes x 3

**Aztecs remain lying as dead on the ground!**
And so the magical and much loved cacao plant reached Europe and soon Europeans were cooking with ingredients from all around the globe.

**Aztecs up off the ground!**

**MUSIC/ACTION: All sing Cacao from One Sun, One World**

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ONE SUN ONE WORLD

JOURNEY THROUGH

THE ELEMENTS

KEY THEMES

• world eco and climate systems
• water, ice and oceans
• fire, sun and hot places
• air, wind and global warming
• Earth and continents.

‘One sun, one world, holding the seed of cosmic birth,
One breath, one life, sharing the seed to form one Earth.

The cold of polar night and the heat of tropic day
Send swirling ocean currents speeding on their way.

And all are interwoven where the wind and water meet;
One universal system, a web of cold and heat.’
from One Earth in One Sun One World
by Peter Rose and Anne Conlon ©2010 Josef Weinberger Ltd. London.
Creating one world – myths and stories

Activity – suitable for 7-11 year olds, 11-14 year olds

Curriculum
• English – reading, creative writing
• RE – creation myths

Objectives
• To introduce the elements and show an example of how they have featured in myths and stories that people have developed to understand the nature of the world we live in.
• To develop creative writing techniques.

Learning outcomes
• Pupils will understand what is meant by the elements.
• Pupils will understand what is meant by a myth.
• Pupils will use ideas based on the elements creatively.

You will need
• Resource Sheets 4, 5 and 6

Starter
The four elements – fire, earth, air, water – were what our world was understood to be composed of from 500 BC until more recently when science enabled us to be more specific.

1. Ask pupils if they have heard of ‘the elements’ or ‘the four elements’. Take any suggestion they have and if necessary give them a brief overview of the four classical elements – fire, earth, air, water – see Resource Sheet 4.
2. Read and discuss the other passages on Resource sheet 4 which relate to the elements and the beginnings of life on Earth.
3. Ask the class to think of as many descriptive words as they can for each element. Write them up for all the class to use later.

Activity
4. Read the Aborigine Creation Story on Resource Sheet 5 with the class. Talk about any words or aspects they are unclear about.
5. Divide the class into pairs, each pair taking one element. Ask the pairs to pick out references in the story to their element. Point out that these references may not be literal but may be symbolic – such as the sun, referencing fire and its heat.
6. Have a quick feedback. Are all four elements mentioned? Can anyone give an example of how one element reacts with another to bring the world to life? For example, the sun ‘shone warm rays onto the hollows which became waterholes’. What are the aspects of the world which are brought to life, for example different plants, birds, animals and people and all living things within different landscapes.
7. Do they know other stories about how the world came to life? Why might people tell these sort of stories or myths? In the study of folklore, a myth is a religious narrative explaining how the world and humankind came to be in their present form. Sometimes people make stories to be able to explain what seems a mystery or is not fully understood.
8. Ask pupils in pairs to talk about and create their own myth or story about how the world and all living things came into being. They should bring in the four elements. The pairs should write notes on the story structure on Resource Sheet 6. Then each pupil should write their own story of about a page, based on the structure notes, using some of the descriptive words on the board. They can illustrate their story.

Closing discussion
9. Scientists have explained how our planet came to be part of the solar system and why it revolves around the sun. Scientists have also put forward explanations of how life began on Earth. Why does the class think there are both scientific explanations and myths about the beginnings of the world and living things?

10. How do different creation stories show differences in the way people view the natural world and their relationship to it? For example, is the natural environment something for people to use as they wish? Does a story show that people view themselves as dominant in the world or just one small piece in a big jigsaw? Just one thing among many other living things or the most important living thing? Are living things more important or more powerful than the inanimate environment – water, rocks and volcanoes?

11. Which stories do pupils think have influenced the way that they view the world?
One Earth – climate change, a web of cold and heat?

Activity – suitable for 7-11 year olds, 11-14 year olds

Curriculum
• English – reading, speaking and listening
• Geography – physical geography, natural landscapes
• Science
• Social studies

Objectives
• To introduce a global perspective and the concept of global patterns and links, so that what happens in one part of the world affects other parts.
• To learn about climate change.

Learning outcomes
• Pupils will understand the causes and consequences of climate change.
• Pupils will understand there are solutions and consider how to work towards them.
• Pupils will understand some of the terms used to discuss climate change.
• Pupils will learn how to construct an argument.

You will need
• Resource sheets 7, 8, 9 and 10

Starter
1. Give pupils a copy of the song One Earth from One Sun One World on Resource sheet 7 and read it out loud or sing it if some or all of the class has learnt the song in connection with putting on the musical.
2. Ask the class what they think the main theme of the song is – discuss the one Earth idea, connections and global links. What are the words in the song that are the key words for this theme? Talk about words like cosmic, interwoven, universal, web, circulating. Reinforce the idea that the physical world is made up of land and water, cold and heat and that these all interact on each other to create climates in the regions of the world and our specific weather in our localities on a daily basis.
3. Show the class the Spot the difference PowerPoint presentation with the slides of the glacier or give out copies of Resource sheet 8. Talk through the questions posed. Ask the class how this might show we are experiencing ‘one universal system, a web of cold and heat’? Lead them to the idea of climate change.

NB. You may not have time for both the song and the PowerPoint activity so you can choose one or the other but ensure you bring in the concept of climate change.

Activity
4. Explain to the class that they are now going to carry out a ‘climate change conference’ looking at the situation that faces the world and solutions to the problem.
The ‘conference’ is designed to be carried out in one lesson so it does not cover all the complexities of climate change and does not attempt to simulate a major international conference but seeks to present the main facts and suggestions for the way forward in a straightforward and simple format.
5. Divide the class into groups of four. Give each group a copy of Resource sheet 9 and ask them to read and discuss it. Ask if there are any questions or explanations needed.

6. Give each group a copy of Resource sheet 10 and designate one of the seven ways forward for tackling climate change. Ask the group to prepare a two minute argument on why their solution is worthwhile and should be adopted.

7. Ask each group to choose one spokesperson to represent them at the 'climate conference'.

8. Each spokesperson should sit round a table at the front of the classroom if possible. Introduce the conference appropriately, giving a short introduction to climate change. Tell the ‘audience’ that there will be seven suggestions for solutions to climate change and that they will be allowed to vote for the solution that is most compelling.

9. Each spokesperson then makes their two minute argument. Sum up then ask for votes for each solution. Write them up on the board. Discuss which were the preferred solutions and why, but stress that all the solutions are important and happening now as people take action to slow down climate change. Organisations like WWF are campaigning and taking action around the world to reduce the impact of climate change.

**Closing discussion**

10. Come back to the song and narration from *One Sun One World* on Resource sheet 7 and ask the class how water plays its part in the ‘web of cold and heat’ and climate change.

11. Talk about the currents in the oceans, the frozen water at the poles and the impact of climate change on the amount of ice at the poles, the North Pole particularly. Talk about the space that an amount of water takes up compared with the same amount of frozen water. Talk about what happens when the ice at the poles melts. Discuss how what we do in this country will affect people in other countries and vice versa. Do pupils find it fairly easy to think about the world as a whole? Do they understand what the song means when it says ‘one universal system’?

12. Which action do pupils think they might take to contribute to climate change solutions?
WE NEED WATER!

Activity – suitable for 11-14 year olds

Curriculum
• Geography
• Social studies
• Science
• Environment and society
• Citizenship

Objectives
• To understand the part that water plays in industrial processes.
• To assess their own water use.

Learning outcomes
• Pupils will understand some of the social and political importance of water.
• Pupils will have made a critical analysis of their own water use.

You will need
• Resource sheet 11, 12 and 13
• Access to the internet for pairs or groups or access on the white board

Starter
1. Ask pupils to work in pairs and hand out the Resource sheet 11, Word drops, cut into nine separate squares.
2. Ask pupils to read the quotes and then rank the quotes in a diamond shape putting the quote they found most surprising (or interesting or worrying) at the top and the quote they found least surprising (or interesting or worrying) at the bottom, and the arrangement of the others in between. Give them about 10 minutes.
3. Then ask for feedback on the quotes chosen in top place and bottom place. Was there any agreement? Why were they chosen?

Activity
4. Read or sing the song We need water from One Sun One World, Resource sheet 12. What is the message of this song?
5. Pupils will now calculate their water footprint at www.waterfootprint.org. They will need to go to www.waterfootprint.org/index.php?page=cal/WaterFootprintCalculator

Ask pupils to work in pairs or groups at the computer or set this activity up as a class activity. If they are not sure of their daily consumption of various items, talk it through with them and put in a rough estimate.
6. Ask pupils to feedback on the figures. Were they surprised at their water consumption. Do they try to minimise it? Why does water consumption matter? See the BBC’s map of water insecurity (i.e. those who are at risk of not having access to enough water in the future) at: www.bbc.co.uk/news/science-environment-11435522
7. You can hand out Resource sheet 13 and ask pupils to write their reactions and questions around the picture of the cup of coffee. You may also wish to show some or all of the PowerPoint presentation at [www.waterfootprint.org/?page=files/Presentations](http://www.waterfootprint.org/?page=files/Presentations) or just discuss this one slide taken from the PowerPoint on Resource sheet 13 about how much water it takes to make a cup of coffee. Can pupils explain why it takes more than a cup of water to make a cup of coffee? You can look at the poster and interactive map at [www.waterfootprint.org/?page=files/InfoGraphics](http://www.waterfootprint.org/?page=files/InfoGraphics).

**Closing discussion**

8. Read the song *Water* from *One Sun One World*, Resource sheet 4. What is the message of this song?

9. How would the class sum up the importance of water in our lives? Ask them to research water facts for homework and then collate them into a large poster.
Suitable for 7-11 year olds
- Collect the creation stories from the activity suggested above into a class book or make a display on the wall and ask the class to discuss similarities and differences between the stories.
- Pupils could research other creation myths and look at the ways in which the four elements feature in them.

Suitable for 7-11 year olds and 11 – 14 year olds
- Pupils could choose one element and create a painting, collage or display composed of aspects of the element.
- Pupils could choose one of the elements and write a haiku poem about that element or write a group of four haikus about each of the elements.
- Pupils could develop a dance based on one of the elements or all four elements choosing suitable music and creating choreography and costumes. They could create the dance to go with a suitable song from One Sun One World such as One Earth [Resource sheet 7] or Water [Resource sheet 4].
- Pupils can have a look at the animations on climate change at http://epa.gov/climatechange/kids/global_warming_version2.html This is an American site with some clear explanations of climate change and global warming.

Suitable for 11-14 year olds
- Ask pupils to research the impact of the wind with regard to the volcanic ash cloud from the Icelandic volcano in 2010. Good sources are the BBC website, for example http://news.bbc.co.uk/1/hi/in_depth/europe/2010/iceland_volcano/default.stm with graphics and maps and The Guardian www.guardian.co.uk/world/gallery/2010/apr/18/air-transport-iceland for a picture gallery and news reports.
- Ask pupils to create a display or presentation on the importance of water in our lives based on the narration from One Sun One World on Resource Sheet 7.
THE FOUR ELEMENTS

According to Empedocles, a Greek philosopher, scientist and healer who lived in Sicily in the fifth century BC, all matter comprises of four ‘roots’ or elements of earth, air, fire and water. These are sometimes referred to as the four ‘classical elements’. These elements were considered to be the building blocks of the universe. The nature of the elements has formed the basis of understanding throughout history of geography, biology, medicine, psychology, philosophy and other disciplines. The elements and the ways in which they impact upon our lives occur in many different stories, myths, legends, poems.


THIS ONE EARTH...

This one Earth, what an amazing place it is! Four thousand million years ago, it was a planet of hot seas and violent volcanoes. The thin atmosphere gave no protection from the burning power of the sun. It was a lifeless world – no trees, no plants, no animals.

But in that hostile, barren world, the first molecules of life were formed. Slowly, gradually, over millions of years, they increased, interacted and developed. Life had been born: bacteria and blue-green algae; brachiopods, crinoids and trilobites; mosses, horse tails and ferns.

As the millions of years passed, those living things changed the world. Photosynthesis produced oxygen, the breath of life for the first fish and the first reptiles. The oxygen formed a protective layer of ozone which cooled the Earth and filtered out the harmful rays of the sun.

The lifeless planet had become a living world. Every plant and every animal gradually took its place in the web of life woven during the long millennia of prehistory.

[Words of Narration One from One Sun One World by Peter Rose and Anne Conlon © 2010 Josef Weinberger Ltd. London]

WATER

Water, the droplets and mists of the earth, the life-giving rains,
Encircles and swirls, gathers like pearls, secretly, silently sustains.
Water, the shimmering pools of the earth, the life-giving springs,
Encroaches and seeps, oozes and creeps, inundates, saturates and clings.
Water of the world, source of life and food,
Mysterious and old, its wonders unfold, constantly, eternally renewed.

[Words of Narration One from One Sun One World by Peter Rose and Anne Conlon © 2010 Josef Weinberger Ltd. London]
This is the story of Dreamtime. It comes from the Aborigines of Australia.

When the Earth was newly-born, it was plain and without any features or life. Waking time and sleeping time were the same. There were only hollows on the surface of the Earth which, one day, would become waterholes. Around the waterholes were the ingredients of life.

Underneath the crust of the Earth were the stars and the sky, the sun and the moon, as well as all the forms of life, all sleeping. The tiniest details of life were present yet dormant: the head feathers of a cockatoo, the thump of a kangaroo’s tail, the gleam of an insect’s wing.

A time came when time itself split apart, and sleeping time separated from waking time. This moment was called the Dreamtime. At this moment everything started to burst into life.

The sun rose through the surface of the Earth and shone warm rays onto the hollows which became waterholes. Under each waterhole lay an Ancestor, an ancient man or woman who had been asleep through the ages. The sun filled the bodies of each Ancestor with light and life, and the Ancestors began to give birth to children. Their children were all the living things of the world, from the tiniest grub wriggling on a eucalyptus leaf to the broadest-winged eagle soaring in the blue sky.

Rising from the waterholes, the Ancestors stood up with mud falling from their bodies. As the mud slipped away, the sun opened their eyelids and they saw the creatures they had made from their own bodies. Each Ancestor gazed at his creation in pride and wonderment. Each Ancestor sang out with joy: "I am!”. One Ancestor sang "I am kangaroo!" Another sang "I am Cockatoo!" The next sang "I am Honey-Ant!" and the next sang "I am Lizard!"

As they sang, naming their own creations, they began to walk. Their footsteps and their music became one, calling all living things into being and weaving them into life with song. The ancestors sang their way all around the world. They sang the rivers to the valleys and the sand into dunes, the trees into leaf and the mountains to rise above the plain. As they walked they left a trail of music.

Then they were exhausted. They had shown all living things how to live, and they returned into the Earth itself to sleep. And, in honour of their Ancestors, the Aborigines still go Walkabout, retracing the steps and singing the songs that tell the story of life.
This is the story of

It is written by

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tr>
<td>What was there before the world?</td>
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<td>How did the world begin to come to life?</td>
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<td>What was the world like at first?</td>
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<td>How did the elements of earth, air, fire and water become part of the world?</td>
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<td>What effect did the elements have on the world?</td>
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<td>How did all living things show that they were alive?</td>
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<td>What was the end result and why was it important?</td>
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One sun, one world, holding the seed of cosmic birth,
One breath, one life, sharing the seed to form one earth.

The cold of polar night and the heat of tropic day
Send swirling ocean currents speeding on their way.
The waters off Peru have the tropics as the goal,
But the Caribbean Gulf Stream races for the pole.
Moulded by the spinning earth and gravity’s command,
Mighty ocean whirlpools are captured by the land.
And all are interwoven where the wind and water meet;
One universal system, a web of cold and heat.

Above the racing sea, the wind controls the skies,
Circling deep depressions and atmospheric highs:
The strong Prevailing Westerlies, Trades which never fail,
Alternating Monsoons, North Atlantic gale.
Driven by the spinning earth and gravity’s command,
Circulating freely, they sweep across the land.
And all are interwoven where the wind and water meet;
One universal system, a web of cold and heat.

The barren polar waste, the permafrost of ice;
The steamy monsoon delta, the paddy fields of rice;
The vast Sahara plain, the sand dunes and the palms;
The fertile lands of Europe, the forests and the farms;
The Himalayan mountains, the mighty Barrier Reef,
The Amazonian jungle, a world beyond belief!
And all are interwoven where the wind and water meet;
One universal system, a web of cold and heat.

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
Water! How amazing it is, so soft and yet so powerful, so destructive and yet essential for every living thing. And the earth has been blessed with so much of it: the great oceans, the mighty rivers, the gigantic lakes, the vast ice fields, every stream and pool in every land on earth.

We have always harnessed water for our advantage. Six thousand years ago, the people of Mesopotamia diverted water from the River Tigris to irrigate their fields of wheat. In another part of the world, farmers were already building rice paddies on the Yangtze River delta.

Thousands of years later, Roman engineers built great aqueducts to channel water to the very heart of their cities. Later still, Victorian engineers built canals and excavated reservoirs to power their industrial revolution.

More recently, we have seen the invention of hydro-electric power and the damming of some of the largest rivers on earth. Pumping systems can now tap into ancient waters, sealed in aquifers deep underground beneath some of the driest lands on earth.

All this engineering and all this effort have ensured an ample supply of water for everything we need. As a result, many people in the world today enjoy great prosperity.

from NARRATION FIVE in One Sun One World by Peter Rose and Anne Conlon © 2010 Josef Weinberger Ltd. London
Describe what you can see

Find three differences between the landscapes in these photos.

Were these two photos taken from the same spot? How could you know?

• Choose one of the options below.

These photos were taken

☐ on the same day ☐ on different days in the same year
☐ a year apart ☐ about 60 years apart

• Suggest three reasons for your choice.

What can we learn from looking at these two photos?

What questions would we want to ask?

Who might want to use these photos and how would they use them?
Here are some words, phrases and information that you need to know:

**Carbon dioxide (CO₂)** – a natural gas, essential for all life on Earth. It's absorbed by plants as they grow, and emitted by all life forms as they breathe, as well as when they die (or are burnt as fuel). Other than water vapour, it's the most common ‘greenhouse gas’.

**Greenhouse gases (GHG)** – including carbon gases like CO₂ and methane. They are vital in the Earth's atmosphere in certain quantities because they help trap and retain some of the sun's heat (the ‘greenhouse effect’). This makes life as we know it possible on Earth – without it the world would be mostly frozen. But too much is dangerous too...

**Human activity** – over the past 150 years, the world’s industrialised nations have unwittingly upset the delicate balance of the greenhouse effect by burning huge amounts of fossil fuels (concentrated carbon, like coal, oil, gas), as well as breeding vast numbers of methane-producing livestock, and cutting down the forests that naturally absorb CO₂ from the air. The extra greenhouse gases in the atmosphere have been raising global temperatures.

**Global warming** doesn’t mean we’ll all have warmer weather in future. As the planet heats, climate patterns change, with more extreme and unpredicted weather across the world – some places will be hotter, some colder. Some wetter, others drier.

We know the planet has warmed by an average of nearly 1°C in the past century. This might not sound much, but small rises can create big problems for people and wildlife.

**2°C is too much.** A rise of just 2°C would mean severe storms and floods in some countries and droughts in many more. Seas would become more acidic, coral and krill die, food chains would be destroyed. There would be no Arctic ice in summer, which is not just bad news for polar bears, it would also mean that the global climate warms faster.

**Tipping points and feedback effects.** As the Earth warms, the impacts can fuel each other and accelerate, causing runaway, irreversible changes. Here are some examples:

- Polar ice reflects sunlight away from the Earth. When it melts (and Arctic sea ice is already predicted to be mostly gone in summer by 2020), more heat will be absorbed. Moreover, thawing permafrost releases trapped methane (a greenhouse gas) into the atmosphere.

- More heat can also ’dry out’ forests causing them to die, and therefore lose their ability to absorb carbon dioxide. While burning forests to clear land for roads or agriculture, releases carbon dioxide thereby contributing to greenhouse gases in the atmosphere.
Beyond 2°C – scientists predict possible rises of up to 6°C this century if we don’t drastically cut greenhouse gas emissions. We barely want to think about what this would mean: rainforests dying; the melting of the ancient ice sheets of Greenland and Antarctica; dramatic sea level rises; and people and animals suffering along the way. That’s why we must act now.

A global climate deal – this is urgently needed to set strict and binding emissions targets on the developed, industrial nations – as the ones who largely caused the problem while benefitting from the commercial gains. It’s also needed to help developing countries grow by using low-carbon technologies.

We need to cut greenhouse gas emissions by at least 40% (below 1990 levels) by 2020, and by at least 80% by 2050. A useful immediate aim is for everyone to reduce their emissions by 10%.

And since it’s the poorest nations that are already feeling the effects of climate change, a fair global deal must also put money aside to assist developing countries to adapt to the unavoidable impacts of climate change.

A limit put on total emissions by industries and countries who may buy and sell their entitlements may be useful. But it’s certainly not a ‘silver bullet’, and could be open to abuse, so must be carefully controlled.

Climate change denial – some people might try to tell you: "Global warming is natural" or "The Earth is actually cooling" or "There’s nothing we can do anyway"...

Here's the truth – it’s true the Earth’s climate has always changed, and temperatures have risen and fallen over thousands of years. But it’s happening now at a far faster rate than ever before, which doesn’t give the world’s species (including ourselves) much time to react or adapt.

It’s true the Earth was in a cooling cycle, slowly heading for another ice age in a few thousand years – but the wholesale burning of fossil fuels has upset that cycle, vastly increasing the greenhouse gases in the atmosphere.

The good news is, if we accept that we’re the major cause of climate change, we can choose to do something about it. But we have to do it soon.

[Adapted from WWF website: wwf.org.uk/what_we_do/tackling_climate_change/climate_change_explained/ ]
Getting a global climate deal

We need big cuts in CO₂ and other greenhouse gas emissions from rich, developed countries who’ve been responsible for most of the problem. But we also need to help poorer countries adapt to the effects of climate change.

Low-carbon transport

Transport is another big greenhouse gas emitter. We need to choose our transport carefully, reduce flights and curb the expansion of airports such as Heathrow. Shipping is one of the fastest-growing but often overlooked sources of CO₂.

Energy efficiency

Housing is a huge source of CO₂ emissions and wasted energy – much of which is fairly easy to reduce. That’s why it is important for everyone to insulate and ‘green’ their home and to be able to get help from the government if they need it.

Cleaner power

In the UK we need to persuade the companies who provide our energy to turn away from high-emission fuels – like using coal in power stations – and embrace low-carbon alternatives like wind, wave and solar power.
Preserving forests

A vital step is to curb deforestation, especially of the world’s tropical rainforests. Forests help regulate global CO₂ levels, rainfall and climate. Unfortunately, for some people cutting down the forest and growing crops like soy or oil palm is a way to make money – but there are alternatives, so it is important to work with local communities in changing attitudes.

Changing how we live

We need positive changes in the way we all live, to ease the way forward to a low-carbon future. It’s more than just switching to low-energy light bulbs, although that’s a positive first step. It is important to work with local communities, government and businesses to push ahead with new technologies, climate-smart legislation and greener lifestyles.

Scientific research

It is important that work on climate change is backed up by sound science— for example, the Catlin Arctic Survey which measured sea ice thickness and ocean acidification in the Arctic.

[Adapted from WWF website: wwf.org.uk/what_we_do/tackling_climate_change/how_we_re_tackling_climate_change/ ]
The River Thames is clean enough to have 119 species of fish and 350 species of small water animals. But thousands of tonnes of litter are blown, thrown and washed into it every year.

About 80% of the world’s population lives in areas where the fresh water supply is not secure.

Over 80% of marine pollution comes from land-based activities.

Sea life provides half of our oxygen, a lot of our food and regulates the climate.

Up to 70% of people rely on fish as their primary source of protein.

1.1 billion people lack access to safe drinking water and 2.6 billion people lack access to sanitation services, particularly in poorer countries.

Earth’s fresh water belongs to all living species and therefore must not be treated as a commodity to be bought, sold and traded for profit.

Plastic was found in more than 60% of 6,136 samples collected by dragging fine-meshed nets along the ocean’s surface.

Oceans cover 71% of our planet’s surface and make up 95% of all the space available to life.
WE NEED WATER!

We need water, three litres every day,
And fifteen gallons when we shower to wash the dirt away!
And then we need three gallons when we flush the loo!
We need another gallon; our teeth need brushing, too!

We need water for every drop we sup.
It takes a hundred litres to fill a coffee cup.
A pint of milk or orange holds more than you would think,
A full two hundred litres crammed in every glass we drink!

We need water for everything we eat.
A thousand litres hide inside a kilogram of wheat.
An apple takes up sixty, potato twenty-five.
Imagine just how much we need to keep ourselves alive!

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd, London
• It takes about 21,000 litres of water to produce 1kg of roasted coffee.
• For a standard cup of coffee we require 7 grammes of roasted coffee, so that a cup of coffee takes 140 litres of water. Assuming that a standard cup of coffee is 125 ml, we thus need more than 1,100 drops of water for producing one drop of coffee.
• Drinking tea instead of coffee would save a lot of water. For a standard cup of tea of 250ml we require 30 litres of water.

http://www.waterfootprint.org/?page=files/Presentations
ONE SUN ONE WORLD
JOURNEY OF LIFE

KEY THEMES

- evolution
- plant-life (trees)
- biodiversity
- animals (polar bear, tiger, panda)
- people
- complex web of life.

‘But bathed by the water and warmed by the sunlight,
Earth would remain bare stone;
Life couldn’t spring from the heart of the soil
With water and sun alone.
For we need the air, unobserved, unseen,
For its secret, silent breath turns the blue world green.
From the sun and rain and the moving air,
Every living creature draws its life on this Earth we share.’

from The Old Oak Tree in One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
Activity – suitable for 7-11 year olds

Curriculum
• Science – living things, biodiversity, habitats

Objectives
• To introduce species, habitats and biodiversity.
• To increase knowledge of an endangered species.
• To develop research and presentation skills.

Learning outcomes
• Pupils will understand the meaning of species and habitats.
• Pupils will have greater knowledge of at least one animal and their habitat in a particular region of the world.

You will need
• Resource sheet 17 Wherever they live in the world

Starter
Pupils will need to be introduced to the concepts of

• Species – A group of living things that differ from all other groups of living things and that are capable of breeding and producing fertile offspring. This is the smallest unit of classification for plants and animals.
• Habitat – The location and environmental conditions in which a particular living thing normally lives.
• Biodiversity – Biodiversity is a joining of two words: biological and diversity. Biodiversity reflects the number, variety and variability of living things – on the ground and in fresh and sea water.
• Endangered species – a species which is severely declining in numbers and in danger of extinction in the wild.
[Source: Green facts www.greenfacts.org/glossary/index.htm]

1. Show the class pictures of six or so animals from different parts of the world, for example a rabbit, a polar bear, a panda, a tortoise, a leopard, a tiger and a crocodile. As you show each picture ask pupils to put up their hands if they have seen the animal. Where have pupils seen the animals? Which animals can be seen in the wild in the UK? Discuss which animals pupils may have seen in the wild in other countries.

2. Lead on to the point that particular animals only live in certain habitats (surroundings) and different types of animals (different species) are adapted to live in hot or cold, wet or dry places around the world. Talk briefly about the places in which the animals live.

3. Why is it particularly difficult to see pandas, polar bears and tigers in the wild? Introduce the term ‘endangered species’, find out if the class know what it means and explain it a little if necessary.
Activity

4. Divide the class into six groups and give each group an animal from the list of bee, cod, penguin, panda, orang-utan, tiger, mountain gorilla, and the one verse in which it appears from the song *Wherever they live in the world* from *One Sun One World* which is on Resource sheet 17. They should find out the part of the world which is home to all of the animals mentioned in the verse. The group should then research more about their one animal or fish, focusing on the following key questions:
   • what is the habitat of this animal?
   • what does it eat?
   • how does it bring up its young?
   • why is it an endangered species?
   • what can be done to protect it?

5. Each group could then produce a poster, a PowerPoint or other visual resources and prepare to make a presentation to the class about the animal they have researched, focusing on the key questions.

6. For a fun element, children could also research something ‘special’ about their chosen animal – can it swim very deep, can it see or hear particularly well, does it have any remarkable physical attributes? These could be included in the PowerPoint as a ‘fascinating fact’. If time permits, or possibly for homework, children could look up special facts for some of the other species in the song, and in groups use these facts to start making up a set of top trumps cards.

Closing discussion

7. With nearly a quarter of all mammal species and a third of amphibians threatened with extinction, there’s an urgent need to safeguard wildlife and the places in which they live. Why do the class think it’s important to safeguard animals and their habitats and work to prevent animals becoming extinct? Can the class imagine a world without tigers and pandas and polar bears?

8. The demands made by human activities – such as agriculture, forestry, energy production, road building and poaching – are all having a serious impact on wildlife and their habitats. While important in their own right, species are also critical for maintaining the fundamental balance of ecosystems. Protecting the world’s species and their habitats lies at the heart of WWF’s mission to conserve the Earth's biodiversity and was the prime reason for the organisation being established in 1961.
**Activity – suitable for 7-11 year olds**

**Curriculum**
- Citizenship
- Personal, social and health education
- Religious and moral education
- English language
- The world around us
- Personal development and mutual understanding
- Social studies

**Objectives**
- To demonstrate that children around the world have similar hopes and fears.
- To develop a sense of empathy and solidarity with children around the world.
- To learn that all children around the world have rights as enshrined in the United Nations Convention on the Rights of the Child.

**Learning outcomes**
- Pupils will understand that children all over the world have the same needs and rights.
- Pupils will understand that we all have links with other people and places around the world.

**You will need**
- Resource sheet 14

**Starter**
The starter activity works best if you have some space for children to move around freely, for instance in the playground, school hall or gym or by moving the desks and tables to the edges of the classroom. However, it is possible to carry out the activity sitting down if you adapt it a little. For instance, you could carry it out by compiling a list of all those who can supply an answer and then drawing a graph to see which global link is most popular.

1. Give each child a copy of the Resource sheet 14 and explain that they are going to play a game of bingo! They will need to walk around and ask others in the class if they can supply the answer for a ‘bingo’ box. They will need to find a different person for each box and must fill in an answer in every box on the sheet in order to shout out ‘bingo!’ when they have completed all the boxes. The first person to call out ‘bingo!’ means the game stops (unless you choose to end it sooner or extend it for a while). You should aim for about 10 minutes.

2. Ask the children what they may have learned about their links with other children around the world.
Activity

3. Read or sing the song Children of the world from One Sun One World with the class.

4. Ask the pupils in groups to discuss what they think the main message of the song is. Ask for feedback. Invite groups of pupils to investigate children's lives in different countries or regions of the world – for example, South America, India, Russia, Africa or a very cold place, a hot region, a rainforest... They could be offered headings to work to, such as food, school, homes, leisure time/toys, music, clothes, family... The following resources offer some good starting points:

5. Talk about the differences in children's lives depending on where they live. Talk about how families will pass on the learning that children need to make their way in the environment into which they have been born. Talk also about similarities as children around the world like to play, to feel safe, to learn and children around the world share the same kinds of hopes and dreams.

6. Tell pupils that they are going to design one or more of a logo, a poster, a T-shirt and a greetings card to celebrate and illustrate the theme of 'children of the world'. This could be a group enterprise. To give them some ideas you could display some of the images you can find if you do an internet search on 'children around the world'.

7. Display the final designs and talk about why pupils chose particular images.

Closing discussion

8. Talk with the children about the United Nations Convention on the Rights of the Child (UNCRC). The UNCRC guarantees every child the same rights: to an education, to a childhood, to be healthy, to be treated fairly and to be heard. It was adopted by the United Nations General Assembly in 1989. The Convention has been ratified by 191 out of 193 countries – Somalia and the USA have not signed up – which means that a country by law must ensure full compliance with the articles of the Convention. Children around the world all have these rights. Find out more at [www.unicef.org.uk](http://www.unicef.org.uk).
TALKING TREES AND WISE WORDS

Activity – suitable for 7-11 year olds, 11-14 year olds

Curriculum
• English – literacy, reading, creative writing

Objectives
• To introduce metaphors and proverbs and show how universal meaning can be presented succinctly.
• To introduce the idea that trees have a special place in language and poetry as an image that nearly every person can understand and relate to.

Learning outcomes
• Pupils will understand what a proverb is and the relationship between meaning and metaphor.

You will need
• Resource sheet 15

Starter
Proverbs provide wonderful nuggets of discussion-provoking wisdom. Proverbs, while arising out of and illuminating different cultures, also exemplify widely shared truths and help understanding of ideas. According to the Ghanaian researcher Kofi Asare Opoku, ‘The Yoruba of Nigeria emphasise the value of proverbs with a proverb, saying, “A proverb is the horse that that can carry one swiftly to the discovery of ideas”. ‘According to The Chambers Dictionary a proverb is ‘a short familiar saying expressing a supposed truth or moral lesson’.

1. Talk with the class about what a proverb is. Introduce some well known examples: a stitch in time saves nine; make hay while the sun shines, you can take a horse to water but you can’t make it drink.

Activity
2. Pupils work in pairs or small groups. Give each group a copy of the proverbs and ask them to take it in turns to read them out loud. They should ask if there are any words they don’t understand, such as kindling, then try and work out what the proverbs mean. They may choose to discuss just a few or all of them. Were there any proverbs that they found difficult to understand?

3. Groups should choose one proverb that they like best. Ask groups to say which their chosen proverb is, to explain it and to say why they chose it. Do other groups agree with their explanation? Did they come up with a different explanation? Talk with the whole class about what the meanings might be. For homework the pupils could try and write their own proverb with a tree as the central metaphor.

4. Why might trees feature in so many proverbs and stories? In the One Sun One World musical, the character of the Old Oak Tree begins his last song ‘I am the wise oak tree; I’ve lived through many changing years’. Ask pupils to write a potted history of the area around a very old tree in their area: what changes has it seen, particularly relating to the environment? How and why did these changes come about? Alternatively this could be written as a story.
5. Trees can provide a starting point for a variety of stories. Invite pupils to write their own tree story. It could be about a tree that's important to the pupils themselves; a story about a tree from the perspective of an animal that relies on the tree in some way; a story of a tree in another country and its relationship to local people or a local child. Find out more about forests around the world at [wwf.panda.org/about_our_earth/about_forests/](http://wwf.panda.org/about_our_earth/about_forests/) and [wwf.org.uk/what_we_do/safeguarding_the_natural_world/forests/](http://wwf.org.uk/what_we_do/safeguarding_the_natural_world/forests/).

**Closing discussion**

6. Trees feature in poems and stories around the world. Stories are told under trees in many countries, making use of their shade and shelter. Why are trees so iconic? Why do they feature so strongly in culture, art and literature around the world? Can the class think of stories and books where trees and forests feature? For example, childhood stories such as *Little Red Riding Hood* and *Hansel and Gretel*, literature such as *The Wind in the Willows*, *Harry Potter*, *Lord of the Rings*, *Macbeth*.

7. Discuss the reasons why trees have an iconic and sometimes symbolic status, which might include: trees are so fundamentally important to life (water and carbon cycles, provision of food and energy); trees are thought of as places which are dark or pure 'magic' beyond humankind's control; trees are places of discovery or challenge or refuge. Conclude with why trees are an essential part of the web of life.
Activity – suitable for 11-14 year olds

Curriculum
- Science
- Geography
- Environment and society
- Social studies

Objectives
- To find out about the habitats and adaptation of three endangered species.
- To learn about what is having the greatest impact on their survival.
- To consider what can be done to reverse the trend of their declining numbers.

Learning outcomes
- Pupils will know something about the habitats and adaptations of the panda, the tiger and the polar bear and the present threats to their survival.
- Pupils will have considered the pros and cons of the survival of the animals and made up their own minds about what should be done.

You will need
- Resource sheet 19

Starter
1. Show one or more of the short videos of tigers and their cubs that can be found at www.arkive.org/tiger/panthera-tigris/ There is one with cubs playfighting and climbing a tree at www.arkive.org/tiger/panthera-tigris/video-ti17a.html

2. Do the quick tiger quiz on Resource sheet 18. This is a true/false quiz so ask pupils to write down whether they think each statement you read out is true or false or get them to complete the sheet in pairs.

3. At the end tell them that in fact all the statements are true. Which one did they find most surprising?

Activity
4. Explain to pupils that they will be finding out about three animals, the tiger, the panda and the polar bear that all feature in One Sun One World and are threatened with extinction in the wild – they are endangered species. Their task is to find out more about why they are endangered.

5. Divide the class into groups and give each group a Resource sheet 19 with one of the animals. They should look at the verses form One Sun One World included on the sheet and the information from WWF and fill in the boxes on habitat, food, adaptation and human impact. If they have access to books or the internet they can research more information. If there is time they can fill in information for more than one animal.
6. Ask the groups to feed back their information and make notes on the board. What are the main characteristics of the animals? What are the most interesting and surprising ways that these animals have adapted to their very different environments? How are they dependent on their habitats? What are the main ways in which their habitats are being threatened?

7. Invite pupils to write a short story for a younger child, about the animal they have researched. They should try to bring its habitat to life and build empathy with the animal’s plight. Alternatively they could find out about a news story relating to their animal, and rewrite this for a young child or present as a Newsround style newsbyte.

Closing discussion
8. What is the impact of people on the habitats and lives of these animals? What are the motives that are leading people to destroy animals’ habitats? Does it matter? If it does matter, why does it matter? For instance, while important in their own right, species are also critical for maintaining the fundamental balance of ecosystems.

9. What can or should be done to protect these endangered animals’ habitats? Why might this be controversial? For example, it may be seen by the people affected (who are often among the poorest people of the world), that animals’ needs are being put above their own. It is vital that conservationists work together with business, government and local communities to create sustainable solutions that take account of the needs of both people and nature. For more information see: wwf.org.uk/what_we_do/safeguarding_the_natural_world/wildlife/
Suitable for 7-11 year olds

- Sing altogether or read the verses of the song *Wherever they live in the world*, Resource sheet 17. Divide the class into groups, give each group a verse and ask them to talk about which animals they have heard of and which they don't know anything about. First they should make a list of all the animals they are unfamiliar with. They can find out about one or more of the animals by using books and the internet. Each group should then look to see if the animals mentioned in their verse have anything in common. Each group could then produce a poster, a PowerPoint or make a presentation to the class about the animals mentioned in their verse and the results of their research.

Suitable for 7-11 and 11-14 year olds

- Use activities from the WWF 'Learn' poster pack on safeguarding the natural world through the exploration of the work and history of WWF. There is a poster, extensive information and a range of activities available online to download. The spring 2009 edition on safeguarding wildlife has activities, resource sheets and some very useful website links with even more activities. You can download the pack at [http://assets.wwf.org.uk/downloads/learn_safeguarding_the_natural_world.pdf](http://assets.wwf.org.uk/downloads/learn_safeguarding_the_natural_world.pdf)

Activities to support this issue of Learn are:

- Safeguarding the natural world: Age range 5-16
- Happiness: Age range 5-11
- The Greater Mekong: Age range 11-16
- The web of life: Age range 7-16
- Pandas – Seven reasons to celebrate: Age range 7-13
- Conservation work: Age range 5-16
- Panda jigsaw: Age range 9-16

- Use activities from the WWF 'Learn' poster pack on forests. There is a poster, extensive information and a range of activities available online to download. The autumn 2009 edition on forests and trees has activities, resource sheets and some very useful website links with even more activities. There are quotes on trees, science activities and much more for use in different curriculum areas. You can download the pack at [wwf.org.uk/what_we_do/working_with_schools/resources/online_resources/learn/learn_autumn_2009/](http://wwf.org.uk/what_we_do/working_with_schools/resources/online_resources/learn/learn_autumn_2009/)

- Pupils could research the Major Oak in Sherwood Forest which is thought to be at least 800 years old and where Robin Hood is said to have hidden. The tree has a hollow in its trunk which can hold up to 4 school children all at the same time! See [www.eyemead.com/majoroak.htm](http://www.eyemead.com/majoroak.htm)

- Pupils could write their own song lyrics or a poem or create a presentation or poster celebrating the diversity of species living in an average oak tree. Each one is an individual nature reserve, it can act as host to over 32 species of mammal, 68 species of bird, 34 species of butterfly, 271 species of insect, 168 species of flower, 10 species of fern and 31 species of fungi or lichen.

- Ask pupils to create an art work that illustrates the ‘web of life’ as suggested in the song lyrics ‘Where life is interwoven in a web...’ in *The old oak tree song*, Resource sheet 16.
Suitable for 11-14 year olds

- Evolution is the way in which living things change and develop over millions of years. Why is it that different animals have evolved and adapted to live in different environments and habitats? Pupils can research the work of Charles Darwin, a naturalist (a scientist who looked at the nature of living things) who lived from 1809 to 1882 and developed a theory of the diversity of all living things on Earth and how they came into being. There are extensive resources available as it has recently been the bicentenary of his birth. Groups of pupils could give presentations on the life and work of Darwin – each group could be given a different aspect. Good places to start research are:
  The Natural History Museum at [www.darwin200.org/more.html](http://www.darwin200.org/more.html)
  The Guardian at [www.guardian.co.uk/science/charles-darwin](http://www.guardian.co.uk/science/charles-darwin)
  The BBC at [www.bbc.co.uk/history/historic_figures/darwin_charles.shtml](http://www.bbc.co.uk/history/historic_figures/darwin_charles.shtml)

- Pupils interested in following up biodiversity can play the BioDaversity game at [www.daversitycode.com/](http://www.daversitycode.com/)
Find someone who...

<table>
<thead>
<tr>
<th>… has a cousin in another country</th>
<th>… has a book about a child in another country</th>
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<tbody>
<tr>
<td>Name of country………………………….</td>
<td>Name of country………………………….</td>
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<tr>
<td>Name ………………………………</td>
<td>Name ………………………………</td>
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<table>
<thead>
<tr>
<th>… can tell you the name of another country where children like to play football</th>
<th>… can tell you a country where children speak Spanish, not counting Spain!</th>
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<tr>
<td>Name of country………………………….</td>
<td>Name of country ……………………</td>
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<td>Name ………………………………</td>
<td>Name ………………………………</td>
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<table>
<thead>
<tr>
<th>… has stayed with a child in another country</th>
<th>… has a friend in another country</th>
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<tbody>
<tr>
<td>Name of country………………………….</td>
<td>Name of country………………………….</td>
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<tr>
<td>Name ………………………………</td>
<td>Name ………………………………</td>
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<table>
<thead>
<tr>
<th>… can tell you the name of an organisation that helps look after children around the world</th>
<th>… knows one right that children have under the United Nations Convention on the Rights of the Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of organisation……………………..</td>
<td>Right to……………………………………</td>
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<td>Name ………………………………</td>
<td>Name ………………………………</td>
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<tr>
<th>… can tell you the name of a country where children live in the cold and snow</th>
<th>… can tell you the name of a country where children live in the heat of the desert sun</th>
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<tr>
<td>Name of country…………………</td>
<td>Name of country……………………..</td>
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<tr>
<td>Name ………………………………</td>
<td>Name ………………………………</td>
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</table>
Keep a green tree in your heart and perhaps a singing bird will come.

*Chinese proverb*

Do not be afraid to go out on a limb ...
That's where the fruit is.

*Proverb of unknown origin*

From a fallen tree, all make kindling.

*Spanish proverb*

A tree falls the way it leans.

*Bulgarian Proverb*

A tree does not move unless there is wind.

*Afghan Proverb*

A seed hidden in the heart of an apple is an orchard invisible.

*A Welsh proverb*

A society grows great when old men plant trees whose shade they know they shall never sit in.

*Greek Proverb*
I am the old oak tree;
I share the richness of the earth,
Where life is interwoven in a web of cold and heat
And we all share the seed of cosmic birth.
Yes, I am the old oak tree;
I’ve seen a thousand summers come and go.
I’ve known the joy of spring, the cold of winter days,
So surely I’m the one who ought to know
That we need the sun, the returning dawn,
For the light each morning brings is a life reborn:
Every blade of grass, every simple weed,
Every growing leaf which clothes the world,
every bursting seed.

And we need the rain and the cloud-filled skies,
For we’ve learned to spread our roots where the water lies:
Every drop of dew, every flake of snow,
Every racing stream which scores the earth, every ebb and flow.

But bathed by the water and warmed by the sunlight,
Earth would remain bare stone;
Life couldn’t spring from the heart of the soil
With water and sun alone.
For we need the air, unobserved, unseen,
For its secret, silent breath turns the blue world green.
From the sun and rain and the moving air,
Every living creature draws its life on this earth we share.

Did you know?
- Oak trees usually live for up to 500 years; some oaks are known to be 700-1,200 years old.
- An oak tree can draw more than 400 litres of water from soil and release it into the atmosphere through its leaves each day.

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
Wherever they live in the world,
The animals need to share
The snow, the ice, the sand, the sea,
The rain, the sun and the air.

The donkey, the dog, the cat, the cow, the gannet, the goose and the quail;
The badger, the bull, the tick, the tern, the spider, the slug and the snail;
The mole, the vole, the scallop, the sole and the seal;
The bat, the bee, the stag, the flea, the turkey, the toad and the teal.

The lemming, the krill, the arctic fox, the wolf and the mountain hare;
The haddock, the cod, the elephant seal, the penguin, the polar bear;
The white whale, the grey whale, the spider crab and the moose;
The wolverine, the reindeer, the knott, the barnacle goose.

The silver bill, the climbing perch, the panda, the siamang;
The tailor bird, the archer fish, the crane, the orang-utan;
The sloth bear, the sun bear, the wanderoo and the yak;
The tiger, the gibbon, the flying fox, the dhole, the booted macaque.

The llama, the condor, the toucan, the manatee;
The beaver, the bison, the tortoise, the chickadee;
The tuna, the cougar, the parrot, the prairie fowl;
The spider monkey, the chipmunk, the skunk, the burrowing owl.

The bongo, the drongo, the lion, the manta ray;
The viper, the duiker, the zebra, the mangabey;
The mongoose, the termite, the leopard, the crested rat;
The topi, zorilla, the mountain gorilla, the kob, the butterfly bat.

The wonga wonga, gang-gang, koala and kangaroo;
The numbat, the wombat, the galah, the potoroo;
The dugong, the dingo, the quoll, the wallaroo;
The witchetty grub, the bandicoot, the quokka, the cockatoo.

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
## Quick Tiger Quiz

<table>
<thead>
<tr>
<th>True or false?</th>
<th>T</th>
<th>F</th>
</tr>
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<tbody>
<tr>
<td>1. The tiger is the largest of all cat species.</td>
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<tr>
<td>2. There are now estimated to be as few as 3,200 tigers left in the wild.</td>
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<tr>
<td>4. Wild tiger numbers have fallen by about 95% over the past 100 years</td>
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<tr>
<td>5. Poaching of tigers for skins and body parts used in traditional Asian medicines is the main threat to the species.</td>
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<tr>
<td>6. Habitat loss due to agriculture, and clearing of forests for the timber trade and road networks are forcing tigers into small, scattered areas.</td>
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<td>7. A survey in 2006 showed there was 40% less tiger habitat than just 10 years earlier.</td>
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<td>8. The number of wild tigers and the availability of their prey has steeply declined.</td>
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<tr>
<td>9. Tigers are increasingly coming into conflict with people as they stray close to villages, resulting in tigers and people being killed.</td>
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<tr>
<td>10. Where habitat and prey are protected and there are effective measures to stop poaching and trading, tiger numbers are recovering.</td>
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<tr>
<td>11. Tigers are legally protected and international trade in tiger products is prohibited.</td>
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<tr>
<td>12. WWF’s objective is to double the number of tigers in the wild by 2022.</td>
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</table>

[Source: wwf.org.uk/tiger]
### Panda

I’m at home in these misty mountains;  
These slopes are the hills I know,  
With the bamboo groves and the giant trees  
And the high peaks covered in snow.  
All alone in these misty mountains,  
I crunch on the tough bamboo;  
I chew my food with a crushing jaw  
In the way only pandas can do.  
So, content on my peaceful hillside,  
Slowly I choose my way,  
Leaving a silent pawprint,  
As I search for my food each day.

[From *Silent Pawprints* in *One Sun One World*]

It takes me all my time to find enough bamboo to eat,  
And, though I’d like to find a mate, we never seem to meet.  
This misty mountain forest is the only home I know  
And if I have to leave it, there’s nowhere I can go.  
Each day I hear the people crying out nearby.  
My forest home is shrinking; I watch and wonder why.

[From *I watch and wonder why* in *One Sun One World*]

### Information from WWF

There are around 1,600 giant pandas remaining in the wild, now confined to forest areas high in the mountains of south-western China. The panda’s forest habitat has shrunk and become fragmented over many years due to agriculture, local communities’ use of forest products for food and fuel, and commercial logging.
| **Polar Bear** [picture] | I’m at home on this arctic pack ice;  
These floes are the place for me,  
With the glint of the ice and the shining snow  
And the deep, black wandering sea.  
All alone on this arctic pack ice,  
Passing time is my only bait,  
As I set my nose to the breathing hole  
In the way only polar bears wait.  
So, content on my peaceful ice-floe,  
Slowly I choose my way,  
Leaving a silent pawprint,  
As I search for my food each day.  

[From *Silent Pawprints* in *One Sun One World*]  

I sit beside the breathing hole, but seldom catch a seal,  
My little cub is hungry and needs to eat his meal.  
These bright and shining ice-floes are the only home for me.  
Without them I’d have nothing but the deep, black arctic sea.  
Each day I hear the people screaming through the sky.  
My arctic floe melting; I watch and wonder why.  

[From *I watch and wonder why* in *One Sun One World*]  

| **Information from WWF** | There are an estimated 20,000-25,000 polar bears in the world. The polar bear inhabits the ice-covered waters of the Arctic, spending much of its time at or near the edge of the sea ice, where it is most likely to find food. Climate change is the biggest threat to the polar bear, as it's affecting the Arctic sea ice that many polar bears need in order to hunt for food and raise their young.  

| **Habitat** |  

| **Food** |  

| **Adaptation** |  

| **Human impact** |  

---
I’m at home on these delta islands;
This maze is the place I hide,
With the low-lying land and the mangrove trees
And the rise and the fall of the tide.
All alone on these delta islands,
In the shadows I crouch quite still,
As I watch my prey and prepare to strike
In the way only tigers can kill.
So, content on my peaceful islands,
Slowly I choose my way,
Leaving a silent pawprint,
As I search for my food each day.

[From *Silent Pawprints* in *One Sun One World*]

The mangrove trees still cast the shade to help me make my kill,
But, though I sometimes find a deer, it’s hard to eat my fill.
These secret delta islands are the special home I chose.
What other place is left for me if this wild forest goes?
Each day I hear the people passing where I lie.
My mangrove trees are dying; I watch and wonder why.

[From *I watch and wonder why* in *One Sun One World*]

There are now estimated to be as few as 3,200 tigers left in the wild,
mostly found in isolated pockets spread across increasingly frag-
mented forests stretching from India to north-eastern China and from
the Russian Far East to Sumatra. Wild tiger numbers have fallen by
about 95% over the past 100 years. Poaching of tigers for skins and
body parts used in traditional Asian medicines is the largest immediate
threat to the species worldwide.

<table>
<thead>
<tr>
<th>Habitat</th>
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<tr>
<td>Food</td>
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<tr>
<td>Adaptation</td>
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<tr>
<td>Human impact</td>
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</table>
ONE SUN ONE WORLD
JOURNEY OF
DEVELOPMENT AND
DISCOVERY

KEY THEMES

- civilisations
- explorations
- trading and sharing (cacao)
- the quest for knowledge and power
- development

‘If the winds had never blown and the tide had never turned,
And the galleons had never sailed to sea,
If the oceans of the earth had never been explored,
How different the world now would be!’
from *If the winds had never blown* in *One Sun One World*

‘Sailing serenely over the sea, flying so high in the sky,
Weaving a web around the earth, threads to draw and threads to tie;
Rising and falling under the waves, speeding across the land,
Travelling on from place to place, meeting new cultures face to face,
Sharing the wealth of the human race, passed from hand to hand.’
from *Can you imagine a crazy world?* in *One Sun One World*

‘And merchants and rulers fought for the trade;
For men prepared to venture, a fortune can be made.
Nations rise, nations fall, empires come and go,
But still the cargo sails the sea and still the trade winds blow.’
from *Still the trade winds blow* in *One Sun One World*
by Peter Rose and Anne Conlon © 2010 Josef Weinberger Ltd. London
CAN YOU IMAGINE A CRAZY WORLD?

Activity – suitable for 7-11 year olds

Curriculum
• History
• Geography
• Environment and society
• Social studies
• Citizenship

Objectives
• To learn about the importance of exploration and trade.
• To find out what we have gained from historical contact with the Islamic world.

Learning outcomes
• Pupils will know that there were advanced civilisations in different parts of the world over a thousand years ago.
• Pupils will understand how exploration and trade enriched our society and culture.

You will need
• Resource sheets 20, 23 and 24

Starter
1. You will create a timeline of early civilisations around the world, either on the board or wall or using a line-up of pupils. In preparation you will need to draw a long horizontal line marked out with centuries from 2000 BC up to the present day. You could mark out this line on the ground in the playground or in the hall.

2. Hand out resource sheet 23 of civilisations around the world and ask pupils to read it in pairs. Have they heard of any of these civilisations? Talk about what a civilisation is: briefly, an organised society; or in more complex terms, a society in an advanced state of social development with, for example, complex legal and political and religious organisations and with distinctive cultural and economic organisation.

3. Then build up a timeline, either marking the civilisations on the line or asking pupils to stand on the line at various points. This should demonstrate how long ago these civilisations were flourishing. Ask pupils if anything surprises them.

Activity
4. Give pupils in pairs copies of Resource sheet 24. Ask them to circle in one colour anything that they have heard of and to circle in another colour anything that they use in their daily lives. They should then join with another pair and talk through the items or words that they know or use.

5. Ask the class to feed back. Remind the class that the Arabic world which they looked at in the starter activity was a very advanced civilisation from about 1,400 years ago and when contact was made with the Islamic world Europeans learned many things. The sheet shows the learning and items and words – point out the things pupils may have missed like the numbers and the patterns. How might our society be different if we hadn’t had access to these things?
6. Once all the knowledge is pooled is there anything that remains a mystery. How could they find out about the unknown items? Ask them to do some research for homework.

**Closing discussion**

7. Can the class see the connections between the activity they have just carried out and the song *Can you imagine a crazy world* on Resource sheet 20. What is the message of the song?

8. What happened in the world that gave people access to learning, goods and ideas from all over the world? What might the opening up of the world through trade be compared to these days? Now with the internet we have access to so much that goes on in the world. What comparisons can be drawn? What are the similarities? What are the differences?
Activity – suitable for 11-14 year olds

Curriculum
• Geography
• History
• Citizenship
• Environment and society
• Social studies

Objectives
• To understand what trade is and why it is needed.

Learning outcomes
• Pupils will understand terms related to trade in raw materials.
• Pupils will know about the trade of one raw material.

You will need
• Resource sheets 26, 27 and 28

Starter
1. Ask the class to think of words that have something to do with trade.
2. Can anyone have a go at defining ‘trade’? Here is one definition: the commercial exchange (buying and selling on domestic or international markets) of goods and services.

Activity
3. Ask pupils to work in pairs or groups. Hand out the Resource sheet 26 Trade – what’s it all about and Resource sheet 27 Raw materials, and ask pupils to fill them in. Ask for feedback and discuss the answers. Is it easy to understand the difference between a raw material and a manufactured item?

4. Ask pupils if they know which raw materials are available in the UK and which have to be bought from other countries – traded as imports.

5. Hand out Resource sheet 28 about imports, and ask pupils to fill it in. Then ask pupils to choose one of the raw materials and to draw a mind map or diagram on a large sheet of paper to capture the different people, species and environmental impacts associated with the production of the raw material, the manufacturing process and the transport. It would be ideal if they had access to the internet so that they could do some research, otherwise it might be best to choose a raw material such as oil about which they may have prior knowledge.
6. As a homework or separate research activity, invite pupils to find out more about palm oil and soy. Growing these raw materials has huge environmental impacts, the products they end up in are inextricably part of our everyday lives, yet they remain virtually ‘hidden’. Palm oil – found in one in 10 supermarket products – is regularly called ‘vegetable oil’ on product labelling, whereas soy is used extensively in animal feed. Pupils could produce a PowerPoint explaining: where they are grown; what environmental impacts this has; what types of products they appear in and the links to our own lives; what can be done about it. Search for ‘soy’ or ‘palm oil’ at wwf.org.uk or www.panda.org for more information.

Closing discussion
7. Display the mind maps and discuss them. You could also invite two or three pupils to present their PowerPoints. Draw out the environmental impacts and the complexity of the issues.

8. How do we know if a raw material has been grown or ‘produced’ sustainably, e.g. in a way that does not harm wildlife, habitats, or people? If its production is not sustainable, what choices do we have? Who else has responsibility to sort this out – manufacturers, retailers, government, international organisations?
FAIRTRADE?
CACAO AND
THE STORY OF
CHOCOLATE

Activity – suitable for 7-11 year olds, 11-14 year olds

Curriculum
• History
• Geography
• Citizenship
• Environment and society
• Social studies

Objectives
• To understand the trade in cocoa and where chocolate comes from.
• To question the fairness of trade terms.

Learning outcomes
• Pupils will understand the process that turns the cacao crop into chocolate bars.
• Pupils will recognise that there are fairer alternatives to the way in which the cocoa trade is mostly carried out.
• Pupils will know what Fairtrade is and recognise the logo.

You will need
• Resource sheet 20, 21
• Atlases or globe or large world map

Starter
1. Hide a chocolate bar behind your back. Ask the class to guess which food you are hiding. Give them two clues: on average, in the UK we eat 16kg of it each year and spend £1.20 on it a week. What food is it? Reveal the chocolate.

2. Ask the class if they know what chocolate is made from. The main ingredient of chocolate is cocoa which comes from cocoa pods which grow on the trunk of the cacao tree. Show them pictures of cacao trees with cocoa pods and the split pods with the white-ish beans inside (search on Google images). Are they surprised?

3. In pairs or groups, pupils now read the words of the song *If the winds had never blown* from One Sun One World on Resource sheet 20. Do they know where cacao is grown? Explain that cacao likes constantly high temperatures and a lot of rain. Ask pupils to carry out some research into where cacao is grown and the history of chocolate as homework or a separate project. The information on Resource sheet 21 will help them.

Activity
4. Show the class the chocolate bar again. What are the different stages involved in making a chocolate bar? Show the pupils the presentation 'From bean to bar' at www.papapaa.org/flash/ks2_1b.htm You can also get a lot of information and pictures at www.williescacao.com/ Discuss any points that need clarification.
5. Tell the class they are going to carry out a role play looking at the trade in chocolate. Of the top seven tropical countries which grow cacao, only one country, Brazil, also produces chocolate bars – all the other countries export their beans to industrialised countries to process. This is due to the way that this trade has been carried out historically. Tell the class to bear this in mind and that they will be discussing this later.

6. Divide the class into five groups. In the role play each group will represent one of the main stages in chocolate production. Write the five stages up on the board and give each group one of the role cards (see Resource sheet 21). Explain that in their groups they will need to decide how much of the money paid by a purchaser for a chocolate bar they think they deserve. For ease, a chocolate bar is deemed to retail at £1.00 (one pound). What is a fair share for the work involved? The role cards provide some clues of the costs involved in their part of the journey from bean to bar.

7. Each group chooses a spokesperson to say how much of the £1.00 they think they should get and why. Write the amounts up on the board. The amount is totalled. If it exceeds £1.00 the groups then discuss which group should take less and why. Total the amount again. Is it nearer to £1.00? If not, why not? Is it difficult to keep everyone happy?

8. Then reveal the actual amounts received by the groups involved in the chocolate production and sales process, based on a bar of chocolate retailing at £1.00. Ask how the cocoa farmers feel about their share. How do the other groups feel?

<table>
<thead>
<tr>
<th>Role</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>8p</td>
</tr>
<tr>
<td>Cocoa buyers</td>
<td>7p</td>
</tr>
<tr>
<td>Importer</td>
<td>14p</td>
</tr>
<tr>
<td>Chocolate company</td>
<td>28p</td>
</tr>
<tr>
<td>Shops</td>
<td>28p</td>
</tr>
<tr>
<td>Government</td>
<td>15p</td>
</tr>
</tbody>
</table>

[Source: X-Changing the World, Reading International Solidarity Centre, 1997.]
**Closing discussion**

9. Ask if anyone has heard of Fairtrade? What is Fairtrade? Do the class think it is about charity? Explain that it is about buying commodities and products from farmers in the developing world on fairer terms, for example:

- guaranteed better prices
- decent working conditions
- fairer terms of trade
- extra money for community projects
- health and safety standards
- the security of long-term contracts
- democratic organisations
- environmental protection
- education and training

You could either read out this list, or write onto a chalkboard and ask pupils which statement(s) they think apply.

10. Does anyone know what The Fairtrade Mark looks like? The Fairtrade mark is issued by the Fairtrade Foundation. The Foundation guarantees that the product carrying its special Fairtrade Mark has been sourced and supplied from the developing world in a way that guarantees the producer a better deal. But most cocoa sold is not on Fairtrade terms. This is because there is not yet enough demand from consumers. More shops will only stock Fairtrade chocolate if people show that they will buy it. Ask the class if they think they will look out for and buy fairly traded chocolate in future.
Activity – suitable for 7-11, 11-14 year olds

Curriculum
• Science
• Expressive arts
• Citizenship
• Environment and society
• Social studies

Objectives
• To learn about some aspects of energy and what we need energy for.
• To understand some of the consequences of our energy use.
• To start to explore solutions to the issues connected with our energy use.

Learning outcomes
• Pupils will understand that energy comes from the sun and is essential to life.
• Pupils will understand some of the consequences attendant on our use of fossil fuels.

You will need
• Resource sheet 22

Starter
You may want to be in a large space for this starter. By clearing back the desks or going into the playground or hall.

1. Sing as a class or read together the song Driven by the power from One Sun One World, Resource sheet 22. Emphasise the rhythm and the beat.

2. Ask pupils in pairs or groups to develop some actions to the song. Ask for volunteers to demonstrate their actions while the rest of the class sing or say the song. Vote for the best routine.

3. The whole class then learns the best routine. Then altogether, go through the song twice – the first time all pairs do their own actions, the second time all pairs do the chosen routine.

Activity
4. Give pupils in pairs or groups a large sheet of paper with a big sun drawn in the middle and ENERGY written across it. Ask the pupils to write around the sun anything they know about energy or any questions they have about energy. Give them hints if necessary such as what makes energy, where does it come from, we need energy, cars use energy, etc. Lead into energy activities which you may already use in science. The Ashden Awards website contains a very helpful suite of PowerPoints, teachers’ notes and short films at www.ashdenawards.org/schools/activities and www.ashdenawards.org/schools/films
5. Recognise that inventing different ways to harness energy – particularly the burning of fossil fuels – has created huge changes in our lives, many of them positive. But there have also been consequences. Ask pupils to name any serious environmental consequences of all the energy we use. Hopefully many of them will mention climate change. Explain that our reliance on fossil fuels as a source of energy to power our homes, cars, factories, etc has upset the balance of ‘greenhouse gases’ leading to major changes to climate and weather patterns. Resource sheet 9 in ‘Journey through the elements’ offers explanations of key climate change terms. Again the Ashden Awards website offers some very useful resources. The ‘Making choices’ and ‘What is global warming’ sections are particularly useful.

www.ashdenawards.org/schools/activities
www.ashdenawards.org/schools/films

6. Revisit Resource sheet 9 in ‘Journey through the elements’ with the class, and ask different groups to choose one of the ways of tackling climate change outlined on the sheet, and to research it in more detail. They could report back to the class in a PowerPoint format, or older pupils could write a simple ‘guide’ to the issue and the solution for younger children.

Closing discussion

7. What do pupils think the school could do to reduce its energy use? Ask them to consider if their school could use renewable energy. What have other schools done?

8. What other developments or inventions can they think of that can go some way towards reducing our energy consumption? For example, ‘teleconferencing’ is used by some companies now to reduce staff travel by plane for meetings. Should we just rely on technology and new developments to address our energy consumption issues? Or are there other more significant lifestyle changes we can consider, e.g. working nearer to where we live, growing our own food, spending more time in face to face company with our friends or family rather than watching hours of TV or computer games?
**Activity – suitable for 11-14 year olds**

**Curriculum**
- Geography – physical geography, natural landscapes; graphica, visual literacy
- History – voyages of discovery, trade and empire
- Environment and society
- Social studies

**Objectives**
- To stimulate an interest in and a sense of wonder about the world.
- To help young people make sense of a complex and dynamically changing world. To explain how the currents and winds of the world have affected human history and life today.

**Learning outcomes**
- Pupils will understand the role of wind and current in the voyages of discovery and the development of trade around the world.

**You will need**
- Resource sheet 25
- a globe
- an atlas

**Starter**
The Gulf Stream is just one of the ocean currents that is part of the vast system of currents and winds that controls the climate of the world. These winds and currents bring warmth or cold, dryness or rain to all the regions of the world.

1. Ask the class if they have heard of the Gulf Stream. Talk about the Gulf Stream and how this current of water flows from the warm tropics up the coast of North America and across the Atlantic to flow past the western shores of the UK. This warm water keeps our climate from being as cold as it could be this far north. Talk about how we are on the same latitude (level) as Northern Europe and Russia where every winter there is considerably more snowfall and chilly winds.

2. Look at the maps on Resource Sheet 25 and pick out the main currents and winds that affect the UK. Explain what is meant by the term ‘prevailing wind’ if necessary.

**Activity**
3. Divide the class into pairs or groups and give each the name of one or two commodities which were first traded in the days of sailing ships, such as cacao from South America traded to Spain, Portugal and England and spices from China traded to Europe, mentioned in the song Still The Trade Winds Blow.

4. Give each pair a blank map of the world and ask them to draw on the map the route they think the trade would have taken in the time of sailing ships, given that the ships had to make use of the winds and currents. They should use the maps provided on Resource Sheet 25 to help them. They should list the winds and currents that will help them on their way.
Closing discussion

5. Ask one or two pairs to feed back on the routes that they have chosen. Have all the groups chosen similar routes or are different routes possible. What more do they need to know to make more informed choices about routes? Where could they find this information? What would the sailors have needed to know in order to plot their routes? Where might the sailors have got this information from?

6. How might the patterns of winds and currents have had an impact on the history of the world? What do the class think about the changes in the world that have taken place because of winds and currents? What impacts do winds and currents have on us today? For example, the impact from the ash cloud blown by the wind from the eruption of the Icelandic volcano in 2010 which grounded planes for over a week. What about air or water borne pollution?

7. It is predicted that climate change will have an impact on the patterns of winds and currents in the future. If the Gulf Stream changes its course and does not flow so far northwards, what impact might that have on the climate of the UK?
**Extension Activities**

**Suitable for 7-11 year olds**

**Scrap Globe**

Using scrap materials groups of children can make a globe with representations of the main land masses and oceans. You can use a real globe as a model and to talk with them about the shapes of the continents. You can use a range of different scrap, recycled or waste materials and fabrics which you can get free from Scrapstores around the UK. See the Scrapstore directory at [www.childrensscrapstore.co.uk/Uk%20Directory%20of%20Scrapstore.htm](http://www.childrensscrapstore.co.uk/Uk%20Directory%20of%20Scrapstore.htm).

For instance:

- Make the globe from foam cut to shape or papier mache round a blown up balloon or crumpled chicken wire.
- Stick on strips of blue paper or plain paper and paint it blue or cover with stretchy sea blue fabric.
- Cut out shapes of continents in green or brown felt or fabric, or white for the Arctic and the Antarctic. Stick them on the globe.
- Write the names of the continents on sticky labels or with permanent marker directly onto the fabric.

Ask pupils to read or listen to the song *Still The Trade Winds Blow* from *One Sun One World* and find all the places mentioned on the globe or in an atlas.

Finish up by asking the pairs to discuss if they were going to make a journey to every continent by sea, which order would they visit the continents in and why, take feedback from the whole class and discuss the different journeys.

**Cacao and Fair Trade**

- See [www.papapaa.org](http://www.papapaa.org) for a wealth of information on cacao, the cocoa trade, chocolate and Fairtrade. Oxfam’s resource ‘Spill the Beans’ includes a video. On this the cocoa farmer explains that because he earns a fair wage he can afford to send his children to school thus they access their right to an education. Oxfam’s ‘Go Bananas’ pack may also be of interest – it explores the banana trade.
- See [www.oxfam.org.uk/coolplanet](http://www.oxfam.org.uk/coolplanet)

Role play an interview of someone in the role of Cacao. Be creative – ask them what changes they have seen over the centuries, what they think of the trade in cocoa, what makes them so special!

**Suitable for 7-11 and 11 -14 year olds**

**Journey round the world**

Using Google Earth you can fly on a journey round the world and look at places of your choosing as you go. You could use an interactive white board and do this with the whole class or ask pupils to work in groups at computers. Start by flying in to the location of the school. Then fly to four places in the world that are important in the musical:

- the Arctic where the polar bear lives
- the Sundabans mangrove swamps at the River Ganges delta in India and Bangladesh where the Bengal tiger lives
- China, where the giant panda lives in the mountain forests in Sichuan, Shaanxi and Gansu provinces
• Central America, where the cacao plant is a native species and from which we get chocolate
(Google Earth is a virtual globe, map and geographic information programme which is available to download free at http://earth.google.com
Find out more at http://en.wikipedia.org/wiki/Google_Earth)

• Invite pupils to research the various forms of labelling or certification marks – like Fairtrade – designed to help consumers buy products that are more sustainable or which address certain animal welfare issues. They could conduct a survey in school to see how many people recognise the marks and know what they mean.

• The BBC series 'A history of the world in 100 objects' is a wonderful starting point for investigating the theme of discovery and development. There is a hugely informative website at www.bbc.co.uk/ahistoryoftheworld/ This site uses objects to tell a history of the world. You’ll find 100 objects from the British Museum and hundreds more from museums and people across the UK. There is a timeline and a picture of every single object. Those of the 15th and 16th centuries are very informative about trade and discovery. The podcasts can be downloaded. There is also a very useful site for schools and teachers at www.bbc.co.uk/schools/primaryhistory/worldhistory/ with a lesson about world trade among others.

Suitable for 11 – 14 year olds

• Ask pupils to research the distances that a particular commodity would have travelled around the world and the time it might have taken by sailing ship. What might this tell them about the value of goods? How are the same goods transported today? Has their value stayed the same or decreased?

• Pupils could research the voyages of discovery. Pairs or groups of pupils could take a different explorer such as Columbus and Vasco de Gama and develop a PowerPoint to present their journeys and why they think they were important. How are these journeys referenced in the song Still The Trade Winds Blow?

• What is meant by renewable energy? Groups of pupils can carry out research and prepare presentations or posters of their findings. Ask them to consider if the school could use renewable energy.

• BBC News followed a shipping container for a year to tell stories of globalisation and the world economy and trade – see the route of the BBC Box as it travelled the globe. There is a wealth of information and activities and maps to draw on and learn from. Find out how schools were involved too. Go to http://news.bbc.co.uk/1\hi/in_depth/business/2008/the_box/default.stm
If the winds had never blown and the tide had never turned,
Would I still be in my home among the trees?
If the winds had never blown and the ships had never sailed,
Would my fame have spread so far across the seas?

From the ends of the earth, the galleons arrived,
Seeking spices, silver and gold.
They came to me, Cacao, the food of the rich,
The drink of the brave and bold.
They carried me away in the arms of the winds
To the land of the rising sun.
I was greeted by the wealthy, welcomed by the proud;
My conquest of the world had just begun.

Song from One Sun One World
by Peter Rose and Anne Conlon
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CAN YOU IMAGINE A CRAZY WORLD?

Sailing serenely over the sea, flying so high in the sky,  
Weaving a web around the earth, threads to draw and threads to tie;  
Rising and falling under the waves, speeding across the land,  
Sharing the wealth of the human race, passed from hand to hand.

Can you imagine a crazy world where chillies have never met rice,  
A world where people eat fish without chips and cakes without sugar and spice,  
Where apple has never seen lemon or lime, pawpaw has never met plum,  
The British have never drunk cups of tea, Jamaicans have never drunk rum?

Can you imagine a crazy world where prairies have never seen ploughs,  
Where USA doesn't grow any wheat: no horses, no chickens, no cows;  
Americans walk from A to B, rolling along without wheels,  
And life goes on in a silent world: no wagons, no automobiles?

Can you imagine a crazy world where nobody risks or dares,  
Where nations treasure the crops they have grown, but nobody swaps or shares,  
Where nobody dreams of a world to explore and nobody ventures to roam,  
And nobody travels and nobody trades and everyone stays in their home?

Sailing serenely over the sea, flying so high in the sky,  
Weaving a web around the Earth, threads to draw and threads to tie;  
Rising and falling under the waves, speeding across the land,  
Travelling on from place to place, meeting new cultures face to face,  
Sharing the wealth of the human race, passed from hand to hand.

Song from One Sun One World  
by Peter Rose and Anne Conlon  
© 2010 Josef Weinberger Ltd. London
Cocoa Farmers
- You grow and care for the cocoa trees for three-five years. It takes a year’s crop of cocoa beans from a tree to make just one tin of cocoa.
- You harvest the cocoa pods in hot temperatures and remove the beans from the pods. Then, you ferment the beans for six days and dry them for 10 days.
- It’s your job to transport the sacks of beans to the cocoa buyers.

Cocoa Buyers
- You weigh the sacks of beans and inspect them.
- You pay the farmer for the beans.
- It’s your job to transport the beans to the port.

Importers
- You arrange transport for the beans from a port in the tropical country to the UK by ship. You have to pay for all the fuel and the wages of the people working on the ship.

Chocolate Companies
- You turn the cocoa beans into cocoa solids and cocoa butter and buy other ingredients like sugar to make the chocolate. You do the tasting!
- You design and pay for the chocolate wrappers. It’s important that people buy your delicious chocolate bars so you need to spend money on advertising.

Shops
- You buy the chocolate bars from the chocolate companies.
- You have to pay the wages of the staff in your shop and have a lot of running costs, e.g. electricity bills and plastic carrier bags.
Driven by the power of an engine, articulated lorries pull a load,
Riding on a cog, riding on a crank, cutting lines of commerce on the road,
Beating out the rhythm of a lifestyle, counting out the cost of what it's worth,
Carrying the food, carrying the fuel, carrying the people of the Earth.

We are the beating, burning engines; we keep the transport hubs on course.
We are the certain steer, grinding gear, driving economic force.
We are the beating, burning engines; we keep the transport hubs on course.
We are the turning wheel, shining steel, driving economic force.

Narrations and song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
AMERICAN CIVILISATIONS
The Mayas and later the Aztecs in Mexico, and the Incas in Peru had developed their own civilisation by 1500AD. They were all great builders. The Mayas built huge pyramids while the Incas’ roads ran along the Andes mountains linking their hilltop cities.

The Mayas and the Aztecs could calculate and foretell the position of the stars. They were skilled sculptors and metalworkers. Europeans learned from the Aztecs and the Incas how to grow maize, tobacco, potatoes, and tomatoes. Their agriculture was far in advance of Europe’s at the time.

INDIA
India developed an advanced civilisation from about 2000 BC onwards. Skilled people built cities, palaces and temples. Fine cloth was produced of muslin, velvet and cotton. India was the most developed country economically in the seventeenth and early eighteenth centuries.

THE ARAB EMPIRE
Islam was founded in the seventh century (in the Christian calendar) and for 500 years after the Arab people expanded control over their neighbours. The Arab people became especially learned in maths, medicine and astronomy. Europeans also learnt how to make a ship’s compass and gunpowder from the Arabs.

WEST AFRICAN EMPIRES
The empires of Ghana, Mali and Songhai were at their greatest between 300 and 1550 AD. Their wealth was based on trade in salt and gold. In these empires and in Benin people became fine metal workers.

AFRICAN CIVILISATION
Zimbabwe (1100-1400 approx), the centre of a highly organised and developed civilisation, was a gold and iron working centre, while Mombasa (from 1300) Kilwa (1200-1500) and Sofala became rich through trade with India and the Arab lands.
Objects from Islamic Culture
The ocean currents


The ocean currents

http://images.google.co.uk
THE PREVAILING WINDS ON EARTH

Blue: westerlies
Yellow: trade winds (northeasterly)
Brown: trade winds (southeasterly)
Pink 1: hurricanes
Green 2: cyclone

Trade – what’s it all about?

Can you imagine a crazy world where nobody risks or dares,
Where nations treasure the crops they have grown, but nobody swaps or shares,
Where nobody dreams of a world to explore and nobody ventures to roam,
And nobody travels and nobody trades and everyone stays in their home?
RAW MATERIALS

All manufactured goods are made from raw materials.

In the centre of the page are manufactured goods. Round the outside are raw materials.

★ Draw a line to connect each manufactured good to the raw materials you think it has been made of.

- **BAUXITE**
  - Aluminium
  - alloys
  - aeroplanes
  - bridges
  - silver paper

- **RUBBER**
  - latex, tapes
  - hoses

- **COAL**
  - raw-made
  - fabrics
  - power

- **LEATHER**
  - clothing
  - upholstery
  - bags, shoes

- **SUGAR**
  - food
  - drinks

- **OIL**
  - paint
  - transport
  - power
  - plastic

- **IRON**
  - steel
  - nearly all metal things

- **WHEAT**
  - flour, bread
  - and cakes

- **COPPER**
  - electronics
  - engineering
  - pipes
  - boilers
  - fridges

- **ZINC**
  - galvanised iron
  - roofs, gutters
  - dustbins
  - batteries
  - with copper for brass

- **TUNGSTEN**
  - filaments in electric lights
  - engineering

- **CHROMIUM**
  - plating
  - to prevent rust
IMPORTS

Write down four raw materials that you think would be needed to make these instruments and the band's equipment...

What would you miss if Britain did not import raw materials?

Would the band be able to play if Britain was not able to bring in (import) raw materials from overseas?

Draw or list things that you would miss. You could cut pictures from magazines and make a display on a large piece of paper.

I would miss...
ONE SUN ONE WORLD
JOURNEY OF TODAY AND TOMORROW

KEY THEMES

- process of change
- consumption
- limited resources
- values and vision
- alternative futures
- uncertainty
- justice and equity

‘We share a wonderful world:
The greatest depths of human thought,
The greatest heights the human mind can reach,
The breadth of wisdom we have sought.
We share a wonderful world:
A world of power, a world of speed,
A world which binds us all with threads of life,
A world which serves our every need.
But now our world’s in danger.
How can we plan the future now?
We want to save these wonders,
But who on Earth can show us how?’

from We share a wonderful world in One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
Waste Not, Want Not?

Activity – suitable for 7-11 year olds

Curriculum
• English
• Citizenship
• Personal and social education
• Social studies
• Environment and society

Objectives
• To look critically at consumer society.
• To learn about reducing, reusing or recycling waste.

Learning outcomes
• Pupils will have analysed the difference between ‘wants’ and ‘needs’.
• Pupils will have considered how waste can be reduced.
• Pupils will have begun to consider consumer society critically.

You will need
• Resource sheets 29 and 30
• You will need to prepare a bag or sack of clean ‘rubbish’ containing about 10 items that could be reduced (plastic packaging), reused (a clean piece of tinfoil), recycled (a used piece of paper or cardboard).

Starter
1. Ask the class to think of things that are important to their being able to live their lives as they wish. Write the list up on the board. If they do not include things like somewhere to live, food and water remind them that without these things they would not be able to live as they wish. Ask them to add any of these necessities that they can think of.

2. Ask them in groups of four to decide on the six most important items on the list. Ask the groups to feedback and write all the chosen items up on the board.

3. Then ask the class to decide whether each item is a ‘want’ or a ‘need’. Children’s ‘needs’ should be met because they cannot provide most of them for themselves but rely on adults. Which are most important to enable them to live their lives – ‘wants’ or ‘needs’?

4. Discuss whether all children in our society have these ‘needs’ met. (‘Needs’ are also expressed as ‘rights’ in the United Nations Convention on the Rights of the Child – see www.unicef.org.uk/tz/rights/index.asp); Do children around the world have their ‘needs’ met and equal access to their rights? What can be done to ensure the rights of children everywhere are met?
Activity
5. Read the song about the rat – Life’s never been so good from One Sun One World or the class can sing it! [Resource sheet 29]

6. How does the rat live his life? Why is life so good for him? Is this a good thing? Ask the class what they think the future holds for the rat? Will we continue to waste food? Will the rat continue to get fat?

7. Now read or sing the song Rat about town from One Sun One World [Resource sheet 30]. Give out copies of the song and ask pupils in pairs to underline in one colour things in the song that they agree with and in another colour things that they disagree with. What is the overall message of this song? Is it true that the pressures of living today mean that we live in a ‘throw-away’ society? What does that mean for the planet? How does it affect the environment? Ask them to write round the song all the effects that ‘consuming’ and ‘throwing away’ has on our planet.

8. Ask the class to feedback with their thoughts. If they agree that ‘consuming’ and ‘throwing away’ are not good for the planet, what can we do about it? One of the things we can do is to reduce, reuse and recycle.

9. Produce your big bag or sack of ‘rubbish’ and say that you are going to have a look and see what has been thrown away and whether it could be reused or recycled. Ask for three volunteers to come up and each hold up a sign saying either reduce or reuse or recycle. They should then stand in three separate places.

10. Ask for other volunteers to come up and have a lucky dip (reassure them that there won’t be anything that isn’t safe to touch). As pupils come up and pick something out of the bag, ask them to take it to one of the three areas – reduce, reuse or recycle – and say why they have taken it there. If children are uncertain you can give them some direction. Add your own comments if necessary. After all the items have been taken out and allocated thank the volunteers and ask them to sit down.

Closing discussion
11. Ask the class what the benefits of ‘reduce, reuse, recycle’ are and take answers. Reinforce with information if possible. Reducing the consumption of the planet’s resources will benefit us all for the future and conserve natural resources for the generations of the future.

12. Explain that some people talk of five Rs not three: they also include ‘Rethink’ and ‘Refuse’. Referring back to the lucky dip activity above, you might suggest that plastic packaging need not have been produced or bought in the first place and could go to a ‘rethink or ‘refuse’ area, for example.
**Activity – suitable for 7-11, 11-14 year olds**

**Curriculum**
- English
- Citizenship
- Personal and social education
- Social studies

**Objectives**
- To help students appreciate that people hold different views of the future.
- To consider the assumptions underlying different views.

**Learning outcomes**
- Pupils practise exploration and hypothesis; consideration of ideas; argument, debate and the development of thinking.
- Pupils learn to take different views into account and use evidence to come to their own conclusions.

**You will need**
- Resource sheet 31 cut into separate slips for the role play

**Starter**
1. Ask the class to think of films they have seen about the future or books they have read. Write them up on the board. Are the views of the future optimistic or pessimistic and gloomy? Does everyone agree?

2. Ask pupils to put up their hands according to whether they think the future will be better than the present or worse. Lead into the activity.

**Activity**
3. If possible, pupils should work in groups of four. Using Resource sheet 31, ‘Four views of the future’, each group gets one viewpoint to start with. (If there are more than four groups, more than one group will get a particular viewpoint.) Each group then discusses the viewpoint and works it out in more detail. They then present to the whole class arguments to support that particular view of the future. This should be kept fairly brief.

4. Pupils should continue to work in the same groups. Hand out an envelope containing the four viewpoints to each group. Each group then carries out a short (10 minutes) role play discussion on ‘What will the future be like?’ with each of the four group members taking a different viewpoint. After the discussion ask the students how it felt to be arguing from a particular point of view. Was it difficult? If so, why?

5. The class then take each viewpoint to pieces. Why might it not come true? What are its weak points? Where are the flaws?
6. Groups then work together to draw up summaries on the strengths and weaknesses of each view. The group then ranks them 1 to 4 in the order in which they would most expect them to come about. They also rank them in the order in which they would most like them to come about. Discuss with the class whether there is a difference between the two.

**Closing discussion**

7. Talk with the class about the responsibilities of decision makers. Do the class feel that sufficient care is being taken to make decisions at a global level in their best interests?

Remind the class that they are the decision makers of tomorrow and that their actions have consequences.

[Source: Adapted from *Educating for the Future: A Practical Classroom Guide* by David Hicks, published by WWF, out of print]
MY MOBILE PHONE – MY BEST FRIEND?

Activity – suitable for 11-14 year olds

Curriculum
• Citizenship
• Personal and social education
• Social studies
• Environment and society

Objectives
• To consider the role of the mobile phone in our lives.
• To find out about some of the raw materials that are needed to make mobile phones.

Learning outcomes
• Pupils will have investigated some aspects of the impact of mobile phones.
• Pupils will have learnt about the extraction and recycling of some of the more costly raw materials used in mobile phones.
• Pupils will have used debating and communication skills.

You will need
• Resource sheets 33 and 34

Starter
This activity is based on Philosophy for Children (P4C) which focuses on the development of thinking skills and quality dialogue during ‘community of enquiry’ discussion groups. The sessions help children to think for themselves, benefit from the thinking of others and ultimately come up with better ideas. The process also helps them to communicate these ideas with greater confidence and clarity.

Community of enquiry discussion groups operate within a series of conventions which are designed to help children to participate within a structured, respectful and relaxed environment. The children can be invited to participate in the creation of these conventions which might include items like listening to the speaker; treating contributions with respect; taking turns; prefacing comments by explaining whether you agree or disagree and explaining your reasoning.

During these discussion activities, the teacher takes a back seat and acts as a facilitator. The Teachers’ TV website features a video which provides a useful introduction to Philosophy for Children: www.teachers.tv/video/1395

1. Ideally, pupils should be sitting in a horseshoe or circle for this starter and activity. Agree the ground rules. For example, these might include that someone may ‘pass’ at any time, that there should be no interruptions, no put-downs and that people should only speak when they are holding the phone (switched off!).

2. Ask pupils to pass a mobile phone round the circle and while they are holding it say one thing that they like about mobile phones.

3. Ask pupils to pass the phone back round the other way and say one thing they don’t like about mobile phones. There is no need for discussion at this stage.

4. Tell the pupils that in the next stage they will be carrying out an enquiry.
Activity
5. Read out the song My best friend from One Sun One World [Resource sheet 33] or ask one or more pupils to read it out. Also project or hand out the Resource sheet 34 – ‘Do you know what’s in your mobile phone?’ and make sure that everyone has read it.

6. Give the participants some thinking time to reflect on the messages of the song and the information about the raw materials used to make mobile phones. What are the ideas that interest them? What does the song make them think about? Does the information about raw materials make a difference to how we might view our phones? You could have an initial brainstorm of comments and reactions but without discussion at this stage.

7. Ask pupils in pairs or threes to formulate questions for the enquiry. These questions are prompted by the song, the information and the comments that have followed and should enable people to examine an idea that has arisen. An example of a question might be ‘Can a phone be a best friend?’; ‘Why don’t more people recycle their phones?’ or ‘Is it OK for us all to keep having new phones – regardless of the environmental and social cost?’

8. Questions should be shared and written up on the board. The class then needs to agree on one question that will form the basis of the enquiry. You can do this in various ways – you can group the questions and then choose one group and finally one question, or have a free vote on all the questions, or stick a pin in the list.

9. The class then begins the enquiry, remembering the ground rules. You might choose the person whose question was chosen to make the first comment. You might also wish to choose a scribe to write up the key point on a flip chart or board. Then the participants build on the comments, agree, disagree (politely), clarify, explore, suggest, query and put forward connections, analogies and examples. As facilitator you will choose how often or not to intervene, making sure that the ground rules are adhered to and that the enquiry is allowed to be flexible without running off track.

10. The facilitator will decide at what point to draw the enquiry to a close.

Closing discussion
11. To wind up the enquiry you can go round the circle again with each participant making a contribution or ask for last comments in any order.

12. Ask for comments about the process. Would there have been better ways of holding the enquiry? Did they enjoy the enquiry? Did they learn something?
CONSEQUENCES

Activity – suitable for 11-14 year olds

Curriculum
- English
- Citizenship
- Personal and social education
- Social studies
- Environment and society

Objectives
- To help students explore the wide-ranging consequences that can follow from a particular decision, trend or event in the present.
- To begin to consider the responsibilities that we have for preparing for our own futures and that of the planet.

Learning outcomes
- Pupils explore, hypothesise and consider ideas.
- Pupils learn that decisions have a range of consequences in the short, the medium and the long term.

You will need
- Resource sheet 32
- Sheets of A3 paper and a variety of coloured pens

Starter
1. Read or sing as a class the song ‘Can you imagine a powerless world?’ from One Sun One World [Resource sheet 32].

2. Can pupils imagine why there might be a powerless world? What circumstances might lead to a powerless world?

3. What would the consequences of a powerless world be? Can they pick out all the consequences mentioned in the song. Are there others they can think of?

Activity
4. Students work in small groups of 3-5 and decide what issue that has importance for their future they wish to explore. This could be the powerless world mentioned in the song or it could be something such as people living longer. It could relate to the local community, such as the decision to create a new supermarket or close a factory, or the wider world, such as continued use of fossil fuels or the increase in organic farming.

5. Pupils should write the issue in a few words in the centre of a large piece of paper. It is helpful to pencil in a series of concentric circles around the words. The question to be explored is ‘What are the immediate consequences?’. When these have been established, they are roughly placed in a ring around the main idea. This indicates that they are first order consequences.

6. Next, pupils consider secondary consequences, i.e. those which spring from the previous ones now indicated in the first ring. Third and fourth order consequences can be built up and written in the appropriate ring. It is not necessary to track every consequence as far as it will go.
7. The end result is a futures wheel which represents a series of judgments about the range of consequences likely to flow from a particular decision, trend or event. As the wheel builds up different relationships may be observed between different areas. In particular discussion and negotiation may focus around whether one consequence actually does lead to another. It may be helpful to put in arrows and link lines.

[Source: Adapted from Educating for the Future: A Practical Classroom Guide by David Hicks, published by WWF]

Closing discussion
8. Is it important to think about consequences of decisions in this way? Are there ways of ensuring that we make the best decisions now? Which are the most important decisions about the world being made today? Who is making the decisions that matter?

9. For homework, pupils could prepare individual presentations, setting out the possible consequences of a particular decision and considering the impact of these consequences in relation to their rights and responsibilities. They may wish to make a simple flow chart showing one set of consequences following a decision, and explain it to the rest of the class.
Suitable for 7-11 year olds

- Make a model or paint a picture of the rat’s home at the rubbish dump. Use old (clean) rubbish for a collage of a rat’s home.
- Role-play an interview with the rat and then ask the class to use it as the basis for a newspaper article about the rat – rat about town!

Suitable for 7-11,11-14 year olds

**Speed debating**
You can arrange the classroom to suit your particular situation, but the best arrangement for this activity is for the tables to be in a circle or a horseshoe with an inner and outer circle of chairs with students sitting opposite each other.

Give each pair of students a statement about ‘consuming’ and our consumer society, for example:

- ‘It’s not what you earn, it’s how you spend it that’s important’
- ‘People are too obsessed with spending and buying more and more things. We should think about whether we really need all the things we buy’
- ‘When we make choices about what we spend our money on, we should consider whether those things harm other people and their rights, or harm the environment’
- ‘I’m not just a consumer, I’m a citizen – I’m more than just what I buy!”

Invite them to debate for exactly two minutes. Use a timer so that you stick to the time and move things on efficiently. When the time is up, give them a short time to record the main points that explain why they agreed or disagreed with the statement.

Move the inner circle students round so they are sitting opposite a different student. Give the pairs a different statement. To encourage students to debate from a viewpoint that is not necessarily their own, you could introduce the instruction, ‘For the next two-minute debate, students in the inner circle will agree with the statement and those in the outer circle will disagree.’

Select some of the statements and ask for feedback about the debates. Students can refer to their recording sheets to remind them of the discussions. Which were the statements that caused the most discussion?

Suitable for 11-14 year olds

- Ask students to research an example of a product that they feel has harmed other people and denied them their rights, or harmed the environment – e.g. clothes from companies that exploit their workers, or products that are tested on animals, or products that have caused the destruction of natural habitats. Ask them to create a presentation where they offer their own opinion about these things and what they think they could do about it. See Labour Behind the Label’s campaign on [www.labourbehindthelabel.org](http://www.labourbehindthelabel.org) for ideas.
- Design a home/school of the future, draw it and annotate it or make a model of it. If school has new buildings underway or will have in the future, look for ways of getting pupils involved such as discussing plans with the school council.
• The internet and mobile phones have radically changed people’s lives. Can the pupils suggest a major new invention which they think could catch on like wildfire, but which would be good for people and the environment?

• Use ‘blue screening’ and film live ‘from location’ news reports about water or climate change or biodiversity and the future. Groups of children can have a different issue to research and present on. After the filming has taken place the children have a review sheet to fill in as they watch the clips back which asks them to determine resolutions to the problems created.

• Pupils individually can write an open letter to a chosen group of people living in 2050 to say what people are doing now to make sure that the planet, its people and the environment will be respected. Students should be reminded that an open letter is for public consumption and therefore will make use of a more formal style and may include rhetorical devices to give it impact. The letters can be read out loud to the class.

The big questions

Divide the room into ‘zones’ corresponding to the number of Big Questions you are asking. Place a large sheet/s of paper in each ‘zone’. On each of the pieces of paper should be written one of the following questions: What does the future hold? Can we make a difference? How can we safeguard the natural world? How can we tackle climate change? How can we change the way we live to conserve the Earth’s resources?

Students should divide themselves between the zones so the groups are about the same size. Each student has a marker pen and is invited to think about the question and then write a comment or comments on the paper that relates to the question. After a few minutes, ask students to move to the next zone and then repeat again. Students can write a comment that responds to a remark made by a previous student in the form of a silent debate. Do this until students have had the opportunity to respond to each of the questions on the sheets.

Gather feedback from each group, sharing the comments. Encourage students to explain what they mean, respond to comments and build on each other’s ideas. You could encourage depth by providing a challenging counter argument. Can they see a link between the questions?

Students can use the large sheets of paper with their comments on to record their summing up of the key points of the session.

To follow up, students could gather information to help them answer the final Big Question: In a globalised world, how can we enjoy a decent standard of living without compromising the rights of others and the welfare of the planet?
Life’s never been so good;
There’s nothing to get me down!
It’s a pleasure to roam far from my home;
I’m quite the rat about town!
Life’s never been so good;
There’s plenty of time for play!
Each morning I take my stroll by the lake
And I dine at the dump each day!

Life’s never been so good,
Thanks to my human friends!
Your service on wheels brings succulent meals;
I enjoy what your affluence sends!
Life’s never been so good;
You throw so much food away!
The titbits you waste are quite to my taste
When I dine at the dump each day!

My à la carte menu is really superb;
Everything fresh from the truck!
Today, I chose salmon and pâté and trout,
Followed by beef and roast duck.
My palate was cleansed with a salad from Spain;
My teeth made light of the seal.
An unopened six-pack of yoghurt from Greece
Completed a wonderful meal!

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
It’s all very well for the rat;  
He lives in the sewers and slime!  
We’ve been used to living in style;  
It’s been an affluent time.  
Nobody told us to eat up our food;  
Nobody told us to save.  
We were born in a throw-away world;  
That’s the way we behave!

It’s hard not to follow the fashion;  
It’s hard not to follow the trend.  
We want to fit in, be one of the crowd;  
We’re under pressure to spend.  
It’s all very well for the rat!  
There’s nothing to get him down.  
He never fears the scorn of peers;  
He’s just a rat about town!

It’s all very well for the rat;  
He’s covered in horrible fleas.  
He doesn’t care about hygiene;  
He’s not afraid of disease.  
We have the sense to wrap our food  
With packet and bottle and tray.  
After the meal, what else can we do  
But throw all the wrappers away?

It’s all very well for the rat;  
How can he possibly know?  
There’s stuff we don’t want, stuff we don’t need,  
Clutter we’ve just got to throw.  
Why should we bother to wear old clothes  
When this year’s fashion is great?  
And why should we bother to eat the food  
When it’s past its sell-by date?

Song from **One Sun One World**
by Peter Rose and Anne Conlon
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<table>
<thead>
<tr>
<th><strong>Same as today</strong></th>
<th><strong>Technological growth</strong></th>
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<tbody>
<tr>
<td>I think that life in the future will be much the same as today. Not a lot will change in school, at home or work, for example. The problems we will have in the world will also be similar to today’s: pollution, waste, conflicts between people, wars. We will solve them like we do now. Nothing much needs to change.</td>
<td>I think that important discoveries in technology will solve many problems in the future. More money spent on science and technology will lead to major developments in things like medicine, farming, computers, pollution control, space exploration. This technological growth will bring all sorts of benefits to us in the future.</td>
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<table>
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<tr>
<th><strong>Edge of disaster</strong></th>
<th><strong>Sustainable growth</strong></th>
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</thead>
<tbody>
<tr>
<td>I think we are on the edge of a serious disaster and the signs of this are already around us. We may soon see a big increase in famine and poverty in Africa, the depletion of natural resources, worse pollution and destruction of habitats, increased flooding of coasts as a result of climate change. Life will change greatly and nothing will ever be the same again.</td>
<td>I think important changes are beginning to happen in how people think about the planet and those living on it. Taking care of the environment, of animals and of other people is now becoming the most important thing. In the future people will conserve things so that future generations will have enough for their needs too.</td>
</tr>
</tbody>
</table>
Sailing serenely over the sea, flying so high in the sky,
Weaving a web around the earth, threads to draw and threads to tie;
Rising and falling under the waves, speeding across the land,
Sharing the wealth of the human race, passed from hand to hand.

Can you imagine a powerless world where black is the king of the night,
A world where people just sit in the dark and nobody turns on the light,
Where windows in winter are covered in frost and icy-cold rooms are the norm,
And everyone shivers and everyone shakes and nobody ever gets warm?

Can you imagine a powerless world where nobody eats ice cream,
Where pints of milk become sour in a day, ice lollies are simply a dream,
Where people don’t vacuum the dust and the dirt but sweep with a broom when they clean,
And wash all the clothes at the end of the week, no dryer, no washing machine?

Can you imagine a powerless world where micro has never met chip,
A world where i can be seen without Pod and file can live without zip,
Where tele has never met vision or phone and C has never met D,
And beautiful blue can survive without tooth and MP can live without 3?

Sailing serenely over the sea, flying so high in the sky,
Weaving a web around the earth, threads to draw and threads to tie;
Rising and falling under the waves, speeding across the land,
Bouncing around in outer space, interconnecting place with place,
Sharing the wealth of the human race, passed from hand to hand.

Song from One Sun One World
by Peter Rose and Anne Conlon
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My Best Friend!

I want to show you my phone, it’s stylish and slim;
I love all the stuff it can store:
Music and messages, texts from my friends,
Photographs and emails and so much more!
I carry my phone wherever I go;
It’s not a piece of kit I would lend,
’Cause, when I’m with my phone, I am never alone!
It’s the link with all the things I love, my best friend!

I’m your fabulous phone, stylish and slim;
Just look at the stuff I can store:
Tantalum, palladium, silver and gold,
Copper, aluminium, and so much more:
Arsenic, lead, nickel and zinc,
An elemental, magical blend!
So, when you’re with your phone, you are never alone!
I’m your link with everything on earth, your best friend!

If I bought a new phone, I’d want to do more;
I’d want to watch a movie on the screen.
I’d want to be connected to my virtual world;
I’d want the cutest mobile there’d ever been.
And after a while, I’d want to upgrade;
I’d need to keep ahead of the trend,
But for now, this phone is the model I love!
I couldn’t live without it, my best friend!

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
DO YOU KNOW WHAT’S IN YOUR PHONE?

• Mobile phones are made up of valuable materials from all over the world.
• Forty different raw materials are used to make a mobile phone – like lithium, tantalum, cobalt and antimony, some of which are extremely toxic and all of them costly and difficult to get.
• The Mibra tantalum mine in Brazil is the single largest operating tantalum mine. At 2007-2008 levels, the mine accounted for 5-10% of global primary production. Other tantalum mines are in Ethiopia, Russia and China.

Do you know your phone can be recycled?
• About 65-80% of the material content of a mobile phone can be recycled and reused.
• Recovering metals and other materials from old phones reduces the need to extract more raw materials.
• In total, there are an estimated 90 million unwanted phones in the UK alone!
• It is estimated that only 5% of old mobile phones are currently recycled.
The problems seem so complex and so great
And you feel so helpless and so small,
But if you work as one, as only humans can,
You’ve the power to change the world for all.

from *The Wise Oak Tree in One Sun One World*

We don’t need to feel afraid, helpless or alone;
We can take some steps, however small.
We can waste a little less, share a little more
And value what the Earth provides for all.

Just as every drop of rain swells the mighty sea
And every feather shapes an eagle’s wing.
When we act in harmony, we can change the world,
Even when we do the smallest thing.

from *Just one world Tree in One Sun One World*
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
Activity – suitable for 7-11, 11-14 year olds and adults

This activity looks at what it means to be a global citizen and why it is important for the future of our one wonderful world that we are all global citizens.

Activity

In pairs, participants have one piece of paper and write the letters of the alphabet A-Z down one side of the page. The aim is to find as many words as possible beginning with different letters of the alphabet to describe an attitude, skill, value, action or feeling that they think a global citizen might have. Use a timer and give them five minutes. If pupils come up with more than one suggestion for a letter, ask them to choose the best one.

- When the time is up, ask each pair to choose the five words from their list that they think best describe a global citizen.
- Ask each pair to share their five words with another pair.
- Ask them to identify their two best words and place each one in a separate statement that begins ‘A Global Citizen is someone who...’ (e.g. if the word was ‘aware’ the statement might be, ‘A Global Citizen is someone who is aware of the world around him/her.’)
- Gather some of the statements together on the board/flip chart.
- Can they give some practical, real life examples of actions a global citizen might take? To what extent do they feel they are global citizens?

As an extension activity or for homework, ask pupils to think about the interdependent nature of our lives as global citizens and ask them to prepare a presentation that shows their understanding of the meaning of the quote: ‘There’s just one world for all the human race, just one world for you and me!’ from the song Just one World in One Sun One World.

Let’s celebrate one wonderful world!

Here are a few activities that you can do to celebrate one wonderful world. You will be able to think of many more!

Suitable for 7-11 year olds

- **Circle time**
  Circle games value each child, helping them to gain confidence and express their feelings and opinions in a safe situation. Children should sit in a circle and each child should have an opportunity to speak uninterrupted by the others. It may help to have a ‘magic microphone’. Only the child holding the chosen object or ‘magic microphone’ is allowed to speak. Each child might say one thing that makes the world wonderful, or that would make the world an even better place to live in or that we could do to care for our surroundings.

- **World in a bottle**
  Hold a competition to see who can make the best ‘world in a bottle’. Pupils should use glass or plastic bottles but can interpret this theme as widely as they like.

- **Miniature gardens on a plate**
  Have a competition to see who can make the best miniature garden on a dinner plate. Put wet sand on the plate and then arrange plants, shells, stones, feathers, anything natural.
• **I-spy walks**
  Go out on a walk and play I-spy – really observing the natural aspects of the world. This can also be played to encourage children to walk to school. Give them a list of different things that they should try and spy during the course of a week.

• **If I could look after the world for a year...**
  Ask pupils to draw up a charter stating what they would do if they could look after the world for a year. Display the charters and give each pupil three stickers to put beside the three charters that they think would make the world a better place for all.

**Suitable for 7-11, 11-14 year olds and adults**

• **One Planet Future activity**
  Show the short WWF film ‘One Planet Future’. You will need to watch the film through first. You can run the film on a screen or interactive whiteboard. You can find the film at [www.green.tv/wwf_oneplanetfuture](http://www.green.tv/wwf_oneplanetfuture). It is best to download the film and run it on Realplayer or similar to avoid problems of direct streaming. The film lasts for 6 minutes and 15 seconds. Have a discussion of the film afterwards – what were the main messages?

**Suitable for 11-14 year olds**

• **Green fashion**
  Hold a green fashion show – all the clothes should be made from recycled materials. You could showcase some costumes made for the musical.

• **Green dragons’ den**
  Present projects for using plastic bottles to a panel. If this is held in front of the class, the class could vote on which is the best and the most practical.
It is important that not only do we learn about our one wonderful world but also that we take action to safeguard the natural world and tackle climate change. In order to do that we need to change the way that we humans, particularly in the Western world, live our lives. If everyone in the world lived like we do in the UK, we’d need far more than one planet to support us – almost three Earths, in fact. It’s a way of life that’s threatening the future of our natural environment, as well as millions of people around the world. WWF puts pressure on government and industry to make the changes needed to alter our over-consuming lifestyles, and build a future where people and nature thrive within their fair share of the Earth’s natural resources.

There are some ideas about how we can take action and make changes in our lives on the WWF website at wwf.org.uk/how_you_can_help/change_how_you_live/ and pupils will probably have some ideas too.

There are simple steps we can each take to make our daily lives more sustainable. In doing so we can become better global citizens and look after the future of our planet and all those who live on it.

There are some suggested activities below that you can use to encourage action for change. Actions can be led by teachers, parents, governors or other members of the school community. Some actions can be carried out by families at home.

Below there are ideas for:

- individual action
- action for the school community
- action for all the family

**Taking the next steps – individual actions**

Pupils may like to carry out individual actions at home, perhaps over a week, and then report back on their achievements. Discuss with the pupils if any reward might be appropriate for those that complete their actions. There are some suggestions for actions below but pupils will have their own ideas.

- **Don’t buy**
  Decide that you won’t buy anything for a day (or a week!) to cut down on consumption that is using the Earth’s resources.

- **Reuse**
  Find a use for one thing that you were going to throw away.

- **Recycle**
  Recycle something – give something that you don’t use anymore to someone else, if it is still usable.

- **Walk**
  Walk round to your friends instead of asking your parents to drive you. Walk to school one day. But check that it is OK with your parents.
This activity helps you to plan and take action for our one wonderful world on:

- safeguarding the natural world
- tackling the global threat of climate change
- helping people to change the way they live to ease pressure on natural resources.

**You will need**

- an outline of a large oak tree (see Resource sheet 5 for a diagram)
- large sheets of paper, scissors, card, felt tips and markers
- ideally pupils should have watched a performance of *One Sun One World* or heard some songs

**Activity**

1. Talk about *One Sun One World* and its message. If participants have not seen the musical or heard the songs then you could read together or in groups the songs *Thunder and Lightning* [Resource sheet 36] and *We Share a Wonderful World* [Resource sheet 37] and *The Wise Oak Tree* [Resource sheet 38].

2. Then ask the class to think of all the things about their surroundings that they would like to care for and take action on in their school and local community. What would they like to change about their surroundings? Ideas might include:
   - less litter
   - more green space
   - more recycling
   - less waste
   - healthier food
   - safer play areas
   - use of renewable energy sources
   - gardening and growing areas
   - reducing the amount of ‘stuff’ we all have

3. Explain that pupils can take some action in school and with their family and friends to make changes for a cleaner, greener world. You can also use this activity to generate ideas for the school council.

4. Pupils in groups then make an ‘action tree’ to help them think about and discuss their ideas for letting everyone in the school know about the ideas and action for safeguarding the natural world, tackling the global threat of climate change and helping people to change the way they live.

5. Draw out the shape of a big oak tree onto large sheets of paper or lay it out using string or any other suitable material. The trunk of the tree is the issue or topic that pupils want to raise awareness of. Draw some big leaves and write ideas on them for action and attach them to the tree; on the big branches of the tree write plans for how to organise and present the ideas and action; on the roots write the resources and the preparations you need to make. Use any suitable items to add to the tree as reminders of the action to be taken as the plans are discussed and built.

6. Decide on when and how action will be taken and who will do what. Some ideas may well emerge from other activities suggested in this pack, such as presentations in assembly and displays. Draw up a timetable so that momentum is not lost and note the points on the whiteboard.

**NB.** You can also use this process to plan fundraising activities with the pupils.
You may like to suggest that your class or part of the school or whole school carry out one or more of the actions suggested below. Of course, the school council or other groups in the school can suggest their own actions. Talk about responsibilities and how to ensure that everyone is involved. Plan carefully with the group or school about what will happen, who will be responsible for what, when it will happen and how the success will be measured. Discuss with the group or school if a reward might be appropriate if they complete the actions such as a certificate or recognition in assembly or photo for the local paper.

- **Power-down hour**
  WWF’s Earth Hour takes place annually. At 8.30pm one evening in March, people around the world turn off their lights for one hour, to show their support for global action on climate change. You can do this and save energy too! Arrange for there to be an hour when no electricity or energy is used in the classroom. Turn off all lights and computers (but be aware of health and safety issues and check with the school caretaker). Decide how you would like to spend the hour – maybe the class could go out for a walk or tidy up an area of the school.

- **Paperless day**
  The class could try to have one day where they don’t use any paper at all. What alternatives are there? Could they use the chalkboard or whiteboard?

- **Posters**
  The class could make some posters to put up round the school to remind people to switch off lights and computer screens and reduce, reuse, recycle. They could produce information posters about the need to safeguard the natural world, and the work of WWF.

- **Grow your own**
  The class could plant some vegetables, such as salad leaves in containers or some mustard and cress and keep track of their progress. Can they nurture the plants and finally eat them with a special class snack? What are the advantages of growing our own vegetables?

- **Reduce, reuse, recycle**
  The class could audit what they recycle at present and increase what they recycle or encourage another class to do some recycling.

- **Goody bags**
  Decide on some things that can be found or acquired for nothing or very little which will have some significance for people to take home after a performance of One Sun One World. Get a group of volunteers to put together the little bags; reuse or recycle as much as you can. Maybe you can get some local businesses or organisations to sponsor you.
Pupils who are involved in One Sun One World or who are learning about the issues may like to suggest ideas to their families for action. There are some suggestions below, and families who watch a production of One Sun One World can take home a family action sheet.

- **Power-down hour**
  WWF’s Earth Hour takes place annually. At 8.30pm one evening in March, people around the world turn off their lights for one hour, to show their support for global action on climate change. The family can do this and save energy too! Arrange for there to be an hour at home when no electricity or energy is used in the house. Turn off all lights and computers and don’t use phones or iPods (but be aware of health and safety issues and check with your parents and the whole family). Decide how you would like to spend the hour – maybe the family could go out for a walk or have a tidy up outside or perhaps you could have a games evening or read a book together.

- **Watch, talk, action...**
  Watch a short WWF film with the family called ‘One Planet Future’ at www.green.tv/wwf_oneplanetfuture and talk about it. Decide as a family on one action that everyone can do to make a change to the family’s lifestyle. It could be making sure the taps are turned off when cleaning teeth or growing some salad leaves in a recycled container in the garden or hanging the washing on the line instead of putting it in the tumble dryer.

- **Family quiz**
  Ask some classes to make up green quizzes or a quiz about One Sun One World that could be done at home with their parents. Classes then swap quizzes and everyone gets a quiz to take home and do with their parents.

- **Family garden day**
  Have a family garden day. Spend some time together in the garden or a garden that is open for visiting. Decide on a challenge to complete – it could be to spot and find out the names of three unknown plants or birds. Take a notebook to write down the characteristics.

**Fundraising ideas**
Here are some fundraising ideas that you can use. The ideas are intended to be fun and also to have a link to the issues that WWF is concerned with.

- **School councils or a class organise a fundraising ‘fun afternoon’ with many different activities on an animal theme including face painting to represent animals, pin the tail on the tiger, bunny-hop race, guess the name of the (toy) animal, obstacle race ‘in the jungle’, animal walk-a-likes, photo-gallery: match the pet with the owner.**

- **Choose a theme for a fundraising day. Dress all in green to signify a commitment to sustainability or all dress in black and white like pandas, wear traditional costumes from around the world, dress like an animal or wear ‘ears’... the choice is huge.**

- **Write a short play on the theme of ‘one wonderful world’ and invite parents and local neighbours along. Draw a big outline in the playground of a panda, an elephant or a tiger and ask everyone who attends to contribute to filling it in with coins!**

- **Hold a ‘hunt for loose change’; ask pupils to collect coins in a recycled container (a large sweet jar would be good) in their classroom. Prepare money estimating and counting tasks for the final count. You could also have a competition to guess how much money is in the jar. The prize could be a furry animal toy that is no longer wanted by its owner, reminding everyone to reuse or recycle!**
• Make and sell cakes and biscuits. Decorate the cakes with animals and forest scenes. Cut the biscuits in the shapes of leaves and animals. Make some Arctic cakes using white icing to make polar ice-caps populated with plastic or marzipan polar bears in ice caves!
• Have a competition for who can make the best Arctic cake!
• Get pupils to decorate plant pots made from recycled yogurt pots, tins and jars. Plant some with small plants and seedlings grown by the class from seeds, or grow mustard and cress on layers of kitchen paper in recycled plastic trays and then organise a sale.
• Organise a jumble sale and/or clothes exchange at your school – a great opportunity to reduce, reuse and recycle! For each clothing exchange, a small donation can be given by both parties.
• Exercise keeps us healthy, so organise a sponsored exercise class during lunch break – run like a leopard, jump like a kangaroo, keep your balance like an orang-utan, stretch like a tiger, relax like a panda.
• Children could be sponsored to eat five portions of locally sourced fruit and vegetables per day at 20p per portion.

Getting noticed

Remember, the more people that get to know about your event, the more successful it will be! Word of mouth is often the best method of attracting publicity, so tell as many friends, family and colleagues as possible about your plans. Why not put together a press release for your local paper or community newsletter? Note down the essential details, and mention what makes it newsworthy.
Organise a swap shop

Raise awareness of the importance of using fewer resources

Set up a working group

All use less paper

Do an assembly
Thunder and lightning and battering winds,
Flooding and great devastation;
Riverbeds dry after decades of drought,
Creeping desertification;
Hot in the winter and cold in the spring,
Monsoon intensity rising;
Giant tsunamis and deadly typhoons,
Ocean defences capsizing.

What does it mean? What does it show?
How can we tell? How can we know?
Will it improve? Will it get worse?
Can we believe that it’s true?
Is it our fault? Are we to blame?
Is it as bad as scientists claim?
Can it be stopped? Can it be solved?
What can anyone do?

Harvest hit by insect pests, fungus and disease;
Fish stocks crash as purse nets drag the last life from the seas;
Crops and trees and livestock die, drought destroys the land;
Fragile topsoil, dry as dust, blown away like sand.

Reservoirs empty and aquifers low,
Threat to the water supply;
Rice and potatoes and butter and bread,
Prices incredibly high;
Rapidly rising utility bills,
Keeping in step with the crude;
People in panic from Ghana to Kent,
Purchasing fuel or food.

Could the mighty oceans rise, just as people say?
Could the streets of London and New York be swept away?
Could the arctic snowfields melt, glacial streams run dry?
Could we see the Yangtze and the sacred Ganges die?

Broken by the winds of change, can our world survive?
Can the children of the world keep their dreams alive?

Song from *One Sun One World*
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
We share a wonderful world:
The coral reefs, the mountain chains,
The steaming deltas and the burning sands,
The cold and empty arctic plains.

We share a wonderful world:
The rising sun, the breaking dawn,
The moving waters and the restless winds,
The breath of precious life reborn.

But now our world’s in danger;
The surging ocean sweeps ashore,
The frozen north is melting,
The world we knew will be no more.

Who can inspire the children of the world,
So full of dreams, so far apart?
How can we save the wonders of the world,
And hold the dream within our heart?

We share a wonderful world:
The tawny owl, the bumble bee,
The apple blossom and the fragrant rose,
The strong and deeply rooted tree.

We share a wonderful world:
The cheetah’s eye, the eagle’s wing,
The tiny tadpole and the great blue whale,
The vast migrations of the spring.

But now our world’s in danger:
The beating wing, the silent paw.
The web of life is changing;
The world we knew will be no more.

We share a wonderful world:
The greatest depths of human thought,
The greatest heights the human mind can reach,
The breadth of wisdom we have sought.

We share a wonderful world:
A world of power, a world of speed,
A world which binds us all with threads of life,
A world which serves our every need.

But now our world’s in danger.
How can we plan the future now?
We want to save these wonders,
But who on earth can show us how?

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
I am the wise oak tree;
I've lived through many changing years.
Countless generations have walked beneath my boughs;
I've shared their days of laughter, days of tears.
Yes, I am the wise oak tree;
I've seen the shadows forming day by day.
I've heard your heartfelt cries, your worry for this world,
So listen to these words I have to say:

Your precious gift of human thought
Has made you question and explore;
It led your feet to tread the highest peaks,
Your eyes to search the ocean floor;
And you have changed the world.

The problems seem so complex and so great
And you feel so helpless and so small,
But with your inventive minds and your skilful hands,
You've the power to change the world for all.

The soaring eagles rule the air,
The polar bears command the cold,
The whales are masters of the open sea,
And I'm dependable and old.
But you've the power of human words:
They shaped the land you redesigned,
They found solutions when you faced defeat
And formed the insights of your mind;
They helped you change the world.

The problems seem so complex and so great
And you feel so helpless and so small,
But if you work as one, as only humans can,
You've the power to change the world for all.

Yes, we've the power of human words;
We have the power to think and plan;
We have inventive minds and skilful hands;
We dream as only humans can.
We've heard the wisdom of the tree.
It helps us choose the path we take,
It helps us understand the power we hold,
The world of difference we can make;
And we can change the world! Yes, we can change the world!

Song from One Sun One World
by Peter Rose and Anne Conlon
© 2010 Josef Weinberger Ltd. London
FINDING OUT MORE ABOUT THE CHARACTERS

OAK TREES
For information, images and videos of oak trees and their habitat, see
www.arkive.org/pedunculate-oak/quercus-robur
You can use these photos in the classroom without charge.

For more on British trees see: The Tree Council:
www.treecouncil.org.uk
and British Trees.com:
www.british-trees.com
The UK BAP Habitat Action Plan for upland oakwood is available online at:
www.ukbap.org.uk

POLAR BEARS
For information, images and videos of polar bears and their habitats, see
www.arkive.org/polar-bear/ursus-maritimus
You can use these photos in the classroom without charge.

For further information on the polar bear see:
www.polarbearsinternational.org
www.bbc.co.uk/nature/species/Polar_bear
wwf.org.uk/what_we_do/safeguarding_the_natural_world/wildlife/polar_bear/

Polar Bear Battlefield
www.youtube.com/show/polarbearbattlefield
Documentary revealing the way of life for the world's largest land carnivore as it's never been seen before. A mother polar bear and her cub emerge from their snow den in the Arctic to enter a hostile world of sub-zero temperatures and limited food supplies. Ice is the battleground; polar bears and seals are mortal enemies; and survival is on a knife edge. Narrated by Sanjeev Bhaskar.

49mins 10secs BBC 25/12/2003
GIANT PANDAS

For information, images and videos of giant pandas and their habitats see
www.arkive.org/giant-panda/ailuropoda-melanoleuca
You can use these photos in the classroom without charge.

For further information on the giant panda see:
wwf.org.uk/panda
www.panda.org/resources/publications/species/pandas/index.htm
www.bbc.co.uk/nature/species/Giant_Panda

For more information on the giant panda and the research, conservation and breeding programme at the Smithsonian National Zoological Park (National Zoo) see:
Smithsonian National Zoological Park:
http://nationalzoo.si.edu/Animals/GiantPandas/

TIGERS

For information, images and videos of tigers and their habitats see
www.arkive.org/tiger/panthera-tigris/
You can use these photos in the classroom without charge.

For further information on the tiger see:
www.catsg.org
www.bbc.co.uk/nature/species/Tiger
wwf.org.uk/tiger

Tigers threatened by climate change in the Sundarbans
www.youtube.com/watch?v=GFaVeoTr6-g

One Sun One World – Rodney Clarke (baritone) Royal Albert Hall
October 2009
www.youtube.com/watch?v=fp0kACaZWzMk

Rodney Clarke (baritone) sings the role of the Old Oak Tree in the premiere of One Sun One World composed by Peter Rose and librettist Anne Conlon, marking the 50th anniversary of the WWF.
4mins 7 secs   www.rodneyclarke.com

CACAO

For an assembly on chocolate, download the PDF free – scroll down page to find it.
www.risc.org.uk/education/risc_publications.php

The chocolate trading game. Download the game and teachers’ notes free from http://learn.christianaid.org.uk/TeachersResources/primary/choc_trade.aspx

According to Papapaa, school children eat chocolate nearly four times a week. A subject this close to their heart provides a great starting point for learning about fair-trade and taking responsibility for your actions.

www.papapaa.org
WWF-UK in numbers

3,500
Every year over 3,500 schools take part in WWF’s Earth Hour – the global climate change campaign

2,500
Over 2,500 schools registered for our Sky Rainforest Rescue Schools Challenge, run in partnership with Sky and Global Action Plan

1,000
Within two months of launch, over 1,000 schools signed up to our WWF and BT Green Ambassadors Scheme which puts young people in the lead on sustainability in their schools

11,000
Over 11,000 schools regularly receive our termly newsletter and poster resource, “Learn”

Why we are here
To stop the degradation of the planet’s natural environment and to build a future in which humans live in harmony with nature.

wwf.org.uk