

### "Capacity Building and Strengthening Institutional Arrangement"

# Workshop: 'Capacity Building for EEAA Training Departments' (Base)

# Training Kits (tools) APAT Experiences

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Agency for Environmental Protection and Technical Services

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# The Unesco lessons

### Teaching and learning for a sustainable future



education programme

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





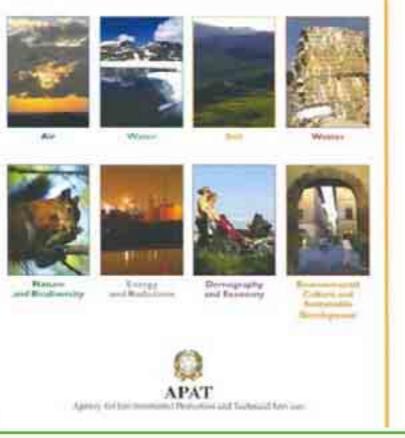
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# **APAT leaflets case**

Example of tool for environmental protection issues

### Leaflets of Environmental Education



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

This kind of tools are composed generally by 4 pages that include introduction to the theme, 2 pages of contents and a final page with technical and scientific data



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## **APAT booklets case**

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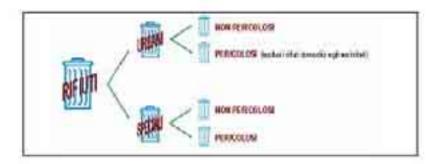
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Indice



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



La seguente tabella riporta albura esempi di rituti urbani ed urbani periobiosi:

I RIFIUTI URBANI	I REUTLU
<ul> <li>i rifiuti domestici, anche ingombranti, provenienti da locali e luoghi adibiti ad uso di civile abitazione;</li> <li>i rifiuti provenienti dallo spazzamento delle strade;</li> <li>i rifiuti di gualungue natura o provenienza, placenti sulle strade ed aree pubbliche o sulle splagge marittime e tacuali e sulle rive del oorsi d'acqua;</li> <li>i rifiuti vegetali provenienti da aree verdi, guali plandini, parchi e aree cimiteriali.</li> <li>i rifiuti provenienti da esumazioni ed estumulazioni nonché da altre attività cimiteriali</li> </ul>	Tra I rifiuti u sono costitu • da mec (per esem e del video videogioci ouali cont pericolosa come il cr zinco, e so possono p Rientrano, in • I solve • I solve • I mater

#### IRBANI PERICOLOSI (RUP)

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- ibios ilsir

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 muto e che sono oggetto di raccolta differenziata in ambito urbano.





Una boltiglia di vetro

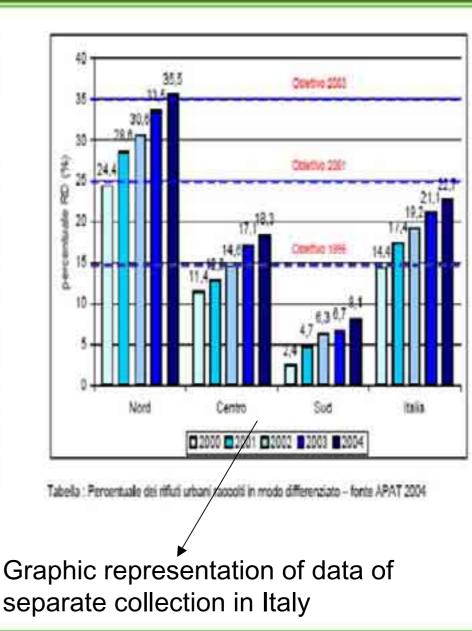
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pallet di scatole





sistem di raccolta devono tendere ad apevolare i conferimenti separats offrendo allutente 101 servizio pratico e comodo, itolbe devono consentire di stimare, per quartieri, zone, condomini, produzione. 4060V2 rifuti in modo da poter premiare o penalizzare, mediante le taciffe comunali. I diversi comportamenti. lunzione delle carateristiche residenziali o di altra destinazione della della interessata. 20118 composizione 64.05 intercellacione this





### Questionario di Autovalutazione Area Tematica : "RIFIUTI"

- 1 Quali dei seguenti rifiuti sono biodegradabili, ossia è la natura stessa a scomporti 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.
  - Rifiuti non organici.
  - C. Rifiuti urbani speciali
- 3 II 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. II 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 educational 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

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### 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 chinney. 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, this 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: be 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



HOOPY DOMINOES

The Flairy Dominus gone is suitable for children from 3 years of age printl.

The game and be played by 2 to 6 players.

#### Purpose of the Game

Through playing the game childran insen to distanguish between what is good and what is had for the environment They learn his to believe and take cars of the processment

### The Rules

The same consists of 34 cards with two illustrations on the face of each -21

To mart. One player acts in the dealer. He gives 3 can beach to the other physicand to impelf and parts 1 and the states and ther-up in the active of the table. The dealer places the remaining cards in a pile face drive, on the table. The player who can to the left of the dealer begins. He puts a matching card sent to the starter card. The matching card must have the same illustration as the startist card (to be played this picto-domingles).

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



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A child on a bilar Rafug a file to LET (1) for the environment and it is builty for you. We exhaus process protect.



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# **Stickers**







# The 'Jiffy's Quiz' Toolkit case

#### Anne the Representation Desired By Convers

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 homes 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:

Text sour innerledge, etcl per practical advice on how to improve the economical inspatial tour depth-dept advice, by economy 306y's world and driving "Diffy's Eco-Quil"

Access the largest European database on environmental Toplicta. An environmental Toplicta is a soft of tools (polle, pene, poin, tyo.) which area at stronging penales ( between the entrope environmental) mendor poin.

theck your facts - Change your mays

(lick as "Search for a Taalkit")











# **General Index**

## I Introduction to the environmental themes

### 1) Environment

- 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 Ecodeve lopment (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
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- 41 References of rules
- 42 Types of atmospheric pollution
- 43 Sampling
- 5 Analysis of Laboratory
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- 5.2 Chrometographic 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
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- 9.2 Waste management
- 9.3 Waste environmental controls
- 10. Management and re clamation 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 refluent waster
- 11.1 Legal references
- 11.2 Characterization of afterscour water
- 11.3 Characterization of biological mud
- 11.4 Characteristics of domestic sewages
- 11.5 Water mechanics treatments
- 11.6 Physical-chemistry treatments
- 11.7 Biological treatments
- 11.8 Mudtreatments
- 11.9 Disinfections
- 12 Phytopunfication
- 12.1 Legal references 12.2 Parification of surface water