Ubuntu Network: Teacher Education for Sustainable Development

Resource complied as part of a project to Integrate Development Education into EN4006 (Curriculum Studies) in UL through the teaching of Active Learning Methodologies

- Draft, March 2007 -

For further information, please contact
Deirdre Hogan, Ubuntu Network Coordinator
Or Mags Liddy, Ubuntu Research Associate
T: +353 61 233289
E: deirdre.hogan@ul.ie; mags.liddy@ul.ie
Or see the Ubuntu Network website at www.ubuntu.ie

List of Activities

1. **Simulation –** *activities to generate an understanding of global inequalities and injustices*
    - **a.** Food Glorious Food
    - **b.** Cocoa Trading Chain (adapted from Oxfam)

2. **Images –** *use of images to explore perceptions, attitudes, and ideas relating to development education*
    - a. Choose an image that represents ‘development’ to you.
    - b. Exploring perspectives using images
    - c. First Impressions – using images

3. **Walking Debate/Consensus –** *activity to stimulate critical thinking, communication and debate on issues central to development education*

4. **Matching/Sequencing –** *activities to raise awareness of organisations and issues relating to development education*
    - a. Matching Logos
    - b. Matching Definitions
    - **c.** Sequencing

5. **Self Reflection -** *activities to promote self-awareness and responsibility to each other and the world.*
    - **a.** Ecological Footprint

6. **Ranking Attitudes –** *activities to support students think about where their values lie in relation to development*
    - **a.** Pyramid Activity

7. **Communication –** *exercises to develop communication skills*

8. **Speakers –** *on development education issues and concepts.*

Activity 1a: Food Glorious Food

Objective: To generate an understanding and appreciation of the unequal distribution of wealth in the world.

Room Set Up: Students stand and move around for the duration of the activity

Description:

1. Place posters representing the 5 major continents in the world: Asia, Europe, Africa, North America and South America around the room.

Green = North America
Green = South America
Red = Europe
Purple = Asia
Yellow = Africa

2. Ask the students in the group to divide up according to the population in those regions (as they deem appropriate themselves). Through discussion, attempt to reach consensus among the students.

3. Reveal the actual breakdown of the regions' population. Ask the students to redistribute themselves to accurately represent populations.

4. 30 Squares of Chocolate are used to represent the world's wealth. Each group (continent) discusses and decides how many squares each should get.

5. Squares are distributed according to how much each group thinks they should get. Facilitator reveals actual distribution and sweets are passed back accordingly.

Breakdown -

Population and wealth distribution – In the world

Continent	Group of 12 Population	Group of 12 Wealth	Group of 20 Population	Group of 20 Wealth
Africa	2	1	2	1
Asia	5	1	12	2
Europe	3	4	4	6
North America	1	5	1	10
Latin America	1	1	1	1

Population and wealth distribution – In Ireland

Group	% share of total income	Number of Euro/beans/sweets
Poorest 20%	5.12	5
Next 20%	10.6	11
Next 20%	17.68	18
Next 20%	27	27
Richest 20%	39.6	40

6. Discussion follows, exploring the manner in which food is divided globally, the right to food, etc. Concepts such as **trade embargos, sanctions, unfair trade, ethics, poverty (reasons, effects), key industries in each continent** usually enter into the discussion.

Ideas to support Discussion

See links:
https://www.cia.gov/cia/publications/factbook/geos/af.html
http://www.irinnews.org/
http://www.ubuntu.ie/websites.php

What makes a country/continent poor?

Role of international agencies: Cutbacks in health, education and other vital social services around the world have resulted from International Monetary Fund (IMF) and World Bank. Debt plays a large role as interest payments must be made.

Politics and power play by the elite leaders and rulers have increased poverty and dependency globally. Free trade agreements are often written without a huge level of input from under-developing countries.

Corruption is another factor where money or aid gets redirected in private bank accounts or into paying for trophy displays of wealth e.g. skyscrapers and shanty towns side by side.
Food aid is often given to address hunger but that undermines farming practices and does not address income poverty from low prices of raw commodities such as coffee and beef.

Why is there such an unequal distribution of wealth?

Global inequality is also linked to many if the issues above, especially power and politics. Also you can add into the mix racism, stereotyping and patronising attitudes to under-developed countries.

Least developed countries (LDCs), including most of sub-Saharan Africa are trapped in a vicious circle of interlocking handicaps including poverty and illiteracy, civil strife, geographical disadvantages, poor governance and economies largely dependent on a single commodity. Many are also burdened by high external debt and hard hit by the continuing decline in the price of primary commodities. These problems have been compounded by continuing agricultural protectionism in the industrialised countries. This restricts market access while subsidised imports and food aid undermine local agricultural production.

Globalisation has played a large role, including the exploitation of cheap labour in Asia and installing dirty technology that does not meet environmental criteria in Europe or US. Multi-national companies cause a capital drain where profits are kept in the parent country. Brain-drain of the intelligent and entrepreneurs is also a factor.

What are the main industries in each continent?

ASIA

Afghanistan: main industries are small-scale production of textiles, soap, furniture, shoes, fertilizer, cement; hand-woven carpets; mining of natural gas, coal, and copper. Afghanistan is considered the world's largest producer of opium. However GDP is $800 per capita (PPP) in 2004 and unemployment is estimated at 40% with 53% of households below the poverty line (https://www.cia.gov/cia/publications/factbook/geos/af.html).

In comparison, Thailand was at the centre of the 1997-98 Asian financial crisis but seems to be well on the way to recovery. It has well-developed infrastructure especially for tourism, a free-enterprise economy, and is popular with foreign investors. GDP is low in comparison to Europe at $9,100 per capita (PPP) but is high if compared to its neighbours. Unemployment is very low at only 2% with less than 10% living below the poverty line (https://www.cia.gov/cia/publications/factbook/geos/th.html).

AFRICA

Botswana is considered one of the most dynamic economies in Africa. Mineral extraction, principally diamond mining, dominates economic activity, though tourism is a growing sector due to the country's conservation practices and extensive nature preserves. GDP is $11,400 per capita (PPP) but unemployment is at 23% and 30% of population are living below the poverty line (https://www.cia.gov/cia/publications/factbook/geos/bc.html).

In comparison, Mali has a life expectancy of 49 years, GDP is $1,200 per capita (PPP) but only 15% unemployment. Industries include phosphate and gold mining, food processing and construction (https://www.cia.gov/cia/publications/factbook/geos/ml.html).

Some countries are attaining industrialised country income levels, especially in East Asia, Eastern Europe and Latin American nations such as Mexico and Chile.

Peter’s Projection Map – can be used with Activity 1a

- **The earth is round.** The challenge of any world map is to represent a round earth on a flat surface. There are literally thousands of map projections. Each has certain strengths and corresponding weaknesses. Choosing among them is an exercise in values clarification: you have to decide what's important to you. That is generally determined by the way you intend to use the map.

- The **Mercator** is a "conformal" map projection. This means that it shows shapes pretty much the way they appear on the globe. The mapmaker's dilemma is that you cannot show both **shape** and size accurately. If you want a true shape for the land masses you will necessarily sacrifice proportionality, i.e., the relative sizes will be distorted.

- The **Peter’s** Projection is an **area accurate map**.

- Comparisons:
    - In Mercator, Greenland appears to be the same size as Africa, yet Africa's land mass is actually fourteen times larger (see figure below right). Because the Mercator distorts size so much at the poles it is common to crop Antarctica off the map. This practice results in the Northern Hemisphere appearing much larger than it really is.
    - See other examples on Peter’s Maps.

Activity 1b: The Cocoa Trading Game

Objective: To simulate the cocoa production process and related issues (include fair trade and trade laws, consumerism)

Room Set Up: Six groups

Description:

1. Give a general overview of the cocoa producing process (from The Chocolate Game – Christian Aid)
2. Divide the class into 6 equal groups. Allocate a role to each group and a card identifying their particular roles and the roles of others –
    a. Farmers
    b. Cocoa Buyers
    c. Importers
    d. Chocolate Company
    e. Shop
    f. Government
3. Instruct each group to consider that the resulting chocolate bar is sold for €1 and to
    a. Decide how much of this €1 they should receive for the job that they do.
    b. Estimate how much they actually receive.
4. Ask for feedback on question (a) and write these on the black/white board and add the total requested. Typically this will exceed €1 – ask students to negotiate/reconsider to make a total of €1.
5. Present the Actual allocations to each player.

Feedback:

	Requested (c)	**Reconsider (c)**	**Actual (c)**
Farmers			**8**
Cocoa Buyers			**7**
Importers			**14**
Chocolate Company			**28**
Shop			**28**
Government			**15**
Total	**100**	**100**	**100**

Discussion: Fair Trade, trade laws, interdependence, consumerism

Cocoa Trading Chain

Farmers:

- Grow and care for the cocoa trees for 3-5 years
- Harvest the cocoa pods in very hot temperatures
- Remove the beans from the pods
- Ferment the beans for six days and dry them from ten days
- Take the sacks of beans to sell to cocoa buyers

Farmer dries cocoa beans

Cocoa Buyers:

- Weigh the sacks of beans
- Store the beans
- Pay the farmer for the beans
- Arrange to take the beans to the port

Weighing cocoa beans

Importers

- Arrange transport for the means from Ghana to the UK and Ireland
- Turn the beans into cocoa solids and cocoa butter

Cocoa product

Chocolate Companies

- Buy the cocoa solids and cocoa butter
- Buy the other ingredients
- Make the chocolate bars
- Pay for the chocolate bar wrappers
- Pay for the advertising of the chocolate bars
- Deliver the chocolate to shops

Chocolate

Shops:

- Buy the chocolate bars from the chocolate companies
- Sell the chocolate bars to shoppers

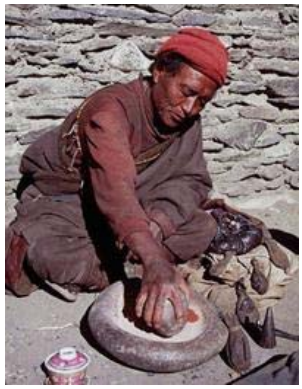
Retailers

Government:

- Charge tax on the chocolate bar

Government

Activity 2a: Using Photos to generate discussion on Development



Objective: To encourage students to think about and express their perception and attitudes on 'Development'.

Room Set Up: Chairs in a circle in centre of room.

Description:

1. Place photos randomly around the room.

2. Instruct students to examine the photographs and identify one that best represents development to them.

3. Divide students into groups of 4 (each group has 4 photos).

4. Students use Question Sheet to discuss and consider their photographs.

    a. Complete the statement: "This photograph represents…"

    b. Why did you choose this photograph?

    c. What is happening in this photograph?

5. Each individual must explain to the group their answers to a. and b. above. Facilitator captures the feedback (to question a. on the board to facilitate feedback)

RESOURCES

Photos, Questions on overhead

Activity 2b: Exploring Perspectives Using Global Images

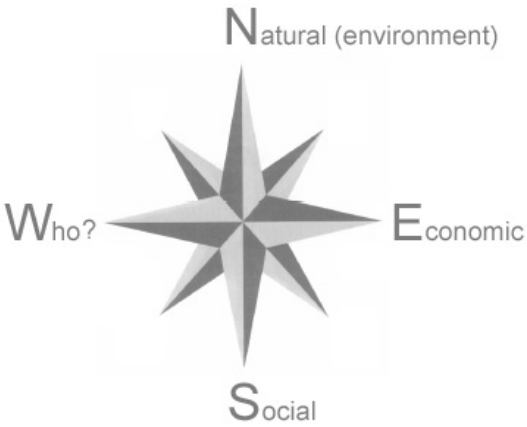
Objective: To explore an image, considering potential positive and negative effects of what is photographed, from economical, sociological and environmental perspectives.

Room Set Up: Chairs in a circle in centre of room.

Description:

1. Divide the class into groups of 4. Explain the process to each group and instruct them to chose one photograph.

2. Each group then applies the 'Development Compass Rose' to the photograph, i.e. They pose questions that relate to:



Questions about…

Natural Environment: energy, air, water, soil, and living things etc.

Economic: money, trading, ownership, aid, and employment etc.

Social: people, their relationships, their traditions, culture, gender, race, disability etc.

Who? Who decides what happens, and how it happens? Who benefits? Who loses out?

3. Groups feedback to the whole class.

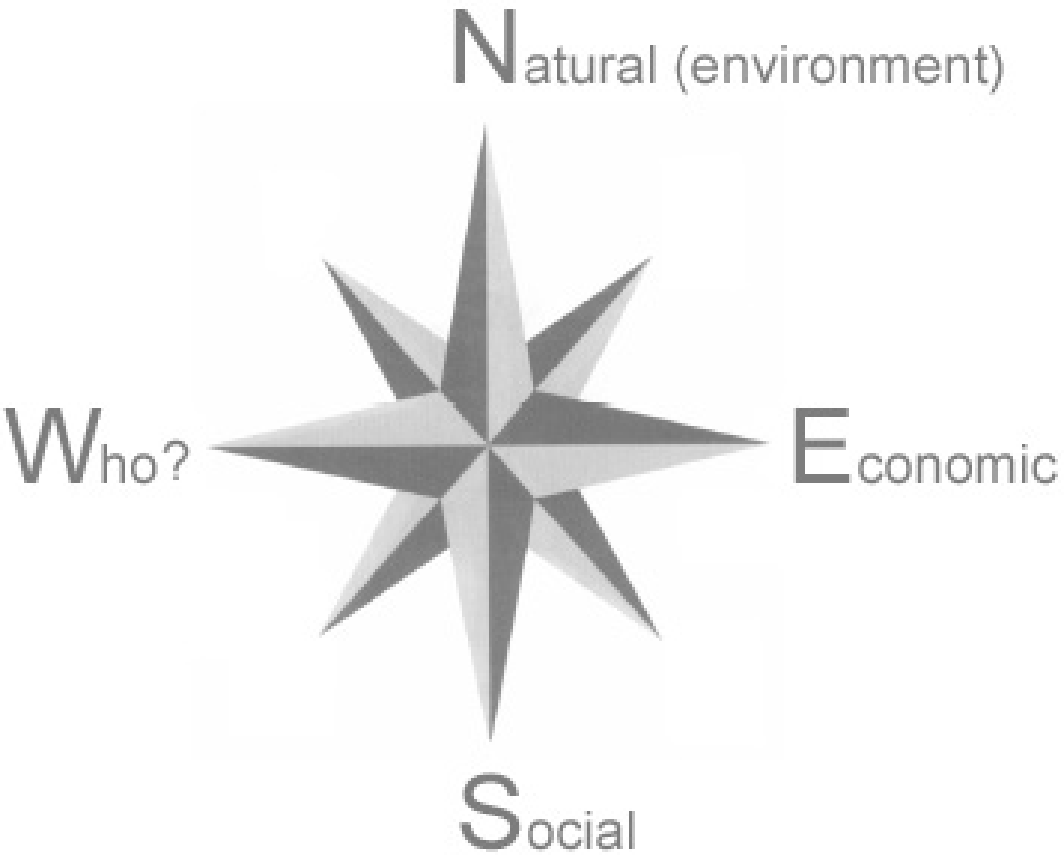
Resources:

- Photographs, Feedback Sheets

The Development Compass Rose, (extracted from DEC, Birmingham)

The development compass rose is a framework which encourages us to ask a range of questions about environment and development issues in any place or situation. Like the compass rose we use to find our bearings in unfamiliar terrain, the development compass rose can be placed on any locality, photograph or case study. It raises issues about people and their relationship to their environment, and considers how change and development should be sustainable for the future. Instead of north, south, east and west, the four main compass points represent:

- Natural/ecological questions
  Economic questions
  Social and cultural questions
  Who decides? Who benefits? i.e. political questions

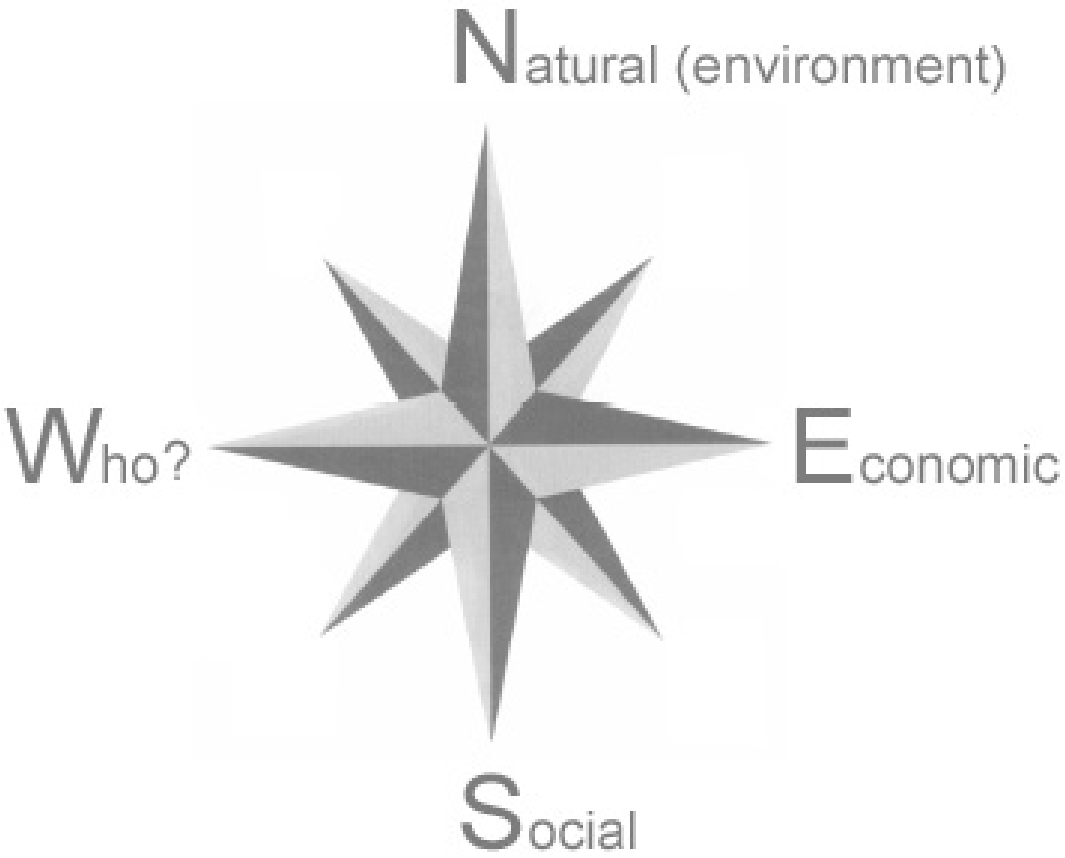


The diagonal points highlight the relationship between the four main points. For instance, NE raises questions about how economic activity has an impact on the natural world; SE raises questions about the relationship between economic activity and people's lives.

Questions which relate to all four main compass points can be put in the centre.

Consider the image that you have chosen according to the four axes of the Development Compass Rose.

What questions arise under each heading? Some questions may overlap



Activity 2c: First Impressions using Images (taken from Failte)

Objective: To explore how we make judgements based on stereotypes

Room Set Up: Chairs in a circle in centre of room.

Description:

1. Ask the participants to sit is a circle. If there are more than 10 participants, divide them into two circles.

2. Ask them to look at the picture and write down their first impression AT THE BOTTOM OF THE PAGE. (Demonstrate this, to make sure it is clear). Keep the pictures moving fairly quickly – don't give people too long to think. Encourage people to be honest.

3. Ask them to turn up the bottom of the page to hide what they have written before passing the page on to the next person. Repeat until each person has seen each picture. Unfold the paper and let everyone see and compare 'first impressions'.

4. Discuss the first impressions. Did people have similar first impressions or different ones? What surprises were there, and what was not a surprise? What did people base their first impressions on? Has anyone ever had a wrong first impression of a group member, or he or she of someone else? How would that feel?

Resources needed: Pictures of people from magazines that are interesting/striking/different. Avoid using celebrities or well-known people, and choose a diversity of ages, activities ethnic groups, situations etc. Stick the pictures to the top of a piece of paper, leaving plenty of space underneath. Have as many pictures as participants and a pen/pencil for each participant.

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

- **Your first impression of this person?**
- **What is this person feeling?**
- **Who is this person?**

Activity 2d: First Impressions using Images

Objective: To explore how we make judgements based on stereotypes

Room Set Up: open space in room

Description: challenging stereotypes

You are selecting a pen-pal. Walk around the room and select a pen pal from the descriptions. Explain why you choose this type of person to the room, describe what you think they are like ad their loves.

Turn over the page to the image of your pen pal. Describe how you feel now.

Have a collection of 12-15 laminated images of people with descriptions of them on the other side of the page.

Examples:

Newly married couple = lesbian couple

Student nurse (student teacher)= 55 year old male

Soldier = 10 year old boy with a machine gun

CEO of a company /lecturer? = Young woman wearing a sari

Activity 3: Walking debate/Consensus

Objective: To encourage students to express their view points on development issues and education in order to reach consensus.

Room Set Up: Chairs in a circle in centre of room.

Description:

1. Provide each student with a handout (below)
2. Students complete the handout independently.
3. In groups of 4, students discuss their answers and come to a consensus on 1) Two statements they agree on and 2) Two statements they disagree on. A spokes person from each group explains why the 4 statements were chosen.
   Or Define each end of the room as 'agree' and 'disagree' and an 'unsure' area is in the middle of the room. Call out one statement and ask students to go to the relevant end. Those in the 'agree' and 'disagree' ends must try to convince the 'unsure' middle people to join them.

Handout:

No.	Statement	Agree	Unsure	Disagree
1	Development education could be integrated into my subject area at post primary level.			
2	Fundraising and charity are the best ways that I can help people in developing countries.			
3	Having ethnic minorities in Irish schools makes teaching more difficult			
4	I really can't do anything to improve the Aids crisis in Africa.			
5	I would not want to teach traveller children			
6	If a child cannot speak English they should not be in my classroom			
7	Ireland is giving too much money to developing countries			
8	Problems experienced by developing			

	countries are a result of their own making			
9	The ethnic diversity in Irish classrooms will benefit the education of native Irish students			
10	The images that I see of the South (developing countries i.e. South America, Africa and parts of Asia) do not truly depict life there.			
11	The severe climate change experienced in some of the poorer countries is a result of industrialisation and excessive lifestyle in the North.			

Activity 4(i): Match each Word/Phrase to an appropriate description

No.	Word/Phrase	Definition
1	**Fair Trade**	Trade between buyers in the West and local suppliers in developing countries that provides them with the best price for their produce, increases the local people's profit and cuts out the middleman.
2	**Free Trade**	Trade between different countries that is free from government restrictions or taxes.
3	**Asylum**	What a state grants to an asylum seeker that lets them stay in a country to avoid threat of harm in their home country.
4	**Refugee**	Someone who, because of tear of persecution on grounds such as race, religion or political reasons, is not in their own country and is unable or unwilling to return.

Activity 4(ii): Match Name & Question to the appropriate Logo

	Logo/Image	Name	Question
1		Fairtrade	A bag of coffee bought for US$50 in the Third World can retail in Irish coffee shops for between US$15,000 and $20,000. Fact from www.fairtrade.ie
2		Aids Awareness	The number of people infected with HIV worldwide is: 40 million _____x 24 million _____ 4 million _____
3		Let's kick racism out of Football	What logo does the Barcelona football team currently have on their shirts? UNICEF
4		Make Poverty History	Campaign to raise awareness of immense global poverty and to influence G8 summit – cancel 3rd world debt, relax trade rules. What was the campaigne TV Ad? _____ http://www.makepovertyhistory.org
5		WWF World Wildlife Fund	It is estimated that sea levels will rise by 88cm by 2100. _____ million people globally live less than 88cm above sea level. (2, 20 or 100) Ans = 100 million http://www.wwf.org
6		UNICEF United Nations Children's Fund	What is the life expectancy of a child born in Ireland is 77.7 years. What is the life expectancy of a child born in Uganda? 47.3 yrs - From UNDP Human Development Report '05
7		Concern	To send the gift of a goat to a developing country through Concern's Gift Programme Costs: €37_____ x €57 _____ €67 _____
8		Oxfam	Supports projects that are designed to relieve poverty, distress and suffering in some of the poorest countries of the world.
9		Irish Aid	Ireland's official development assistance programme.
10		Development Education.ie	A development and human rights education resource maintained by a group of organisations and NGOs based in Ireland.

Activity 4c: Sequencing

Put the following in the correct sequence,

Coffee bushes grow in tropical countries near the equator – greatest producers of coffee beans are Brazil, Columbia and Vietnam). After planting, a typical coffee bush will not produce coffee beans for approximately **five years**.

After this time coffee ‘cherries’ (red in colour), the fruit of the coffee bush appear. They take about 10 months to ripen. Each cherry contains two green beans.

Once ripe the cherries are picked **by hand** by labourers who receive payment by the basketful. (Machines cannot be used during this process as beans ripen at different times).

The cherries are dried in the sun or using machines. Using the sun, it takes between ten days and two weeks for the cherries to completely dry.

The cherries need to be raked regularly to prevent mildew during this process.

The cherries are put through a ‘hulling machine’ which removes the dried cherry husk and the ‘parchment’ (the skin which covers the bean).

The beans are sorted (by hand or by machine) into different sizes. Beans that are the wrong size or colour, or those that haven’t been properly hulled, are removed.

The beans are packed into bags and transported to the port.

The beans are shipped abroad where they will be roasted and blended (mixed with other types of coffee bean) to improve the flavour.

Stock exchange dealers then sell the beans to roasting companies - Coffee is second only to crude oil as the world's **most highly traded commodity**.

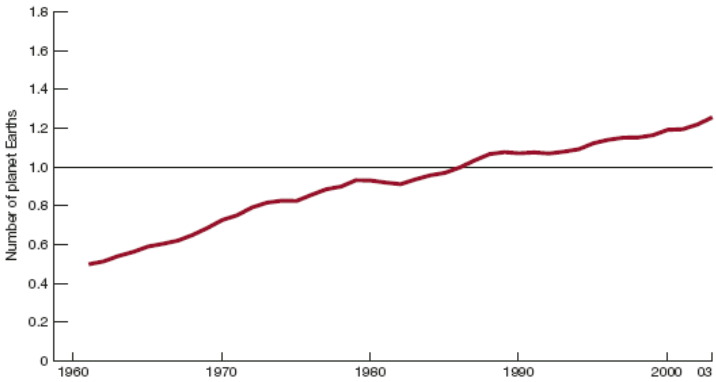
During the roasting process the green coffee bean expands to nearly double its original size, changing in colour and density. As the bean absorbs heat, the colour shifts to yellow and then to a light "cinnamon" brown then to a dark and oily colour. During roasting oils appear on the surface of the bean.

Coffee is then sold in shops - A bag of coffee bought for US$50 in the Third World can retail in Irish coffee shops for between **US$15,000 and $20,000.**

Activity 5: Ecological Footprints

Background:
In order to live our day to day lives we draw from the Earth's resources – for food and water, for transport, for homes and shelter, for goods and services. We depend on the earth to regenerate – the land, forests, air, water supplies etc. But the Earth has limited resources and limited capacity to regenerate…alarmingly since the 1980s we have been 'overusing' the earth – it is unable to keep producing and regenerating to meet our needs and thus our current lifesyles are not sustainable.

Fig. 2: **HUMANITY'S ECOLOGICAL FOOTPRINT,** 1961–2003



Taken from Living Planet Report, 2006 – available at
http://www.panda.org/news_facts/publications/living_planet_report/index.cfm

The Ecological Footprint measures humanity's demand on the Earth in terms of the area of biologically productive land and sea required to provide the resources we use and to absorb our waste.

By measuring the Ecological Footprint of a population (an individual, a city, a nation, or all of humanity) we can assess our overshoot, which helps us manage our ecological assets more carefully. Ecological Footprints enable people to take personal and collective actions in support of a world where humanity lives within the means of one planet.

FACTS

- In 2003 the Global Ecological Footprint was 14.1 billion global hectares. The total supply of productive area (biocapacity) in 2003 was 11.2 billion global hectares. This means we would need 1¼ planets to sustain life (without negatively impacting the earth).
- In 2003, each person would have needed 2.2 global hectares per person (a global hectare is a hectare with world-average ability to produce resources and absorb wastes). The capacity of the earth only allows 1.8 global hectares per person.
- A country's Ecological Footprint is determined by its population, the amount consumed by its average resident, and the resource intensity used in providing the goods and services consumed.
- In 2003 in Ireland we required ~5 global hectares per person (2003 figures).
- An individual's ecological footprint can be determined using the test below. Note that this is a simplistic test - footprints can be inaccurate due to simplifying assumptions, some aspects of the test may be argued e.g. per person calcuations.

Your Individual **Ecological Footprint** Calculator

YOUR TRANSPORT

1. Distance travelled annually by private car?

- More than 20,000 miles **20**
- Between 15,000 and 20,000 miles **12**
- Between 10,000 and 15,000 miles **10**
- Between 1,000 and 10,000 miles **6**
- Less than 1,000 miles **4**
- No car miles **0**

2. Distance travelled annually by public transport?

- More than 20,000 miles **12**
- Between 15,000 and 20,000 miles **10**
- Between 10,000 and 15,000 miles **6**
- Between 1,000 and 10,000 miles **4**
- Less than 1,000 miles **2**
- No public transport miles **0**

3. If you own a car, what kind of model is it?

- SUV or large vehicle **20**
- 1.4 to 2.0 car **10**
- 1.0 to 1.3 car **5**
- Electric/hybrid/biofuel car **3**

4. How many short-haul flights (UK and Europe) did you take?

- Three **18**
- Two **12**
- One **6**
- None **0**

Add 6 points for each additional flight

5. How many long haul flights did you take (e.g. Asia, America, Africa, Australia)?

- Three **60**
- Two **40**
- One **20**
- None **0**

Add 20 points for each additional flight

YOUR ENERGY USE

6. What is your average bi monthly gas or oil bill?

- More than €200 **8**
- Between €100 and €200 **5**
- Between €50 and €100 **3**
- Less than €50 **1**

7. What is your average bi monthly electricity bill?

- More than €200 **10**
- Between €100 and €200 **7**
- Between €50 and €100 **5**
- Less than €50 **2**

FOOD AND COMMODITY CONSUMPTION:

8. Are you

- Vegan **2**
- Vegetarian **4**
- A regular meat eater **8**
- A heavy meat eater **10**

9. The main type of food you consume is?

- Mostly fresh, locally grown **2**
- A mix of fresh and convenience **6**
- Mostly convenience **12**

10. How many newspapers or magazines do buy or have delivered each week?

- More than 10 **4**
- Between 5 and 10 **3**
- Between 1 and 5 **2**
- None **0**

11. How much furniture and other Commodities (e.g. Computer, kettle, clothes) **machines/gadgets** (mobile, i-pod, DVDs/CDs) **do you purchase each year?**

- More than 7 **10**
- Between 5 and 7 **8**
- Between 3 and 5 **6**
- Less than 3 **4**
- Hardly any or second hand **2**

YOUR HOUSE

12. What type of property do you live in?

- Large sized property (5 or more beds) **10**
- Medium sized property (3-4 beds) **7**
- Small sized property (1-2 beds) **4**
- Apartment - as above but subtract **2** points

13. How many other people live in your household?

- No other person **14**
- One other **12**
- Two others **10**
- Three others **8**
- Four others **6**
- Five others **4**
- More than five other people **2**

YOUR DOMESTIC WASTE AND RECYCLING

14. The amount of domestic waste you produce a week (a full wheelie bin is approx 30kg)

- More than 120 kg **50**
- Between 90kg and 120kg **40**
- Between 60kg and 90kg **30**
- Between 30kg and 60kg **20**
- Between 15kg and 30kg **10**
- Less than 15kg **5**

15.To dispose of waste you're going to use up valuable landfill land. You start this section with 24 points. Do you recycle the following items?

- Glass: subtract **4** points
- Plastic: subtract **4** points
- Paper: subtract **4** points
- Aluminum: subtract **4** points
- Steel cans: subtract **4** points
- Food waste (veg, egg shells, tea bags etc): subtract **4** points

YOUR WATER CONSUMPTION

16. If you have a dishwasher, how many times do you run it, on average, per week?

- More than 7 times **3**
- Between 3 and 7 times **2**
- Between 1 and 3 times **1**
- Not applicable – no dishwasher **0**

17. If you have a washing machine, how many times do you run it, on average, each week?

- More than 7 times **3**
- Between 3 and 7 times **2**
- Between 1 and 3 times **1**
- Not applicable – no machine **0**

18. How often do you use water outside your home (e.g. hosepipe for car wash, sprinkling)?

- Often use (once a week or more) **3**
- Occasionally use (once a month or more) **2**
- Rarely use (once every six months) **1**
- Never **0**

19. How often so you conserve water in your house for general purpose tasks (e.g. washing dishes, turning off taps)?

- Rarely **2**
- Occasionally **1**
- Always **0**

HOW DID YOU SCORE?

Less than 50	Between 50 – 100	Between 100 – 150	More than 150
Congratulations, Very little land and resources are needed to support your lifestyle. If everyone lives like you, then human existence and the earth would continue to prosper sustainably.	Your footprint has more of an impact on the earth's resources. This represents the European average. If everyone lived like this we would need 2 planets.	Your footprint uses a large share of the earth's resources. It is close to the UK average. If everyone lived like this, we would need 3 planets.	Your footprint is close to the North American average. If everyone lived like this we would need 4 planets.

Counting your Score

	YOUR SCORE	SCORE PER SECTION
YOUR TRANSPORT		
1. Car		
2. Public Transport		
3. Model of Car		
4. Short Haul Flights		
5. Long Haul Flights		
YOUR ENERGY USE		
6. Gas use		
7. Electricity use		
YOUR FOOD AND COMMODITY CONSUMPTIOMN		
8. Vegetarian/Meat Eater		
9. Local/Convenience Food		
10. Newspapers		
11. Commodities		
YOUR HOUSE		
12. House Size		
13. House Occupants		
DOMESTIC WASTE & RECYCLING		
14. Domestic Waste		
15. Recycling		
WATER CONSUMPTION		
16. Dishwasher		
17. Washing Machine		
18. Outside Water Usage		
19. General Water Usage		
TOTAL SCORE		

Discussion:

Are you surprised by any of the ratings above?

- Air travel scores very highly –
- Houses V Number of people -

Where do most of the greenhouse gas emissions come from in Ireland?

Greenhouse Gas emissions - 2004

- Agriculture – 29.0% (Nitrous oxide from spreading fertilizers, methane from livestock)
- Energy Generation – 23.2% (Power generation using hydro, peat, coal and oil refining)
- Transport – 18.4% (Burning of fuel and oil – cars, buses, trains etc)
- Residential – 10.4%
- Industry – 8.2%
- Commercial Institutions – 4.5%
- Processes – 3.7% (e.g. cement and lime manufacture)
- Waste Management – 2.7% (90% of this is from methane emitted from landfill)

Source: http://www.epa.ie/OurEnvironment/ClimateChange/GreenhouseGasEmissions/

What do we use most energy on in Ireland?

What do we use energy for? (measurement in kilo tonnes of oil equivalent (ktoe))

Transport 5,075 (including Road Freight, Road Private Car, Public Passenger Services, Rail, Domestic Aviation, International Aviation)
Industry 2,490 (including Food, beverages and tobacco, Textiles and textile products, Non-Energy Mining, Wood and wood products, Pulp, paper, publishing and printing, Chemicals & man-made fibres, Rubber and plastic products, Machinery and equipment, Electrical and optical equipment)
Residential 2,874
Commercial/Public Services 1,735
Agricultural 325
Source: http://www.sei.ie/index.asp?locID=70&docID=-1

What is happening if we are 'overusing' the earth?

- We're using up limited resources… oil, coal,
- We're causing irreversible ecological damage – overproduction of carbon, urbanization resulting in accumulating pollution (air, water, soil), climate change, possible shortage of water, logging and deforestation to make land for production of products such as palm oil and livestock production.

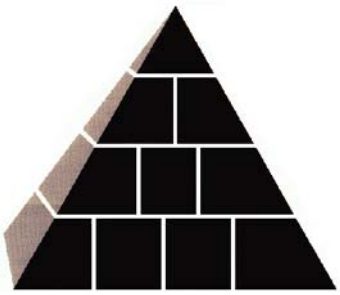
Why do vegetarians have a lesser ecological foot[print than meat eaters?

Every kilogram of beef costs on average:

- 50-100,000 litres of water,
- 5,900 joules of energy,
- 145 kg in topsoil loss,
- 40 kg of manure,
- 11.5kg of CO2 equivalent,
- 10 kg of grain,
- 200 mg of antibiotics
- and a range of pesticides.

It takes six times the amount of land to feed a meat eater than a vegetarian. (McCarthy, 2004)

Activity 6: Ranking Attitudes – Pyramid Activity



Consider the following statements – and place in the share of a pyramid, with the most important at the top.

Development is… World Peace	**Development is… Democracy**
Development is… Environmental sustainability	**Development is… Economic growth**
Development is… Basic education for all	**Development is… Health provision for all**
Development is… Provision of water, food and shelter for all	**Development is… Redistribution of wealth**
Development is… Equality	**Development is… a cure for AIDs and Malaria**

Activity 7: Communication Activity

Objective: To improve students' communication skills – explaining, listening and interpreting

Room Set Up: Standard – students will work in pairs.

Resources: Image cards (one per student)

Description:
Students work in pairs. A student chooses a card and explains (using shapes) to the other student who then draws the object on paper.