

Paper waste prevention at school



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Introduction

Despite the evolution of information technology and the emergence of new digital communication devices, paper remains one of the main means of information dissemination and its worldwide consumption continues to grow.

Industrialized countries, which represent 20% of the world population, consume 87% of writing paper and printing¹, much of which is converted to waste.

Measures are therefore required that contribute to the responsible use of paper and to preventing the generation of paper waste in different areas –at work, in school, at home, etc.

In the context of the European Week for Waste Reduction held each year, offers the opportunity to implement a specific initiative to reduce paper waste generation in schools, government departments and businesses, in order to use this material more efficiently and more sustainably.

¹ Klaus Toepfer, Executive director, UN Environment Program, (...) VII International seminar *Cleaner production*, 29-30 April 2002.

Paper Waste Prevention at school

The initiative aims to emphasize how much we currently generated paper waste and focus on the ways in which we use it during our school day. Eliminating paper waste for a day will enable students to realize how much they produce paper waste and –primarily– to think about how to reduce its generation. This action is a challenge and an opportunity for the educational institution to improve both environmentally and economically.

The event must achieve the following objectives:

- Quantifying the amount of paper waste produced and being aware of how much we currently depend on the material
- Detecting problems related to selective paper collection
- Rethinking the paper use processes in place within the school in order to reduce waste generation and avoid unnecessary use and waste
- Reducing costs and increasing the efficiency of procedures
- Improving the image of the educational school by highlighting its commitment to the environment
- Acting on the environment, including families, promoting good practices to reduce paper waste generation, including in households.

To ensure the success of the event educational centers must ensure:

- to avoid to the maximum the production of paper waste on that day
- to involve the whole team of people -teachers and other staff- in the organization of the day
- to involve all students to meet the challenge and perform the tasks required by the day
- to encourage staff and students to follow the instructions throughout the day
- make the necessary adjustments in terms of teaching and learning during the day
- help ensure that the challenge creates an atmosphere that allows for creative tasks in a different way

Conditions of participation in the event

- The school will use the logo of the European Week for waste reduction only as part of this event. The rights to use of this logo will be limited to this action.
- The school is committed to making a **general assessment** of the volume of paper waste produced during a school day.
- The school is committed to assessing its participation in the event (qualitative and quantitative assessment) using **indicators** or methodologies contained in the dossier. The school will have to publish the results.

Other Considerations

- If the full school staff (teachers and other staff) is involved, the day will be even more productive. Although it may be difficult to reduce paper waste generation in the offices, it is possible to make some adjustments. Hence the importance of choosing a day when sending mail is very limited, if any, and plan the day carefully so as to generate the paper waste only if it is really necessary.
- A few days before the day, it is important to plan the event with students to get them involved in the goals of the day and make them understand the motivations of the

challenge. To do this, they need to be invited to submit their ideas about learning to reduce paper waste generation. Their suggestions will be given consideration during the event.

- It is important to choose a day when no trip/excursion/external visit is expected. If possible, avoid excursions, trips or events before the day in order to avoid the production of paper waste mail between the school and families.

Beyond the students, teachers and other staff, the event also aims to involve families, whose participation will be required to carry out the following activities:

- Communicating without paper.
- Much better in fabric!
- The eco-audit at home.
- Advertising, no thank you!

1.1 WHAT TO DO, AND HOW?

1.1.1 PHASE 1. PRELIMINARY ACTIVITIES

1. QUANTIFYING THE PAPER

Recipients

Entire educational centre (students, teachers and other)

Description

Before celebrating the event, it is important to conduct a general assessment of the volume of paper waste produced during a school day. This assessment can be done in three ways:

1. Assessment using indicators

This folder contains a series of indicators to estimate the savings that the participation in the event will lead to ([see 1.1.3](#)).

2. Control

Some schools have environmental management systems (EMAS or ISO) and have control of the paper waste produced each year. This allows the daily production of paper waste to be more effectively estimated.

3. Basic eco-audit

To assess the volume of paper waste produced per day, it is necessary to calculate the total weight of paper from all recycled paper waste baskets throughout the school, including those used for paper towels (or in the toilet sinks). It is important to only weigh the elements in paper, which may have to be removed from containers for general use.

The assessment should be performed during a normal school day, without the knowledge of students, in order to obtain unbiased data. It should not take more than 5 minutes per class or department.

The results of this evaluation will be important to determine the impact of the event in terms of production of paper waste, which should be calculated as accurately as possible.



Too much waste



Less waste
thrown away

Target audience: **educational establishments**



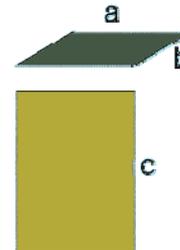
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At the same time, to facilitate the calculation of the amount of paper waste produced and that we will avoid producing during the day, students will be provided with a visual representation. To do this, they can fill cardboard boxes with the paper waste produced during a school day in classrooms, offices, etc. The boxes can then be aligned on a line to view the total volume.

The weight of paper can be calculated in two ways:

- Weigh the paper and cardboard with scales
- Calculate the volume of boxes:

1. To calculate the total volume of the box: $a \times b \times C = \text{cubic meters}$
2. Once the volume calculated, it will be necessary to calculate the weight of the paper in a full box knowing that a cubic meter of paper weighs 250 kg. $\text{Weight} = \text{number of cubic meters of the container} \cdot 250 \text{ kg.}$



For this calculation to be as accurate as possible, it is important to completely fill the box without wrinkling the paper in order to avoid empty space.

Human and material resources

- Those responsible for collecting paper and note all data
- Boxes
- Balance
- Calculator

2. UPDATE DATABASES

Recipients

Entire educational centre (students, teachers and other) and families.

Description

Before celebrating the event, it is important to update the databases (parents, students, teachers and other, suppliers ...) and establish systems that detect data errors.

It is particularly important to update the email addresses and telephone numbers and to ensure that all data is correct. The database will be performed using a specific computer management program to facilitate the data updates and information research.

The objective is to use the email addresses and phone numbers for school communications (phone calls or vocal and text messages) during a working day.

In case of absence of such a database, it is recommended to create one.

Human and material resources

- Computer
- Computer program designed for database management
- People responsible for updating databases. We calculate about one working day of 8 hours to update a database from 100 to 150 contacts. This estimate depends on the initial list and the existing data register.



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3. PREPARE THE NECESSARY TECHNICAL, TECHNOLOGICAL AND COMPUTER RESOURCES

Recipients

Entire educational centre (students, teachers and other)

Description

Most of the actions proposed as part of the event require the use of different types of technical, technological and computer resources. It is therefore important to first ensure that these resources will be available and usable during the day.

When it comes to proposing alternatives to the use of paper, it is very important to take into account the environmental impact that they may entail, selecting the option with the smallest impact.

Technical, technological and computer resources

- Conventional or digital table
- Computers and projectors
- Internet access
- TV & DVD
- USB memory devices
- Computer programs designed to make presentations
- E-mail programs

Human and material resources

- Person(s) responsible to ensure that resources to use are available and operate correctly.
- Person responsible for organizing and coordinating the document management course.



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1.1.2 PHASE 2. REDUCING PAPER WASTE

4. TURN OFF THE PRINTERS AND PHOTOCOPIERS

Recipients

Entire educational centre (students, teachers and other)

Description

One of the golden rules of the event is to avoid the use or creation of paper materials. Therefore you should turn off all appliances that involve paper production during the day, ie:

- photocopiers
- printers
- faxes

Other mechanisms can also transmit data, such as technological resources computer programs and Web resources.

When it comes to proposing alternatives to the use of paper, it is very important to take into account the environmental impact that they may entail, selecting the option with the smallest impact.

Technological resources and computer programs

New technologies provide us with infinite possibilities for working and transferring information without needing to print out documents, thus enabling us to speed up our work. As soon as possible, it is therefore preferable to use and combine the following mechanisms:

- Conventional or digital table
- Computers and projectors
- TV & DVD
- USB memory devices
- Computer programs designed to make presentations
- e-mail program features, such as calendars and task managers.

Web resources

The internet offers a wide range of resources, which many are free and accessible to everyone, which enable you to work digitally as part of specific tasks, such as:

- Creating texts and presentations with the ability to publish and share them on the internet: *Google docs, Prezi and Slideshare.*
- Share and edit documents created by users: *Pageflakes and Wikispaces.*
- Use notes to share and exchange knowledge.
- Send and/or share large format documents (over 10 Mb): *Dropbox, Senduit, Yousendit, etc.*

Before the course, it is important to adapt content to suit to the resources you will use.

Human and material resources

- Switch off the following devices: photocopiers, printers, faxes, etc.
- Availability in class of devices which allow to project and communicate information (computer and projector, digital table, conventional table, whiteboard with dry-erase markers, etc.).
- Computer programs for e-mail and online adhesive notes
Computers with and without Internet connection



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5. COMMUNICATION WITHOUT PAPER.

Recipients

Entire educational centre (students, teachers and other) and families

Description

The internal and external document shipments and receipt involve the production of a significant volume of paper waste. During the event, the idea is therefore not to receive any type of paper material and send any of the following:

- Sheets
- Letters
- Flyers
- Internal communication elements (notes, lists, notices, etc.)
- Publications (newspapers, magazines, newsletters, etc.)

If it is necessary to make shipments, we could look for alternatives that do not involve the use of paper. Other mechanisms can also transmit data internally and externally, such as technological resources, computer programs and Web resources.

Technological resources and computer programs

New technologies provide different mechanisms to transfer and view information without having to print documents on the one hand and share documents on the other. As far as possible, always:

- send the documentation via e-mail
- use the conventional table or portable tables
- use word of mouth

Web resources

The internet offers a wide range of resources, which many are free and accessible to everyone, which enable you to work digitally as part of specific tasks:

- Creating texts and presentations with the ability to publish and share them online: *Google docs, Prezi and Slideshare*.
- Using the notes to share and exchange knowledge.
- Using computer programs (if available online) that can take notes on the computer screen as a reminder (Stickies.net, Spaaaze.com, etc.)
- Consulting digital newspapers and magazines

All communication materials issued in electronic format should include the logos of the European Week for Waste Reduction in order to highlight the school's commitment to the initiative.

Human and material resources

- Availability of electronic mail to all persons who must send data
- Access to the network to use online resources



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6. COURSES WITHOUT PAPER.

Recipients

Nursery classes and primary and secondary school pupils.

Description

In class, teachers and students use a large volume of printed materials or paper. The idea is therefore during the day to not use:

- text and reading books
- exercise books, sheets or paper spreadsheets
- notebooks or sheets to take notes

Then students should not bring their pen.

Before beginning to teach, it is important that teachers adapt the content of their subject to formats they want to use (internet, electronic, or other).

Other mechanisms can also transmit data, such as technical and technological resources, computer programs and online resources.

Technological resources and computer programs

New technologies provide endless possibilities to teach and learn digitally. As soon as possible:

- use all the possibilities of the digital table and the conventional table
- use computers
- use TVs

Web resources

The internet offers a wide range of resources, many of which are free and accessible to everyone, which enable you to work digitally as part of specific tasks, such as:

- Creating texts and presentations with the ability to publish and share them on the internet: *Google docs* and *Prezi*.
- Share and edit documents created by users: *Pageflakes* and *Wikispaces*.
- Use the notes to share and exchange knowledge.

Human and material resources

- In the classroom, availability of projection equipment (computer and projector, digital table, overhead transparencies, conventional table whiteboard with dry-erase markers, etc.).
- Computers equipped with internet access
- Individual tables for students



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7. TRAINING SESSION ON GOOD PAPER WASTE PREVENTION PRACTICES

Description

With the goal of providing the company's staff with practical information to enable them to reduce paper waste generation, a one or two-hour training session is proposed to offer advice and look at good practices related to the responsible and efficient use of paper in the workplace.

The training session would be led by an expert in this area, whether from the company itself or an external company, and may encompass the following two aspects:

- Introduction to document management: with the goal of providing the tools and know-how to create, receive, send, register, classify and store files or documents in digital format.
- Good paper waste prevention practices: in order to incorporate new habits that enable the optimisation of paper use and that foster paper reuse in daily activity.

Human and material resources

- Person in charge of organising and coordinating the course.
- Available space and resources for the proper organisation of the course (computer, projector, whiteboard...)

8. LET US BUILD OUR OWN PAD

Recipients

Nursery and primary education students

Description

Notebooks and pens are the tools that the students use the most. That's why we invited them to build a single tablet to replace the notebook and writing materials for one day, which can also be reused later. The development of this tablet can be seen as a craft activity.

The tablets can be built using different materials:

- Cardboard covered with a layer of paint for pictures, chalk
- Special sticker for the whiteboard on which it is possible to write with dry-erase markers

These single tablets can make a series of exercises in maths, English, etc. In a math class, for example, the teacher can explain the problems or exercises to be performed. After completing it, students, raising their tablet, letting the teacher know if they have found the correct answer.

Human and material resources

- Cardboard, paint for picture and chalk
- Special sticker for whiteboard and dry-erase markers



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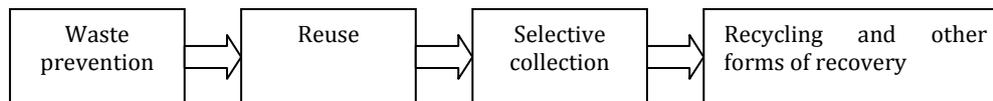
9. THE POWER OF WORDS AND INTERPRETATION

Recipients

Nursery students

Description

Interpretation and oral activities can be performed without generating paper waste. This is an original and fun way to convey diverse content which actively involves students, making them actors in their learning. The main message that teachers must transmit in the event is to reduce its waste generation and its preliminary recycling. In the proposed activities, the teacher should consider and apply the hierarchy in terms of waste management and apply it:



Examples:

Oral activities

- Telling tales or stories (*Stories about the 3 Rs.*)
- Project cartoons ([Mundo Pocoyo Clip - Aprender / Enseñar a reciclar](#), [Els escombriaires al món del reciclatge](#) and [Las Aventuras de los Hnos. Cucaracho - Reciclaje.](#))

The stories and videos available deal with different aspects related to waste. Using these tools, it is very important that teachers insist on prevention, the first step in waste management, in order to make students think and have them work in this domain (eco-design, responsible purchase, reuse, repair, etc.).

Interpretation activities

- Workshop on responsible and durable purchasing where students learn to make purchases that avoid excessive packaging as much as possible and using baskets or reusable cloth bags.
- Field trip to observe the different types of containers and the type of waste being thrown into it with special emphasis on the paper waste prevention and reflecting together on how to reduce our own waste.
- Recite phrases that rhyme or sing invented songs on the subject.

Human and material resources

- Computer and projector
- TV & DVD
- Internet access



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Target audience: educational establishments



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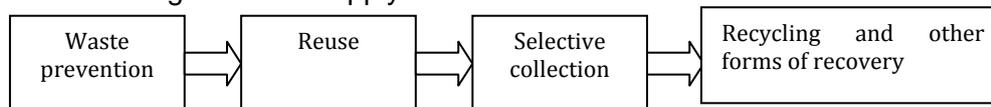
10. THE POWER OF WORDS AND INTERPRETATION

Recipients

Primary education students

Description

Interpretation and oral activities can be performed without generating paper waste. This is an original and fun way to convey diverse content which actively involves students, making them actors in their learning. The main message that teachers must transmit in the event is to reduce its waste generation and its preliminary recycling. In the proposed activities, the teacher should consider and apply the hierarchy in terms of waste management and apply it:



Examples:

Lower years

Oral activities

- Telling tales or stories (*Les tres bessones i les tres erres, En Pau i la Laia. I les deixalles, què?*)
- Show films, cartoons, etc. and comment them in class. ([Pesadilla reciclable](#) ; [Reciclar, el mejor plan](#)).
- Online games ([Les Tres Bessones miren al món](#) and [Jo reciclo, i tu?](#))

The stories and videos available deal with different aspects related to waste. Using these tools, it is very important that teachers focus on prevention, the first step in waste management, in order to make students think and have them work on this theme (eco-design, responsible purchase, reuse, repair, etc.).

Interpretation activities

- Use movement and dance to illustrate, for example, the life cycle of paper.
- Make a small representation of what students can do to reduce paper waste generation.
- Workshop on responsible and durable purchasing where students learn to make purchases that avoid excessive packaging as much as possible and using baskets or reusable cloth bags.

Upper years

Oral activities

- Telling tales or stories to think about paper consumption and recycling (*El Melquíades, l'inspector i el club 3R. Una història sobre deixalleries.*)
- Give presentations on various topics.
- Show a film, a documentary or a video and have a debate in class ([Esmorzar a ritme de Boc'n Roll](#), [Reciclarse o morir](#) and [La transformació dels arbres en paper](#))
- Read a digital newspaper, comment on news in groups and state the conclusions in a document created online (*Google docs*, for example).



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- Create and edit radio ads focused on preventing of generation of paper waste.
- Play the role of journalists for a day on topics related to the actions of the event at school or on the street in order to broaden the dissemination of the Day.

Interpretation activities

- Use movement and dance to illustrate, for example, the life cycle of paper.
 - Make a short play on an event in the story told in class or on another interesting topic.
 - Workshop on responsible and durable purchasing where students learn to make purchases that avoid excessive packaging as much as possible and using baskets or reusable cloth bags.
 - Workshop on paper eco-products where students will gain knowledge on waste prevention and analyse the life cycle of paper.
 - Workshop identification of products with an eco-label where students will learn about the different types of labels that distinguish environmentally friendly products, learn to differentiate them and know the data they provide.
- See similar activity [The green satchel](#) (page of the point "Example of good practices").
-

Human and material resources

- Stage or space in the classroom to accommodate performances
- Selection of digital presentations
- Computer and projector
- TV & DVD
- Movies on DVD
- Internet access
- Tales
- Recording equipment
- Video camera
- Microphone, sound equipment and speakers
- Computer programs for audio and image editing



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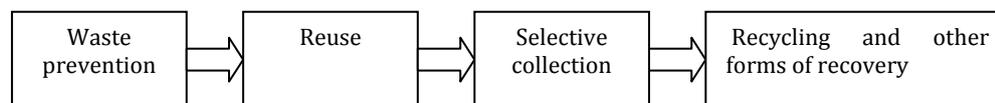
11. THE POWER OF WORDS AND INTERPRETATION

Recipients

Pupils in secondary education

Description

Interpretation and oral activities can be performed without generating paper waste. This is an original and fun way to convey diverse content which actively involves students, making them actors in their learning. The main message that teachers must transmit in the event is to reduce its waste generation and its preliminary recycling. In the proposed activities, the teacher should consider and apply the hierarchy in terms of waste management and apply it:



Examples:

Oral activities

- Introduction to themes and group debate
- Viewing films and documentaries followed by debates. The conclusions may be published on the Internet using online programs such as *Google docs*. Examples of films or documentaries: [The Story of Stuff](#) (to think about consumption in general), [Comprar, llençar, comprar](#) and [El desafío verde](#).
- Create and edit radio ads focused on preventing of paper waste generation.
- Play the role of journalists for a day on topics related to the actions of the event at school or on the street in order to broaden the dissemination of the Day.

The stories and videos available deal with different aspects of waste. Using these tools, it is very important that teachers focus on prevention, the first step in waste management, in order to make students think and have them work on this theme (eco-design, responsible purchase, reuse, repair, etc.).

Interpretation activities

- Use movement and dance to illustrate, for example, the life cycle of paper.
 - Make a short play on an event in the story told in class or on another interesting topic.
 - Workshop on responsible and durable purchasing where students learn to make purchases that avoid excessive packaging as much as possible and using baskets or reusable cloth bags.
 - Workshop on paper eco-products where students will gain knowledge on waste prevention and analyse the life cycle of paper.
 - Workshop identification of products with an eco-label where students will learn about the different types of labels that distinguish environmentally friendly products, learn to differentiate them and know the data they provide.
- See similar activity [The green satchel](#) (page of the point "Example of good practice").



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Human and material resources

- Stage or space in the classroom to accommodate performances
- Selection of digital presentations
- Computer and projector
- TV & DVD
- Movies on DVD
- Internet access
- Recorder
- Video camera
- Microphone, sound equipment and speakers
- Computer programs for audio and image editing

12. ART WITHOUT PAPER OR CARDBOARD

Recipients

Nursery students

Description

This activity aims to make students think about the use of paper and cardboard in the context of a large piece of practical work done in class, and to show them other options that allow them to do this through the promotion of reuse rather than the new use of such materials.

Crafts courses offer many opportunities to make artwork without resorting to the generation of paper waste. In this context, one option is to use natural materials or to take advantage of other materials which, if not reused, would become waste. Here are examples of Crafts that can be done without paper waste generation:

Crafts

- Creating musical instruments by reusing materials (plastic, wood, metal pots, etc.)
- Making accessories (necklaces, bracelets, etc.) from seeds, food paste, stones, leaves, colour threads, etc.
- Decorative elements made with stones, leaves, seeds, vegetables, food paste, ...
- Mural paintings made with bed sheets or old towels
- Making lunch bags with reused fabrics

Ephemeral art

There are other ways of making art, an ephemeral art:

- Drawing with a wet brush with water and stones using the playground as a "paper"
- Prepare trays of sand so that students could draw or write on them
- Make figures or sculpting with clay or play dough

These activities may be carried out during the event and for the rest of the year, during the crafts course.

Human and material resources

- Brushes.
- Clay



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- Play dough
- Sand
- Water
- Trays or plastic bases
- Other materials, depending on the activity: fabrics, metal lids, plastic, paint, food paste, etc.

13. ART WITHOUT PAPER OR CARDBOARD

Recipients

Primary education students

Description

This activity aims to make students think about the use of paper and cardboard in the context of a large piece of practical work done in class, and to show them other options that allow them to do this through the promotion of reuse rather than the new use of such materials.

Crafts courses offer many opportunities to make artwork without resorting to the generation of paper waste. In this context, one option is to use natural materials or to take advantage of other materials which, if not reused, would become waste. Here are examples of Crafts that can be done without paper waste generation:

Crafts

- *Patchwork* workshop (making materials from pieces of fabric: lunch bags, cloth dolls, etc.).
- Creating musical instruments by reusing materials (plastic, wood, metal pots, etc.)
- Making accessories (necklaces, bracelets, etc.) from seeds, food paste, stones, leaves, colour threads, etc.
- Decorative elements made with stones, leaves, seeds, vegetables, food paste, etc.
- Mural paintings made with bed sheets or old towels

Ephemeral art

There are other ways of making art: ephemeral art:

- Drawing with a wet brush with water and stones using the playground as a "paper"
- Prepare trays of sand so that students could draw or write on them
- Make figures or sculpting with clay

These activities may be carried out during the event and for the rest of the year, during the crafts course.

Human and material resources

- Brushes
- Clay
- Sand
- Water
- Trays or plastic bases
- Other materials, depending on the activity: fabrics, metal lids, plastic, paint, food paste, etc.



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14. ART WITHOUT PAPER OR CARDBOARD

Recipients

Secondary education students

Description

This activity aims to make students think about the use of paper and cardboard in the context of a large piece of practical work done in class, and to show them other options that allow them to do this through the promotion of reuse rather than the new use of such materials.

Crafts courses offer many opportunities to make artwork without resorting to the generation of paper waste. In this context, one option is to use natural materials or to take advantage of other materials which, if not reused, would become waste. Here are examples of Crafts that can be done without paper waste generation:

- *Patchwork* workshop (making materials from pieces of fabric: lunch bags, cloth dolls, etc.).
- Creating musical instruments by reusing materials (plastic, wood, metal pots, etc.)
- Decorative elements made with stones, leaves, seeds, vegetables, food paste, etc.
- Mural paintings made with bed sheets or old towels
- Make figures or sculpting with clay
- Creating and editing videos

These activities may be carried out during the event and for the rest of the year, during the art class.

Human and material resources

- Brushes.
- Other materials, depending on the activity: fabrics, metal lids, plastic, paint, food paste, etc.
- Home video cameras and computer programs for editing video

15. LET US TALK WITH HANDS

Recipients

Primary education students

Description

Finger spelling is a communication system that consists of transmitting information using the fingers of one hand. It is part of sign language and is used as part of the artificial signs of communication (refereeing, military signals, etc.), manual mathematical calculations, etc. This language is a new mode of communication and learning that does not require physic supports.

Here are some ways to apply finger spelling in classes during the event:

- Describe a series of concepts using hands: animals, shapes, actions, concrete words and expressions (the sign of victory represented by placing the fingers in the shape of "V", the time out sign, the OK , etc.).



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- Represent the letters of the dactylogical alphabet, where each letter is represented by a sign. In French, there are 26 positions along with their variations as to the movement of the hand.
- Dactylogical alphabet, which can be displayed on a digital screen or a conventional table, allows students to practice their name, for example.

Human and material resources

- [Dactylogical alphabet](#)
- Device allowing to show students the alphabet (Digital or conventional table, computer and projector, ...)

16. OFFICE GAMES

Recipients

Nursery students

Description

To improve the students' skills when they take their turn, converse and interact, a series of table games allow these concepts to be consolidated at different levels of learning.

This activity will allow students to acquire knowledge and skills through the use of different tools that do not involve the generation of paper waste, such as textbooks or usual exercises. The teacher will introduce the activity as a method to reduce paper waste in the classroom and make students think about the excessive amount of paper waste generated in the classroom and the importance of using it responsibly.

Example of games:

- *Dominoes*, to work on numbers, vocabulary, etc.
- *The Memory*, to make the memory work by searching for the pairs.
- *Puzzles*, to involve visual perception, dexterity and patience.
- *Oxo*, to work strategy and patience

Human and material resources

- Board games (dominoes, *Memory*, puzzles, etc.).

17. OFFICE GAMES

Recipients

Primary education students

Description

To improve students' skills as they take their turn, converse and interact, a series of board games allow these concepts to be consolidated at different levels of learning.

This activity will allow students to acquire knowledge and skills through the use of different



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tools that do not involve the generation of paper waste, such as textbooks or usual exercises. The teacher will introduce the activity as a method to reduce paper waste in the classroom and make students think about the excessive amount of paper waste generated in the classroom and the importance of using it responsibly.

Example of games:

- *Scrabble*, to build words
- *Naval battle/Battleship* to work the implementation of strategies
- *Puzzles*, to involve visual perception, dexterity and patience.
- *The Memory*, to make the memory work by searching for the pairs.
- *Oxo*, or *Power 4* to work strategy and patience
- Online games: [Catalan waste agency games](#) and [Ambinet](#)

Human and material resources

- Table games (*Scrabble*, *Naval battle*, *Battleship* Puzzles, *Memory*, etc.).
- Computer and Internet access

18. OFFICE GAMES

Recipients

Secondary education students

Description

To improve the students' skills as they take their turn, converse and interact, a series of board games consolidates these concepts at different levels of learning.

This activity will allow students to acquire knowledge and skills through the use of different tools that do not involve the generation of paper waste, such as textbooks or usual exercises. The teacher will introduce the activity as a method to reduce paper waste in the classroom and make students think about the excessive amount of paper waste generated in the classroom and the importance of using it responsibly.

Example of games:

- *Scrabble*, to build words
- *Naval battle/Battleship* to work the implementation of strategies
- *Puzzles*, to involve visual perception, dexterity and patience.
- Online games: [Catalan waste agency games](#) and [Ambinet](#)

Human and material resources

- Table games (*Scrabble*, *Naval battle*, *Battleship* Puzzles, *Memory*, etc.).
- Computer and Internet access



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19. OUTDOOR RESEARCH

Recipients

Nursery, primary and secondary education students

Description

The event can also be an opportunity to promote learning based on outdoor activities that work the senses and do not require the use of paper. Students will thus be able to feel and observe the world around them and express their feelings. Outdoor spaces such as the playground, gardens or nature therefore become experimental and educational places.

The outdoor space of the school can be used for effective learning. The activity is to tell stories or talk about a concrete subject in a natural environment to seek and discover the different areas of the school and turn them into parallel educational spaces. Magnifiers can be used to examine certain elements in every detail. It is important to invite students to use their senses to enjoy the sounds, shapes and textures of natural elements such as leaves, insects, stones, etc.

During the activity, students will also photograph the items they have discovered to then seek more information about them via the Internet. The results and conclusions will be discussed in class and posted on the internet.

Human and material resources

- Magnifiers
- Camera(s)
- Computers equipped with internet access

20. MUCH BETTER IN FABRIC!

Recipients

Entire educational centre (students, teachers and other) and families

Description

Schools usually use a series of elements in paper form that are also available in fabric. During the event, it is recommended not to use the following products:

- Paper hand towels
- Paper handkerchief
- Paper towels
- Paper napkins
- Paper wrappers

To replace these items at the event, students are encouraged to bring a towel and a cloth napkin for their individual use. For its part, the kitchen staff will take care to provide cloth towels to replace kitchen towels. In terms of paper hand towels during the day, priority will be given to the automatic towels.



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For breakfast and lunch, students will be asked to bring their snacks in Tupperware or reusable packaging.

Human and material resources

- Cloth handkerchiefs and towels
- Tea towels
- Tupperware and reusable packaging

21. THE ECO-AUDIT AT HOME.

Recipients

Primary and secondary education students as well as their families.

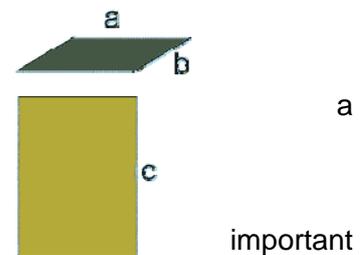
Description

Paper is one of the most used resources within households. To involve students and their families, we propose to make a small audit to determine the volume of paper and cardboard waste produced at the family level. This activity requires the intervention and support of parents, brothers and sisters and other family members living under the same roof.

In order to assess the volume of paper waste produced per day, calculate the weight of paper and cardboard in the house, namely those filed in the collective collection group waste-paper basket: newspapers, magazines, towels, handkerchiefs, paper and cardboard packaging, advertising material, etc.

Once all the paper and cardboard collected, put it in a big box (or several) that will calculate the weight. The latter can be calculated in two ways:

- Weigh the paper and cardboard with a balance
- Calculate the volume of boxes:
 1. To calculate the total volume of the box: $a \times b \times C = \text{cubic meters}$
 2. Once the volume calculated, it will be necessary to calculate the weight of the paper in a full box knowing that cubic meter of paper weighs 250 kg. $\text{Weight} = \text{number of cubic meters of the container} \cdot 250 \text{ kg}$.



important
avoid the

For this calculation to be as accurate as possible, it will be to completely fill the box without wrinkling the paper to presence of empty spaces.

This activity aims to strengthen the involvement of students and to involve families. Students are the messengers of the activities that take place at the school.

Human and material resources

- Paper and cardboard boxes
- Balance
- Calculator



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21. "ADVERTISING, NO THANK YOU! "
<p>Recipients</p> <p>Students and families</p>
<p>Description</p> <p>Advertising, no thank you</p> <p>To help minimize the amount of advertising that we receive in the mailbox, one option is to invite students and families to put a "no junk mail!" sticker on the mailboxes as a preventative action so as not to receive advertising.</p> <p>To disseminate the initiative, educational centres can use the communication channels at their disposal such as social networks, websites, etc. Students can also act as channels to convey this message to their families and feel involved in the project.</p> <p>For more information on this activity, consult the sheet of "Stop adverts in buildings" of the European Week for waste reduction.</p>
<p>Human and material resources</p> <ul style="list-style-type: none"> – Person responsible for preparing the informative material and manage the dissemination achieved through the communication channels of the educational centre – Person responsible for obtaining the stickers against the unwanted mail and distribute them to students and/or families. The request of stickers can be made during registration in the European Week for Waste Reduction.

1.1.3 PHASE 3. HOW MUCH PAPER WASTE HAVE WE AVOIDED GENERATING DURING THE DAY?

Once the event is over, it is essential to take stock of the day, actions taken and measures implemented. Having quantified the paper waste that has not been produced during the day will show us the results that can be obtained in just one day. These calculations can be performed using different indicators and methods.

Results must also be disseminated by publishing them on the internet using the evaluation form.

Here are three systems that can make an approximate calculation of the effects of a day in the educational centre in terms of reducing paper waste production. The school should choose one of these three options, all valid, from which it will obtain a certain volume of production of paper waste that must appear on the evaluation form.

Indicators

The following indicators allow an approximate calculation of production of paper waste generated by the school. They are classified according to the purpose of the paper: for



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healthcare, for use in the classroom for students learning activities, the school's internal and external communication.

ACTIVITIES		PRODUCED WASTE INDICATOR
Avoid using sanitary paper	Calculating the savings generated by avoiding the consumption of towels, handkerchiefs and paper towels during breakfast and/or snack	8 grams/student/day
Classroom activities and communications	Calculating the savings generated by avoiding the generation of paper waste in class and school communications	2.5 grams/student/day
		<i>A student consumes an average of a DIN-A4 (5.11 grams / sheet) and an envelope of 225x115 (5 g/envelope) per shipment.</i>

Source: *lavola*

Available bibliography:

- *ACR+ Guide: Quantitative benchmarks for waste prevention.*
- *EMAS environmental declarations in schools of Catalan.*

Register

Some schools have environmental management systems (EMAS or ISO) and have control of the paper waste produced each year. This allows daily production of paper waste to be more effectively estimated and establishes an average per school day.

Calculation of the paper waste produced: the volume of paper waste produced per year/school day.

BASIC eco-audit

The volume of paper waste produced obtained after the achievement of the eco-audit should be mentioned on the evaluation form. See previous activities point Phase 1.

1.1.4 PHASE 4. WHAT TO DO TO SAVE PAPER WASTE ALL YEAR ROUND?

Respecting the environment is one of the major themes in modern society, especially because of the deterioration that the planet has undergone in recent years.

The education they receive in schools will determine the behaviour they have both at home and at school. Hence the importance of raising their awareness of the need to respect the environment through practices that promotes good habits.



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The adoption of new habits and application of new procedures that reduce the generation of paper waste and improve its management are key aspects. To achieve this, there are several effective practices that will ensure the long term effectiveness of the event.

Nevertheless, it is necessary to take into account the environmental impact involved in implementing one measure or another and apply the one with the smaller impact.

TO REDUCE PAPER WASTE GENERATION, WE MUST:

- When printing, choose the front/back and two pages per sheet printing, etc.
- Revise models of the various documents (size of logos, margins, font size, models designed to front/back printing, removing blank pages, etc.).
- Revise the weights and focus on the use of low weight paper
- Reduce the sending and receiving of unwanted mail by leaving the distribution lists that are no longer interesting.
- Reduce printing, drawings and photocopies of documents based on their actual demand.
- Optimize the paper when printing.
- Use both sides of the paper

PROMOTE THE USE OF PAPER WITH ENVIRONMENTAL CERTIFICATION

- Use recycled paper.
- Ensure that the paper used was made to reduce the impact on the environment, as shown by labels such as Blue Angel, Nordic Swan, FSC, PEFC, etc.
- Avoid using paper and its derivatives in 100% virgin fibre, including newsprint, packaging, toilet paper and kitchen, office documents and publications. If used, it will ensure they have a certification in forest management based on sustainability criteria (FSC, PEFC, etc.).
- Opt for a maximum of recycled products (envelopes, folders, dividers, positive paper, wrapping paper, special papers and toilet paper).

BENEFIT FROM AND MAKE RESPONSIBLE USE OF TECHNOLOGY RESOURCES

- Help students use a system of online storage (*internetStorage*) in order to access their files wherever they are.
- Use USB memory or email to transfer documents from/to the home from/to the students.
- Create a unique Web space accessible from anywhere where teachers and/or students can create, share and store documents.
- Choose to send study materials electronically.
- Promote the exchange of books and electronic textbooks.
- Use the free [online resources](#) to create and share content

RAISE EMPLOYEE AWARENESS OF THE ADVANTAGES TO PREVENT PAPER WASTE GENERATION

- Communicate to teachers and other staff, students and families that the efforts they provide to reduce paper waste can not only save money on paper but also on shipping and space of storage.



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- Promote the habit of "think before you print". Students, teachers and other staff should ensure that they truly need the copies they make to avoid excess.
- Send periodic reviews in order to reduce the amount of copies and prints.
- Integrate awareness messages next to the electronic signature of all staff (eg: "Do you really have to print this mail? ").

Useful links

COMMUNICATION TOOLS OF THE EUROPEAN WEEK FOR WASTE REDUCTION

- Waste Scan
<http://www.ewwr.eu/quiz>
- Promo video
<http://www.ewwr.eu/node/52736>
- Operation "Empty Bin"
<http://www.operationpoubellevide.com/en/ademe>
- Attack of Muckwads
<http://invasion-des-megapoubs.eu/>
- Videos and themes for the European Week for Waste Reduction
<http://www.ewwr.eu/videos/2010>

OTHER EXPERIENCES AND USEFUL INFORMATION

- European Week for Waste Reduction
<http://www.ewwr.eu>
- Recycled paper websites
<http://www.fsc.org/>
<http://www.blauer-engel.de/en/index.php>
<http://www.pefc.org/>
<http://www.eco-label.com/>
- Calculating the advantages of using recycled paper
<http://www.papercalculator.org/>
- Initiative of the "Paper-free day" organized by the Environment Agency of Abu Dhabi.
<http://www.paperlessday.com/media-school.aspx>
- Blocks and wikis containing lesson ideas in the "Paper-free day"
<http://www.theinspiredclassroom.com/2010/04/go-paperless-write-on-your-desk/>
<http://teachpaperless.blogspot.com/2010/04/happy-paperless-earth-day.html>
<http://paperlessearthday.wikispaces.com/>



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- Presentation of "Paperless classroom" with Prezi
<http://prezi.com/zmckfolwulxg/the-paperless-classroom/>

EXAMPLE OF ONLINE RESOURCES

<ul style="list-style-type: none">• Google docs http://docs.google.com	<ul style="list-style-type: none">• Dropbox www.dropbox.com
<ul style="list-style-type: none">• Pageflakes www.pageflakes.com	<ul style="list-style-type: none">• Senduit www.senduit.com
<ul style="list-style-type: none">• Wikispaces www.wikispaces.com	<ul style="list-style-type: none">• Yousendit www.yousendit.com
<ul style="list-style-type: none">• Slideshare www.slideshare.net	<ul style="list-style-type: none">• Prezi www.prezi.com
<ul style="list-style-type: none">• Dipity www.dipity.com	<ul style="list-style-type: none">• Spaaze www.spaaze.com



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Participation Charter – Common Actions (Optional)

Nature of the Project Developer

The Project Developer submitting a proposal for a EWWR action, which will be validated by a national, regional or local Organiser of the Week, must be classified under one of the following categories:

- Administration/public authority
 - Association/NGO
 - Business/industry
 - Educational establishment
 - Other (for example, hospital, retirement home, cultural institution...)
-

Dates of the actions

The EWWR action must take place exclusively during the European Week for Waste Reduction: between the 19th and 27th November 2011 inclusive.

Commitment of the Project Developer

- EWWR actions will be led by Project Developers who can be clearly identified and who are either legal entities or individuals (*individuals may be accepted as official EWWR Project Developers on the condition that their statute is recognised by a municipality, for example: a master composter*);
- Each action must be registered and officially validated by the (national, regional or local) Organiser covering the area where the action will take place. Registration will be made via a form.
- The EWWR action will be carried out in respect of the law and regulations of the country in which the action takes place and will obtain the permission necessary for its correct proceeding;
- The action will seek to promote and encourage positive habits and gestures;
- The action will be carried out in a spirit of openness and cooperation and not in a militant or combative manner;
- The action will not be used to serve a political or religious purpose and will not be in breach of good morals;
- The action will be non-profit and entry will be free;
- Under no circumstances shall the certified EWWR action be focused on a product
- Unless otherwise indicated on the registration form, the validated EWWR action will automatically be entered into the review and selection process for the European Waste Reduction Awards.



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Commitment of the Project Developer – Common Actions

- The Project developer commits to using the European Week for Waste Reduction logo, LIFE logo and adaptable posters only within the framework of this registered EWWR action; the rights of use of the logo being restricted to this single action;
- The Project Developer commits to evaluate his/her EWWR action after it has taken place with the indicators noticed in corresponding common action sheet (For example, for the “Reduce excessive packaging” action, the weight of prevented packaging waste)

Nature of the “Common actions”

Waste management policies in the European member states are more and more influenced by EU laws, based on a hierarchy in which “waste prevention” stand in the first place.

The **Common Actions** aim to obtain **figures** of prevented waste thanks to defined actions. A Project Developer that implements a common action has to evaluate the waste quantities before/after the action. These info should be sent to EWWR Organiser in charge of the event on its territory.

A common action should necessarily address one of following waste flows:

- **Theme 1 - Paper waste reduction**
- **Theme 2 - Food waste reduction**
- **Theme 3 – Repair/Reuse**
- **Theme 4 –Excessive packaging reduction**

Any action addressing another theme that these presented above will be considered as a « classical » action and shall not being accounted as a « common action » (if this action meet EWWR actions requirements)

Date :

Name of the Project Developer

Please send back this participation charter to contact@ewwr.eu



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Example of the "Image use consent" form

The European Week for Waste Reduction is a project supported by the European Commission's LIFE+ Programme. This Week will take place for the third time from 19-27 November 2011. (For more information: www.ewwr.eu)

The European Week for Waste Reduction aims to reach out to the public as much as possible to:

- Promote sustainable waste reduction actions across Europe
- To highlight the work accomplished by various actors through concrete examples of waste reduction
- Raise awareness about waste reduction strategies and about the policies of the European Union and its Member States on this subject

The EWWR is a project which aims to educate people about the steps they can take to prevent waste production. The event is part of this project.

Image use consent - Children

I give my consent for **(Name of organisation)** to use any images (photographs or films) of my child taken during **common action no. 1 (Paper waste reduction)**, at **(Event location)**, **(Date and time)** for use in the promotion or report for this event, and I relinquish all rights to payment or ownership for any use of these photos.

Name of child:

Name of parent/tutor:

Date and signature:

.....
.....

Image use consent - Adults

I give my consent for **(Name of organisation)** to use any images (photographs or films) of my child taken during **common action no. (Paper waste reduction)**, at **(Event location)**, **(Date and time)** for use in the promotion or report for this event, and I relinquish all rights to payment or ownership for any use of these photos.

Name of person photographed:

Date and signature:

.....
.....

Attention:

- ▶ **Parents of minors MUST sign this consent form.**
- ▶ **Those who have not signed this consent form will not be photographed or filmed**



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A3 and A4 promotional poster



A3 size



A4 size



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Weigh-in table

A3 size

EUROPEAN WEEK
FOR WASTE REDUCTION

Title of
your action

COMMON ACTION
Theme of your
Common action



For more information: www.ewwr.eu



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