

Teaching about the environment in PSHCE, using active and experiential learning

By Sue Phillips

Some of the ideas in these lessons have been inspired by the work of other teachers, which was passed on to me. I am sadly unable to credit them as I do not know who they are. Feel free to use these lessons in your own school, free of charge, but please do not publish them without permission.

Teaching about the environment

This is a very important piece of citizenship education which links with global citizenship and Human rights. It has cross curricular links with geography and at its heart lies its links with what your school may be doing on **eco school projects**.

The central core of information is to be found in **“Planet Story”** an extended piece of reading which pupils can do as literacy work. You may wish to use this as a way in, or part way through. It is at the end of this section of work.

Presenting your lesson in a circle with music and a display is of course optional, but will make a great difference to the pupils' motivation and their feeling that you have taken trouble on their behalf.

Lesson One / Two: Introducing ecology and learning the importance of teamwork to save the earth

Aim:

- To introduce the concept of ecology, the idea that we live in a fragile ecosystem in which each aspect is dependent on everything else.

Outcome :

- understanding the word and that co-operation is key to the survival of the planet
- Understanding the role of teamwork and co-operation in all communities – family, school, local and the world. You may wish to begin a with co operation game or reflect back on games you have done.

Resources :

- **Group in a circle**
- **Rain forest music**
- **CD player**
- **Central display which could be formed from natural things like plants rocks /pebbles, shells, fabric from artificial fibre, photographs from nature, dish of water, pictures of animals, candle to represent burning fossil fuels, wood for forests and sustainability, picture if you can find one of the effects of acid rain on buildings and statues.**
- **Keywords and key facts on the board**
- **Material for tower building exercise (a commonly used exercise in PSE)**
- **Logs for reflective work**

Pupils come into music and sit in the circle

1. Introduce topic and keyword: ecology

Use the display to develop points and ideas about the planet and its fragile state

Collect keywords and concepts on the board

Acid rain :deforestation :extinction: fossil fuels: sustainability.

At any point you may wish to put up some of the eco facts which appear at the end of “planet story”.

Link with eco schools work.

Remind pupils of our aims to reduce waste and why this is important.

First thing we need to heal our planet and save it from disaster is co -operation. Let's see how good we are

The following may form a separate lesson

Lesson Three

Aim as for previous lesson as this is a continuation

Resources

Material for tower building

2. Activity: Tower building work

Ask for volunteer group of 5 people to come into middle of circle.

Give them five minutes to build a tower from any suitable material you provide.

- Newspaper
- Cocktail sticks
- Marshmallows
- Playing cards
- Dominoes

Put roles below on the board so that everyone can see and check they know what they mean

Group sets to work: Rest of class observe how they go about it . Class could take notes to create positive involvement

Who is the leader ?

The encourager?

Passive player?

Team player ?

Hinderer ?

De brief

Do players agree ?

Is that what they would like to be ?

Do teams work if everyone is the same ?

Would another team like a go ?

(can be boring to just watch – could get everyone to have a go simultaneously and decide who they are)

Brain storm with the class

Who in the world and our society play these roles regarding the planet ?

Who leads in climate concern? - Scientists

Who encourages ? - Greenpeace, media

Who are the passive players ?- people who don't do anything

Who are the team players ? - everyone who tries to help

Who are the hinderers ? - governments and businesses who deny its not happening or won't legislate because of money.

Reflection

Write in books/files

What sort of player am I ?

What part do I play in my family, my class, school the local community

The global community

Lesson Three/ four: What makes a good citizen?

Aim:

To think about the qualities needed to be good citizen (the idea for this lesson came from another teacher or teachers)

Outcome :

Thinking about the personal qualities that each individual needs especially a sense of responsibility and being part of a team.

Resources:

- **Chairs in circle**
- **Music and display as before**
- **Possibly add to the display modern heroes who model good citizenship – could include celebrities like Angelina Jolie and Bono and Bob Geldof.**
- **Could include pictures of people we do not think are good citizens. May want to relate to ASBOs as the opposite of being a good citizen and a team player.**
- **May wish to relate it to being a good citizen at school, being a team player at school by obeying the rules and wearing uniform even if you don't agree. How this helps you become a valuable employee.**
- **If you had enough pictures you could ask pupils who they most wanted to be like . could have a round on who they most admire and why. What qualities are emerging about who and what we admire.**
- **A4 sheets and sellotape or rolls of wallpaper**
- **Felt pens**

1. Activity: Making a good citizen

Last lesson we looked at how team playing affects our ability to be good citizens. This lesson we are going to think about what makes a good citizen. Look at pictures on display and discuss

Class to work in groups using wall paper or several sheets of A4 stuck together

Make life size outline of person by drawing round a classmate.

Inside put all the inner qualities .Outside put all the actions needed

2. Debrief: As a class define a good citizen - what did everyone conclude?

Its about being a responsible, respectful member of the community.

Looking back on the work on crime who was and who was not responsible and respectful ?

Discuss what factors lead to a person being a good or bad citizen

Role of parents. How far are they responsible for their child's behaviour?

Link with Judaism At a Jewish wedding the couple marry under a chuppah which represents the house they build together . The roof represents the

privacy of marriage ,the sides are open to show that the family they create affects the community and is part of it . At Bar/ bat mitzvah the father thanks god that he is no longer responsible for the child's behaviour

Plenary : Traffic lights discussion exercise

Reflective work: write journals about what qualities you have as a citizen and which you would like to develop ,how could you do that ? , involvement in charity work, contributing to school council etc.

The following could form a separate lesson

Lesson Five

No Man is an Island ...

3. Explore the meaning of no man is an island (could enter to “Metallica” “for whom the bell tolls “and look at the words explore the sense that everyone depends on everyone else)

3. work in pairs or small groups

Draw an island with a person on it

Write on it all the things that we depend on others for

How are the things we value paid for - taxation
explore the importance of paying tax

What things do we pay tax for ?

How much tax do we pay ?

Should businesses pay extra tax for all the water, energy and resources we use. If they did we should pay more for the commodities? Is that fair?
What could the extra money be used for ?

How would people feel about a special tax for the environment ?

In our work on litter (in unit on caring for our community), we discovered that Britain spends forty million pounds a year on clearing up litter. We looked at what we would do with forty million pounds to spend on our town

Suppose we had money to improve the environment in Bognor and surrounding area what would we do ?. Work in small groups or pairs adding these ideas round the island with coloured felts

Share ideas. Place pictures in a circle .All go round to look at them.

Plenary:

- What do we depend on each other for ?
- How do we pay for it ?
- Why is avoiding tax not good citizenship?
- If we had the money how would we improve the environment in our town?

Reflection /logs: Answer these points above in logs. Could turn them into sentence stems which pupils complete quickly.

Lesson Six:

Aim:

Reflecting on positive characteristics for good citizens. (The idea for this lesson came from other teachers)

Resources:

Tables out for group work

A3 or sugar paper

Felt pens.

Games list

4. Start with an energizer game

5. Do one that shows co operation and team work

6. Sort into groups with Pizza or other sorting activity.

7. Groups of five write an alphabet for an ideal citizen

Eg actively involved

Behaving appropriately.

Everyone gets up and tours the room to look at all the work

8. Plenary – Traffic lights

A good citizen always votes in an election

A good citizen always pays their taxes

A good citizen declares the money they receive
cash in hand

A good citizen tells the shop keeper if they have too
much change

A good citizen does some charity or volunteer work

A good citizen tries to put in more than they take out

Lesson Seven/ Eight

Using Planet story

Read planet story to introduce the factual content of ecology.

Create a facts in a hat . Using newspaper articles and card and felt tips ask pupils to put facts on strips of card to be placed in a hat. In a circle every person in turn pulls one out and reads it to the class. Pupils choose the most alarming facts eg in ten years all the tigers may be gone and put them in the middle.

Write an alphabet for an eco warrior

Lesson Nine

Research project in groups – water, soil ,acid rain deforestation, endangered species, soil in ICT room or homework research. Pupils to prepare a presentation for the rest of the class.

Planet story

Much of the material for this story comes from “Ecology for Beginners” by Stephen Croall and William Rankin, published by Icon books.

These cartoon books “Beginners “ books for adults are a great way to get a grasp quickly on a new area you have to teach and are not too familiar with.

Hey, you ! are you listening ? I want to have a word with you . Stop mucking about and pay attention. I am getting nowhere with the adults but since you are around the same age as me, I thought you might actually pay attention - someone had better - before its all too late.

I bet you think I am a lot older than you, older than any thing else you can imagine. In a way you are right. It was 4,600 million years ago when I was born - me - planet earth.

I was formed out of a swirling mass of gas and cosmic dust that condensed to form our planet. That took millions of years in itself , I suppose that's a bit like you growing in your mother's womb. You have a life expectancy of about 75 years haven't you? and because you are learning so much about nutrition and medical care you will probably live quite a bit longer - if you take care of yourself, that is.

Now me, my life span depends on the sun. All the while that goes on shining, I will stay alive, that means I have lived just a sixth of my life, so in your terms, I am about 12 and a half – not quite a teenager !

Thing is, though, although you are getting to live longer and longer I am unlikely to grow up at all.

You see, I am dying . I am being poisoned . I have a self repair system so I can sort myself out if a bit of

me gets hurt, but that is being damaged so much that I can't put myself right any more. The strange thing is that a lot of the grown ups don't believe me, they say it's all natural, its just a stage I am going through and everything will be alright in the end. Huh, why does no one ever listen to teenagers ? You tell them you don't feel well and what do they say ?

Listen, let me tell you what I think is going on. You make up your own mind. I will know if you believe me because you might start doing something about it.

Biosphere

I can support life . I'm very proud of that. There's millions of planets out there that can't ! I can support life because I'm covered with a thin film of air soil and water. It's a bit like a coat of paint on a football and it weighs just one billionth of the planet. That's not much is it ? so that's why you shouldn't mess with it.

It took an awfully long time to set up.

**If you imagine the earth's life as thirty days,
then life arrived on the tenth.**

Life was little tiny organisms. The first organisms lived on sulphur – whole place must have smelled like rotten eggs or those stink bombs you lot love to set off . Any way, some of these organisms began

giving off oxygen and so air breathers were able to evolve on the earth

Bacteria came and gave off waste that in time became fossil and mineral deposits.

Some bacteria became plants

Other bacteria became animals (to cut a very long story short !)

So where do you come in ? **well if we imagine the history of the earth as one month then you have only been here for a minute or so** or

Imagine that the whole history of the planet is your arms stretched out wide . Go on do it !

You have only been here for the time represented by your thumbnail!

Eco system

Early people were okay, they were hunter gatherers, nomads travelling about after food. They did some damage, but there were too few of them to matter ,only about five or ten million on the whole planet.

They killed the animals cut down trees and destroyed woodland, fished, but they kept moving - and I just repaired myself.

Eventually humans discovered **agriculture** , like you all learned in RE. The cave dwellers settled down and learned to grow crops. Around 10, 000 years ago they began to live in cities

The hunters and herdsman who don't do much damage to the planet are still around today but they have been pushed out to the areas no one wants, the African and Australian bush and the Arctic regions.

The **agriculturalists** who came after the herdsman interfered with my **eco system**.

The eco system is the complex web that links everything , all the plants and animals. Everything depends on another. If you alter one thing by killing it off, for example ,then you throw the whole thing off balance.

You kill off mosquitos to stop malaria and you kill of the birds that eat the mosquitos. Then you endanger the animals that prey on the birds and so on.

Now listen, this is very important, **the eco system can do without humans, but humans cannot live without the eco system**

The problem is humans are just a *part* of the ecosystem but they don't see it that way , they call it "other species" or "nature" or worse of all "natural resources"

Resources ! That's terrible, can you see what a terrible way that is to think of the eco system ?

This is where no one listens to me. If someone says "hey, hang on a minute, were using this up!" Someone else says "There's plenty more where that came from "

Or they say

"Don't worry me, I'll be dead time its all gone! "

Why don't they remember what the Native American Indians said. They believed that what ever they did today should be done for the seventh generation from now. Why don't the rest of you do that today ?

civilisation

Look at the Romans , let me tell you what they did..

They built the first city of a million inhabitants – and the worlds biggest sewer! Brilliant engineers those Romans, they managed to design a system to take all that waste outside the city so you couldn't see it ! – but they dumped it into the waterways outside the walls ! When they buried their dead they threw them into huge pits outside the walls, too. The city stank and became full of plague and just to add to it all they made their eating and drinking vessels out of lead!

The middle ages brought science and technology to Europe

Printing was discovered and ideas spread rapidly. Men searched for new materials all over the world

One French man wrote of America just after its discovery

“This is a nation where there is no kind of business, no letters or science, no riches or poverty, no clothes, no agriculture, no metals, no use of corn or wine. The very words that mean lying, treason, deceit, greed, envy, slander and forgiveness have never been heard, a sick person is a rare sight.”

Now, why do you think this would be ? and what do you think happened next ?

Industrialisation

Europeans thought that America needed civilising. Having cut down forests and overgrazed their own lands they introduced it to the New World.

In the eighteenth century the British took over and created the **Industrial Revolution**. Land farmed by peasants in England was taken away and they were forced to work in the factories

Suddenly, the factories began to use up the resources I cannot replace, my fossil fuels, very

fast. After they had burned up all the trees for fuel they turned to coal.

Factory fumes and waste poisoned the air water and soil. The chemicals that spewed into the environment harmed the workers who lived close by .Here is what one eye witness wrote

“ The foul gases which belch forth day and night from the many factories, rot the clothes, the teeth and in the end the bodies of the workers, and have killed every tree and every blade of grass for miles around.”

One man crossing a river in Lancashire described it as

“The most disgusting blackish- green slime pools from the depths of which bubbles of miasmatic gas constantly arise and give forth a stench, unendurable even on the bridge 40 or 50 feet above the surface”

The factory owners resisted every attempt to improve health and hygiene if it cut into profits, while scientists believed that scientific knowledge was all about ***gaining power over nature***. What do you think about that ?

They should have listened to Plato, the Greek Philosopher he said

“If directed by ignorance, wealth is a greater evil than poverty, because it can push things more strongly in the wrong direction”

All this did terrible things to the *people* on the planet ,too

Before the 17th century, wealth per head in many parts of India China, Africa and America was *higher* than in Europe. They had good agricultural methods that did not damage the environment supplying their own needs. They had engineering medicine, science and maths - but no industrial revolution.

The Europeans conquered the countries with violence and then took away their sugar and cotton – and their people as slaves.

European industrialists turned the rest of the world in to suppliers of food, raw materials and labour or markets for what they made in their factories.

One traveller in India in 1660 described India as richer even than Egypt, exporting cotton, silk, rice, sugar and butter.

“ It produces more than enough for its own consumption wheat, vegetables chickens ducks and geese and fish of every kind.”

Thirty years after the British arrived an MP wrote

“Many parts of the country have been reduced to the appearance of a desert. The fields are no longer cultivated large areas are overgrown the population has moved away and there have been repeated famines “.

Mixed farming of several crops for the farmers own family was replaced by plantations of cash crops. The farmers worked for tiny wages and were plunged into poverty.

Settlers in the U SA took just thirty years to hunt the buffalo almost to extinction. Buffalo Bill boasted

“I killed 4,280 buffalo in one year “

Africa

Soon the resources in India and America were used up. The Europeans needed more and so they turned to Africa. They carved it up among themselves causing serious damage to the environment and severe nutritional problems for the people. The huge problems that the many countries of Africa battle with today have their main cause in the greediness of the Europeans.

British Engineers designed the Aswan Dam in Egypt. “Look” they said in delight “you have lots of new farmland now” but further down the river Nile the farming and fishing was destroyed and a massive epidemic of the disease bilharzia developed.

Cars

During the twentieth century cars appeared on the mass market creating a huge demand for fossil fuel. Now it's a major problem as people choke on the fumes and oil reserves are being used up.

Can you guess why people are struggling to launch a good petrol free car ? what would be the consequences of a petrol free car?

Drugs

People are so unhappy with modern life that they are increasingly dependent on drugs that prop up the drug companies who sell them.

Multi nationals go into poor countries to try and sell their products

Technology for the future

- Making machines that last 50 years
- Making machines that release people from dull jobs
- Everyone working fewer hours so there are jobs for everyone and more free time to enjoy being alive
- Developing industry that is sustainable and good for the planet
- Developing farming methods that are good for the planet

- Eating meat less often and eating lower down the food chain
- Changing to organic farming of plants and animals so hormones and chemicals are not put in meat . Animals are treated better because people are not trying to produce so much meat so cheaply
- Eating organic fruit and vegetables so that chemicals do not pollute the soil and us.
- Organic food means no pesticides need to be used
- Stopping the cutting down of the rain forest for grazing cattle and growing soya food for chickens used in the fast food industry
- Stopping the wasteful use of water for industry eg coca cola bottle plant in India as used up much of the underground water reserves to wash the bottles.
- Encouraging people to grow their own vegetables in organically farmed allotments
- Encouraging food and garden waste to be recycled as compost.
- Buying locally produced vegetables rather than mangoes from Kenya which uses up fossil fuels and pollutes the atmosphere
- Growing cash crops for the European market means people cannot grow food to feed themselves and cant afford to buy the luxury food they grow for us.
- Recycling being used to stop landfill.
- Stop overfishing

- Using special fishing nets which allow small fish to escape to grow up and reproduce

Eco facts

In Britain We drank 36million bottles of champagne in 2005 at an average cost of £22 – that is nearly six cases a minute(There are twelve bottles in a case)how much is spent on champagne a minute ?
How much is spent in three minutes ?
A child dies of poverty every three minutes

The population of the world is 6 billion.
In the 1950s it was just two billion.

Water is a serious crisis. We are running short
A lot of it is through leakage from cracked pipes underground but also dripping taps.

1 drip is a teaspoon

100 teaspoons is 400 mill

500 teaspoons is half a litre

If everyone put a single teaspoon into a container we would have two full litre bottles

Or imagine every one saved just one teaspoon a day ,our school would have saved 730 litres of water in a year - that is 730 of the big bottles of fizzy drinks.

We can all save much more by turning off the tap when we are cleaning our teeth.

Not washing things under running water

Showering not bathing

Putting a brick inside our toilet cisterns

Imagine that someone has a dripping tap. It drips once every second. That is six teaspoons a minute.

How much water is wasted every hour ?

How much in a day ?

A week ?

A year ?

Imagine that in households and factories all over the country , Europe and the world.

How much water do we waste with hose pipes and sprinklers and car washes?

£450 is the average cost of food thrown away by each family in Britain that is past its sell by date.

It costs £160 billion a year to clear up Britains' nuclear waste

Disposing of it underground or in the sea is a time bomb for future generations

Animals are seriously endangered because we over hunt them or destroy their habitat. In ten years we could lose all the tigers.

What do we mean by sustainability, resources and reserves?

