

“Capacity Building and Strengthening Institutional Arrangement”

Workshop: ‘Capacity Building for EEAA Training Departments’ (Base)

Training Kits (tools)

APAT Experiences

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The Unesco lessons



The multimedia CD 'Teaching and Learning for a Sustainable Future' is a tool developed by UNESCO as a demonstration project to illustrate:

- Ways of promoting the quality of education through teacher education and a focus on teaching and learning for a sustainable future
- Ways of meeting the professional development needs of educating for a sustainable future
- The potential of international collaboration in providing resources for teacher professional development
- The potential uses and benefits of multimedia technologies in pre- and in-service teacher education

The programme developed by Unesco consists of 4 Thematic Learning Areas:

Curriculum Rationale

1. Exploring global realities
2. Understanding sustainable development
3. A futures perspective in the curriculum
4. Reorienting education for a sustainable future
5. Accepting the challenge

Teaching about Sustainability Across the Curriculum

6. Sustainable futures across the curriculum
7. Citizenship education
8. Health education
9. Consumer education

Interdisciplinary Curriculum Themes

10. Culture and religion for a sustainable future
11. Indigenous knowledge and sustainability
12. Women and sustainable development
13. Population and development
14. Understanding world hunger
15. Sustainable agriculture
16. Sustainable tourism
17. Sustainable communities

Teaching and Learning Strategies

18. Experiential learning
19. Story-telling
20. Values education
21. Enquiry learning
22. Appropriate assessment
23. Future problem solving
24. Learning outside the classroom
25. Community problem solving

APAT has developed a CD with reduced version of the Unesco programme in italian, in order to promote its utilisation by teachers and/or students and to make it easier



Indice

Tema A Introduzione

Moduli

- 1 – Esplorare le realtà globali
- 2 – Capire lo sviluppo sostenibile
- 3 – Una prospettiva futura
- 4 – Riorientare l'educazione per uno sviluppo sostenibile
- 5 – Accettare la sfida

Tema B L'integrazione della sostenibilità nei programmi educativi

Moduli

- 6 – Il futuro sostenibile nei programmi scolastici
- 7 – Educazione alla cittadinanza attiva
- 8 – Educazione alla salute
- 9 – Educazione ai consumi

Tema C Percorsi Interdisciplinari

Moduli

- 10 – Cultura e religione per un futuro sostenibile
- 11 – Cultura indigena e sostenibilità
- 12 – Donne e sviluppo sostenibile
- 13 – Demografia e sviluppo sostenibile
- 14 – Capire il problema della fame nel mondo
- 15 – Agricoltura sostenibile
- 16 – Turismo sostenibile
- 17 – Comunità locali sostenibili

Tema D Metodologie didattiche

Moduli

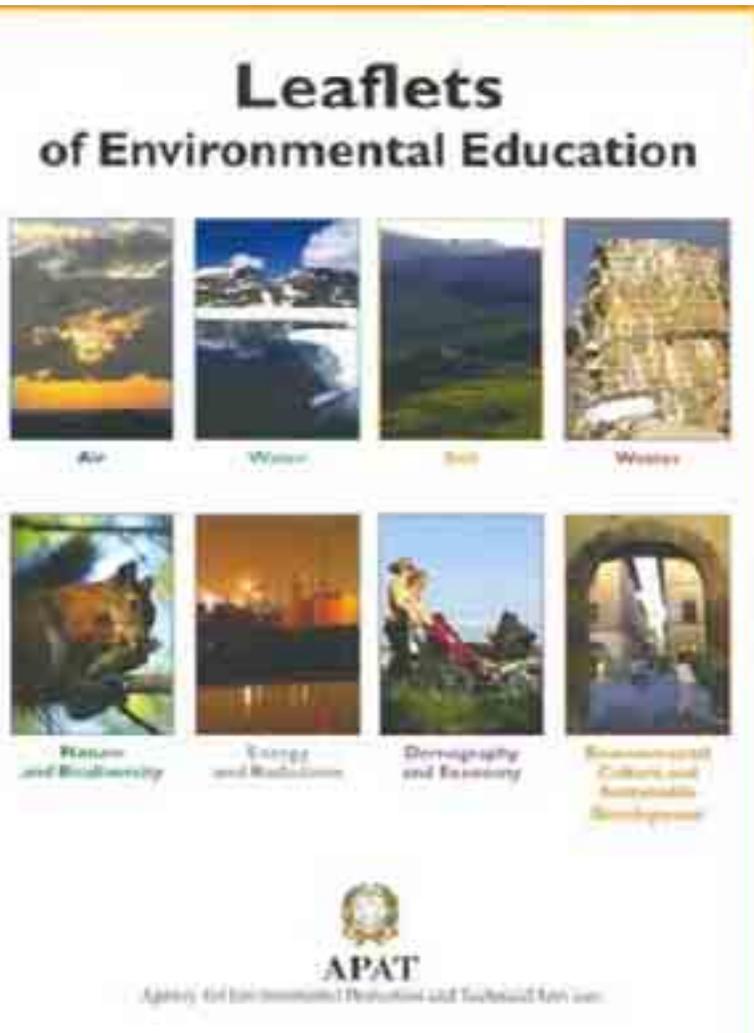
- 18 – Apprendere con il metodo sperimentale
- 19 – Il metodo narrativo
- 20 – Educazione ai valori
- 21 – Apprendere con il metodo dell'indagine
- 22 – Accertamento e Valutazione
- 23 – Risolvere i problemi futuri
- 24 – Apprendere fuori dell'aula
- 25 – Risolvere i problemi futuri nella comunità locale

I contenuti dei temi sopra elencati, nell'ambito dei singoli moduli, sono consultabili anche secondo 3 percorsi specifici:

1. **Introduzione al concetto di sviluppo sostenibile** (Contrassegnato da  e dalle frecce )
2. **Cultura dell'educazione per lo sviluppo sostenibile** (Contrassegnato da  e dalle frecce )
3. **Tecniche innovative di insegnamento / apprendimento** (Contrassegnato da  e dalle frecce )

APAT leaflets case

Example of tool for environmental protection issues



The leaflets developed by APAT includes 8 environmental thematic areas

1. Air
2. Water
3. Soil
4. Wastes
5. Nature and Biodiversity
6. Energy and radiation
7. Demography and economy
8. Environmental culture and sustainable development

APAT booklets case



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I Quaderni della Formazione Ambientale

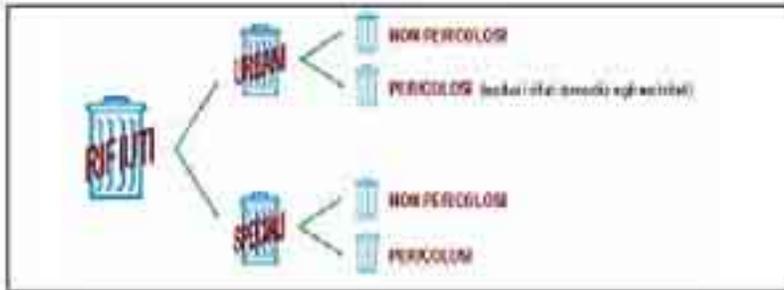


Rifiuti

Indice

Premessa	4
1. Introduzione	5
2. Le tipologie dei rifiuti	8
3. Gli imballaggi	10
4. La gestione dei rifiuti	13
4.1. La raccolta differenziata	18
4.2. Il riciclaggio	22
4.3. Lo smaltimento	28
5. Il recupero di materia e di energia	33
5.1. Incenerimento con recupero di energia	35
5.2. Il compostaggio e il trattamento meccanico-biologico	37
8. La tariffa rifiuti	42
Questionario di autovalutazione	43
Riferimenti Normativi	45
Dati tecnico scientifici di riferimento	47
Bibliografia e siti web	50

Example of a mix between technical-scientific contents, tables of data and figures



La seguente tabella riporta alcuni esempi di rifiuti urbani ed urbani pericolosi:

I RIFIUTI URBANI
<ul style="list-style-type: none"> • i rifiuti domestici, anche ingombranti, provenienti da locali e luoghi adibiti ad uso di civile abitazione; • i rifiuti provenienti dallo spazzamento delle strade; • i rifiuti di qualunque natura o provenienza, giacenti sulle strade ed aree pubbliche o sulle spiagge marittime e lacuali e sulle rive dei corsi d'acqua; • i rifiuti vegetali provenienti da aree verdi, quali giardini, parchi e aree cimiteriali; • i rifiuti provenienti da esumazioni ed estumulazioni nonché da altre attività cimiteriali.

I RIFIUTI URBANI PERICOLOSI (RUP)
<p>Tra i rifiuti urbani pericolosi, i principali sono costituiti:</p> <ul style="list-style-type: none"> • da medicinali scaduti e dalle pile (per esempio del telecomando della tv e del videoregistratore, le radio, i videogiochi, gli orologi, i telefonini), le quali contengono sostanze molto pericolose, chiamate "metalli pesanti", come il cromo, il cadmio, il rame, lo zinco, e soprattutto il mercurio. Anche pochi grammi di questi metalli possono provocare grossi danni. <p>Rientrano, inoltre, tra i RUP:</p> <ul style="list-style-type: none"> • le vernici; • i solventi; • le colle; • i materiali acidi.

Imballaggio Primario: l'imballaggio primario è l'imballaggio per la vendita ovvero è un imballaggio concepito in modo da costituire un'unità di vendita per l'utente finale o per il consumatore. Tra gli imballaggi primari sono considerati anche quelli che i consumatori generalmente producono come rifiuto e che sono oggetto di raccolta differenziata in ambito urbano.



Fig. - Esempio di imballaggio primario: Una bottiglia di vetro



Fig. - Esempio di imballaggio secondario: una scatola di sigari



Fig. - Esempio di imballaggio terziario: un pallet di scatole

Questionario di Autovalutazione Area Tematica : "RIFIUTI"

- 1 *Quali dei seguenti rifiuti sono biodegradabili, ossia è la natura stessa a scomporli in sostanze più semplici?*
 - A. Rifiuti organici
 - B. Rifiuti non organici
 - C. Entrambe

- 2 *Sulla base della normativa vigente in quali grandi categorie vengono classificati i rifiuti?*
 - A. Rifiuti biodegradabili.
 - B. Rifiuti non organici.
 - C. Rifiuti urbani speciali

- 3 *Il D.Lgs 22/97 quale Consorzio ha istituito ai fini del recupero di materiale da imballaggi?*
 - A. Le Agenzie Regionali per la Protezione dell'Ambiente
 - B. Il CONAI
 - C. Gli uffici comunali per la raccolta dei rifiuti

Example of self-assessment questionnaire

The Flepy Kit case

'Flepy' is a project promoted by European Commission (**DG Environment**) with the aim to disseminate environmental education to children between 3 and 7 years old. The educational kit developed includes different tools such as booklets, posters, stickers, video, a card game, a pupil and a Manual for educators



Manual for educators

3. Looking at the Pictures

Each child looks over the pages of the booklet and looks at the pictures.
The children read the story and then discuss the pictures.

The Most Important "Dis-covers" in each picture:



Picture 1 - On the Pond

Floopy lives in the middle of the pond. It's a clean, fish pond with an open space and a good. There are many fishes around the pond. You can recognize them by the different colors and sizes. Floopy makes a sound. The sound is like a fish. Like a fish that is a little night language you. It's called a koo-koo. One of Floopy's friends, the small, purple fish. Why is the small called Floopy? Where can you find his eyes? Floopy leaves a silver line behind him. It's a line of stars that make him behind on his own face.

Picture 2 - The Pond

It's getting dark. The sun sets. Floopy and Floopy are both over the pond. Why? Floopy is able to walk very well. By looking at the pictures how can you tell that they are lost? Floopy has the best design. Floopy design his picture behind him and he looks colorful red. Floopy shows their children.



Picture 3 - The Village

The first discovery is the village with houses and a church. A road runs on top of the church-roof. How is the function of the road? (Answer: to walk). Some small animals, according to the maps that are pointing to them. A river runs through the village. A bridge leads from one side of the village to the other. Another eye-catcher is Floopy, who comes along from the other page. He is happy. You can see it by the way he flies and by the look in his eyes.

Picture 4 - The Skyline

Floopy sees a fish in the sky like a picture. The fish is all in the sky. He sees an orange cat in the hand and it cannot walk in a straight line anymore. An orange cat can't walk in a straight line. It shows a dirty street with a cat and fish around it. There are no plants and no other fish in the street. Fish need air to breathe. Just like we do. Fish breathe by means of gills. The air they breathe out goes to the surface in the form of air bubbles.





Pictures 6A) and 6(b) – Air Pollution

These pictures show examples of air pollution. Air is polluted by many different means of transport. Children should identify the following: a car, a plane, a tractor. Do you know other means of transport? Railway (train, bus, underground, ship).

Dirty smoke comes from the house and the factory chimney. The tractor spreads manure on the field. The manure gives off a bad smell. It evaporates partly in the air (ammonia).



Picture 7a – Results

Air pollution causes trees to die and animals to become ill. In the picture, notice the dark, grey clouds, a tree losing its leaves (although it's not autumn!) and a cow that looks ill (with a swollen body, thin legs and flabby ears). Do people also get sick from air pollution? Think about ozone problems in summer (summer-smog also called ground level ozone).

Picture 7b – You Can Do Something to Stop Air Pollution

Plans are being made. In the middle of the picture we see Emma's father.

In the "bubble" above William, we see a bike:

he will use his bike more instead of the car.

Emma will switch off the light when she leaves the room.

Floopy is lying on a soft bed.

The bottle in front of Floopy contains antiseptic or disinfectant, a wad of cotton wool is beside it.



Games



Floopy DOMINOES

The Floopy Dominoes game is suitable for children from 3 years of age upwards.

The game can be played by 2 to 6 players.

Purpose of the Game

Through playing the game children learn to distinguish between what is good and what is bad for the environment. They learn how to behave and take care of the environment.



The Rules

The game consists of 24 cards with two illustrations on the face of each card.

To start, One player acts as the dealer. He gives 5 cards each to the other players and to himself and puts 1 card (the starter card) face-up in the centre of the table. The dealer places the remaining cards in a pile face-down on the table. The player who sits to the left of the dealer begins. He puts a matching card next to the starter card. The matching card must have the same illustration as the starter card (to be played like picture dominoes).

If he does not have a matching card, he takes 1 card from the pile and awaits his next turn.



To leave a room and leave the light on
This is **BAD** for the environment.



Overflow bath, with lots of foam
Water is wasted like that, water spills every day
This is **BAD** for the environment.
This is **BAD**.



A bottle and a can in a river
Throwing empty cans or bottles in a river or on the ground is **BAD**. They belong in the Council Recycling Centre (bin) in a better world.



Drain
Throwing washwater or grey water (kitchen sink) on the floor (not in a drain) is **BAD**. Wash water can be used for other things if it ends up in a landfill or is incinerated. In this way, it pollutes the environment (water and air).



Frying oil
Pouring frying oil or fat down the drain is **BAD**. It goes to the Council Recycling Centre.



A child on a bike
Riding a bike is **GOOD** for the environment and is a hobby for you. So please give us a present.



Children walking
Walking is very **GOOD** for the environment and is a hobby for you.



Somebody leaves a room and switches the light off
This is **GOOD** because you save electricity. The production of electricity pollutes the air.



To wash a car with a bucket and a sponge
This is **GOOD** because you use less water than when you wash a car with a water hose.



Two children sharing a bath.
When children don't want any more, they don't wash the bath. This isn't very smart, using products. And, they save on water by sharing a bath. This is **GOOD**.

Stickers



The 'Jiffy's Quiz' Toolkit case

European Environmental Toolkit for Citizens

The aim of this site is to help European citizens find out what they can do, on a day-to-day basis, to help improve the state of our planet.



Did you know that half of the greenhouse gas emissions in the world result from heating houses and using private transport? Today's environmental problems are therefore not just caused by commerce, industry and farming - the way we behave in our daily lives has a role to play in changing our environment.

It is therefore important to understand how we can help improve the state of our planet by the decisions we make in our daily lives.

From this site, developed by the European Commission, you can:

Test your knowledge, and get practical advice on how to improve the environmental impact of your day-to-day actions, by entering Jiffy's world and doing "Jiffy's Eco-Quiz".

Check your facts - Change your ways



Access the largest European database on environmental Toolkits. An environmental Toolkit is a set of tools (guides, games, quiz, tips...) which aim at changing people's behaviour to a more environmentally friendly one.

Click on "Search for a Toolkit"




The screenshot shows the 'Jiffy's Eco-Quiz' interface. At the top, there is a navigation bar with icons for water, energy, earth, and air. Below this, there are four large buttons labeled 'water', 'energy', 'earth', and 'air'. To the right of these buttons, there is a text box that reads: 'Welcome to Jiffy's Eco-Quiz. The game will test both your knowledge of environmental issues and your visual memory! The quiz consists of 20 questions selected randomly on 4 themes - Air, Earth, Water and Energy. The questions are based on situations we encounter in our everyday lives - at home, at work, during our leisure time or while we are out shopping. The maximum score is 300 points.' Below the text box, there is a 'Next' button and a small icon. At the bottom of the interface, there is a 'Score' section with a large '0' and the word 'Score' next to it.

at home

water

Among the products below, there is only one that you can throw down your sink. Which one?

A. Frying oil
B. Paint
C. Vinegar
D. Medicine

Will you? (no points for this question yet)

Score: 0

at home

water

Among the products below, there is only one that you can throw down your sink. Which one?

A. Frying oil
B. Paint
C. Vinegar
D. Medicine

Do not throw any chemicals down your sink - no paint, varnish, insecticides, medicine, etc... Neither should you throw any oil down your sink: no frying or seasoning oil, and certainly no engine oil. All these products can damage the functioning of your wastewater treatment plant by killing the fauna (chemicals) or by blocking the pipes (oils).

X 0
-5
3
-5

Next question

Score: 0

General Index

I Introduction to the environmental themes

1) Environment

- 1.1 Ecosystem: definitions, compositions, characteristics. Types of ecosystems, relation between different ecosystems.
- 1.2 The living kingdom: classification and phylogeny
- 1.3 The vegetation
- 1.4 Abiotic environmental hydrology, fresh-water ecosystems , inshore and lagoon environmental.
- 1.5 Geology and geomorphology : rock and mineral , soil.
- 1.6 Ecodevelopment (sustainable development).

2) Environment pollution

- 2.1 Environmental sectors and pollution : characteristics and effects
- 2.2 Transport, dispersion and transformation of defiling.
- 2.3 Environmental pollution: index of environmental pollution.
- 2.4 Effects of human activities on the different environmental sectors.
- 2.5 Sources of radioactivity pollution.
- 2.6 Valuation of Environmental Impact.

II Analysis and sampling

3) Quality of surface water

- 3.1 Legal references
- 3.2 Aim of environment quality
- 3.3 Sampling

4 Quality of air

- 4.1 References of rules
- 4.2 Types of atmospheric pollution
- 4.3 Sampling

5 Analysis of Laboratory

- 5.1 Spectrum methods
- 5.2 Chromatographic methods
- 5.3 Mass spectrometry
- 5.4 Volumetric analysis
- 5.5 Instrumental measures
- 5.6 Analysis of suspended particles
- 5.7 Notes of microscopy
- 5.8 Mistakes in analytic determinations

6 Principles of organic chemistry

7 Systems of Environmental Management

III Technologies of reclamation

8. Characterization of polluted site

- 8.1 Legal references
- 8.2 Preliminary survey
- 8.3 Indirect survey
- 8.4 Direct survey
- 8.5 Sampling and analysis

9 Management and treatment of waste

- 9.1 Legal references
- 9.2 Waste management
- 9.3 Waste environmental controls

10. Management and reclamation of polluted sites

- 10.1 Legal references
- 10.2 Treatments classifications
- 10.3 Safety (techniques of insulation)
- 10.4 Technologies of reclamation

11. Management and treatment of effluent water

- 11.1 Legal references
- 11.2 Characterization of effluent water
- 11.3 Characterization of biological mud
- 11.4 Characteristics of domestic sewage
- 11.5 Water mechanics treatments
- 11.6 Physical-chemistry treatments
- 11.7 Biological treatments
- 11.8 Mud treatments
- 11.9 Disinfections

12. Phytoremediation

- 12.1 Legal references
- 12.2 Purification of surface water
- 12.3 Method of reclamation