

Plastic Free School Manual



by

Wongpanit Krabi Co., Ltd.

under

Plastic Smart Cities TVA Project (PSC-TVA)

World Wide Fund for Nature Thailand (WWF Thailand)



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Preface

Plastic waste is one of an environmental problems that is becoming increasingly severe, affecting the quality of the environment and living organisms. This issue arises from improper waste management, such as incineration or landfilling, as well as a lack of awareness about reducing plastic use. In 2016, up to 242 million tons of plastic waste were released worldwide, with Thailand ranking 12th among the countries generating the most plastic waste.

Schools are one of the sectors that contribute to plastic waste generation, making proper waste management essential.. Teachers and schools play an important role in educating about reducing plastic use and managing plastic waste correctly to reduce plastic waste problems at the source and create awareness of environmental conservation among students.

The Plastic Smart Cities project recognizes the importance of managing plastic waste in schools and therefore develops the “*Plastic Free School Manual*” as a guideline for teachers and schools. The manual was created based on insights and experiences from implementing Plastic Free School activities in Hatyai Municipality and Songkhla Municipality. The contents of the manual include understanding the situation of plastic waste, steps to achieve the goal of being a “plastic waste free school”, and key success factors. Additionally, the manual provides guidance on how it has been used to conduct activities in pilot schools, namely municipal schools in Hatyai Municipality and Songkhla Municipality.



Plastic Smart Cities-TVA

WWF TH-PSC-TVA Project

PLASTIC
SMARTCITIES



Working with cities worldwide to
keep plastic out of nature by 2030

WWF, present in Thailand since 1995, is one of the world's largest conservation organizations, operating in nearly 100 countries. Its mission is to protect biodiversity, promote sustainable resource use, and reduce pollution and waste to foster harmony between humans and nature.



Key partners of the project

Plastic Smart Cities – TVA in Thailand is supported by the people and the government of Norway. The project has supported cities and coastal centres in taking bold action to stop plastic pollution, with a goal to reduce plastic leakage into nature by 30%, and achieving no plastics in nature. In Thailand, the programme focuses on four cities: Surat Thani, Samui Island, Songkhla and Hatyai.

Activities under the project include:

1. Plastic Free School
2. Community Waste Bank
3. Material Recovery Facility
4. Plastic ACTION (PACT)
5. Take-Back System
6. Awareness Campaign

Plastic free school

Plastic leakage is largely caused by inefficient waste management, including a lack of waste separation at the source. To address this, the Plastic Smart Cities project focuses on changing the behavior of communities, students, and teachers. As part of this effort, the project has developed the "Plastic Free School Manual," a guide designed to enhance students' and teachers' understanding of the environmental risks and consequences of improper plastic waste management.



"Plastic Free School Manual" will be a tool that schools can apply to achieve their goal of becoming plastic waste-free.

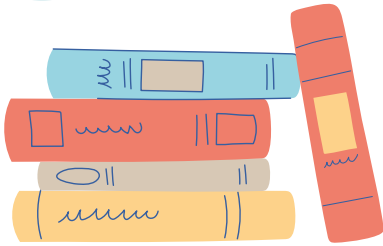
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Instructions for using the manual

01



This manual provides schools with guidance on practical steps to achieve the goal of becoming “plastic free schools.” The manual's contents focus on enhancing knowledge and awareness about plastic waste problems and proper plastic waste management, including steps for implementing plastic waste free schools.

02

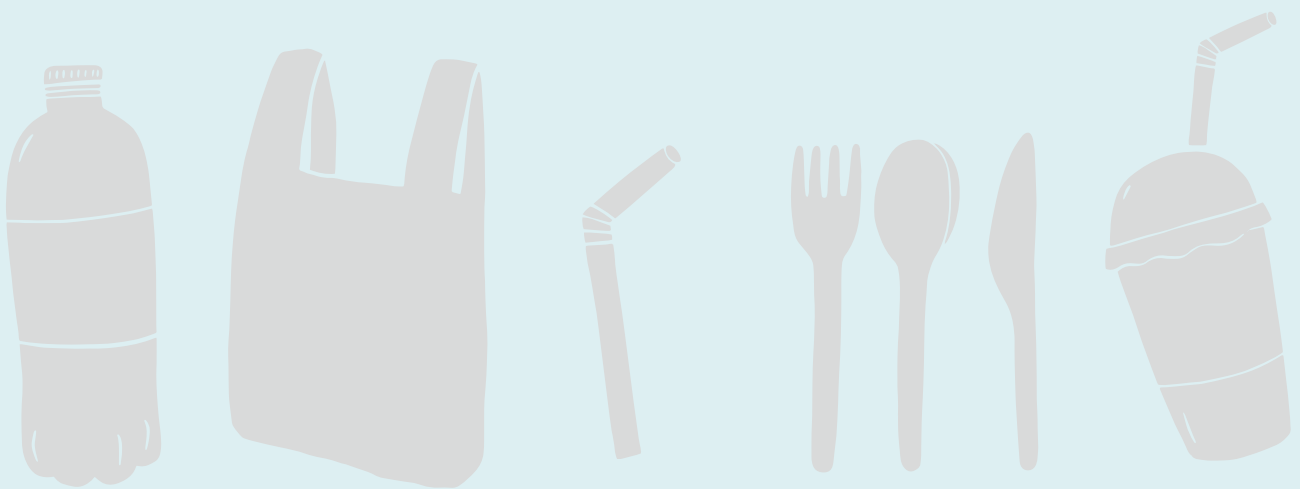


Schools can apply the activities according to the steps in the manual and can use various teaching materials in the appendix as appropriate.

03



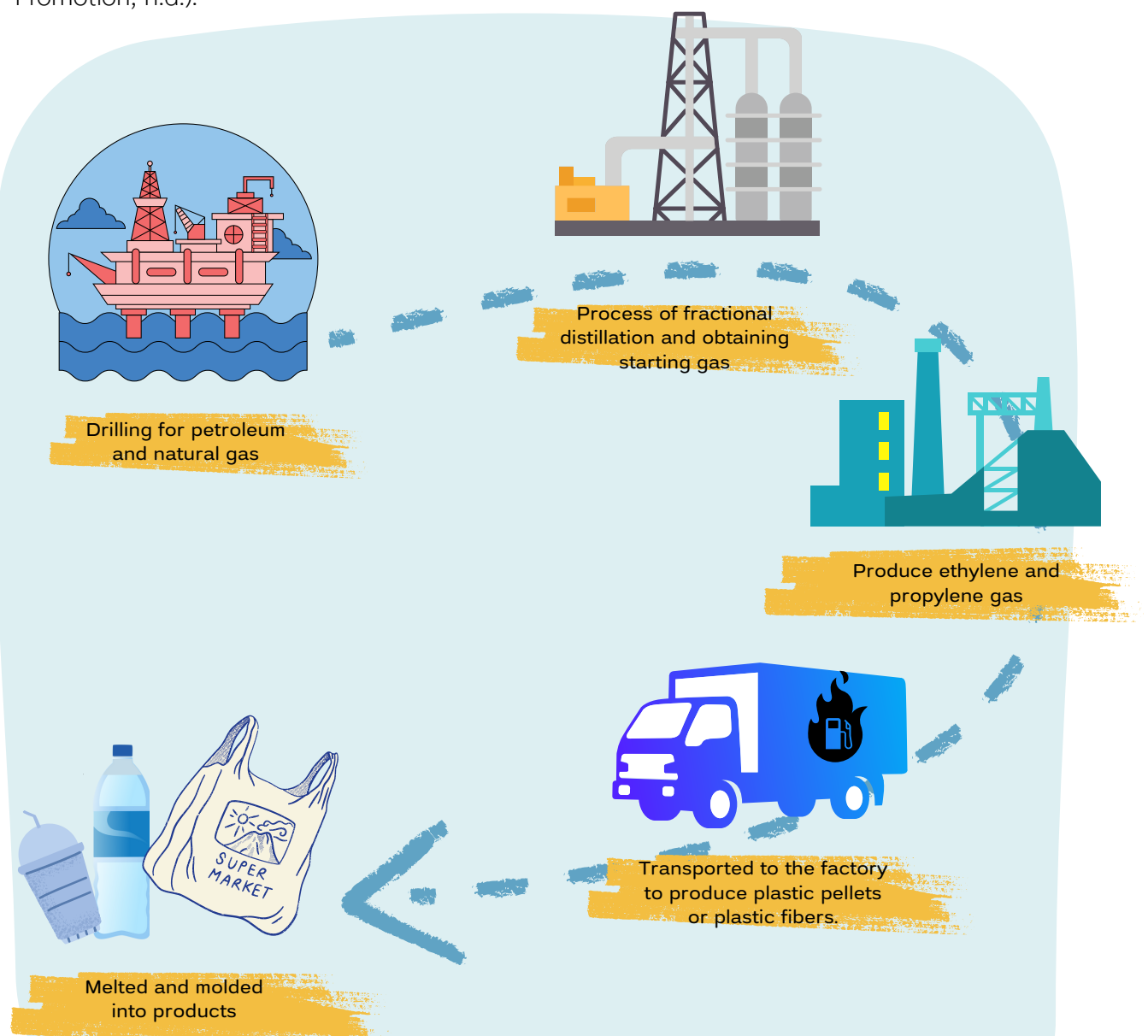
Teachers can integrate the activities in this manual with the teaching of related subjects.



1. Basic information about plastic waste and its management

1.1 Where does plastic come from?

Plastics are widely used today in various products, including bags, boxes, pipes, and films. Most plastics are produced from petroleum, including crude oil and natural gas, which are naturally occurring hydrocarbons found beneath the Earth's surface. Plastic production is made by chemical processes under high heat and pressure. During this process, many additives, including heavy metals, are added, which are toxic to living things (Department of Environmental Quality Promotion, n.d.).



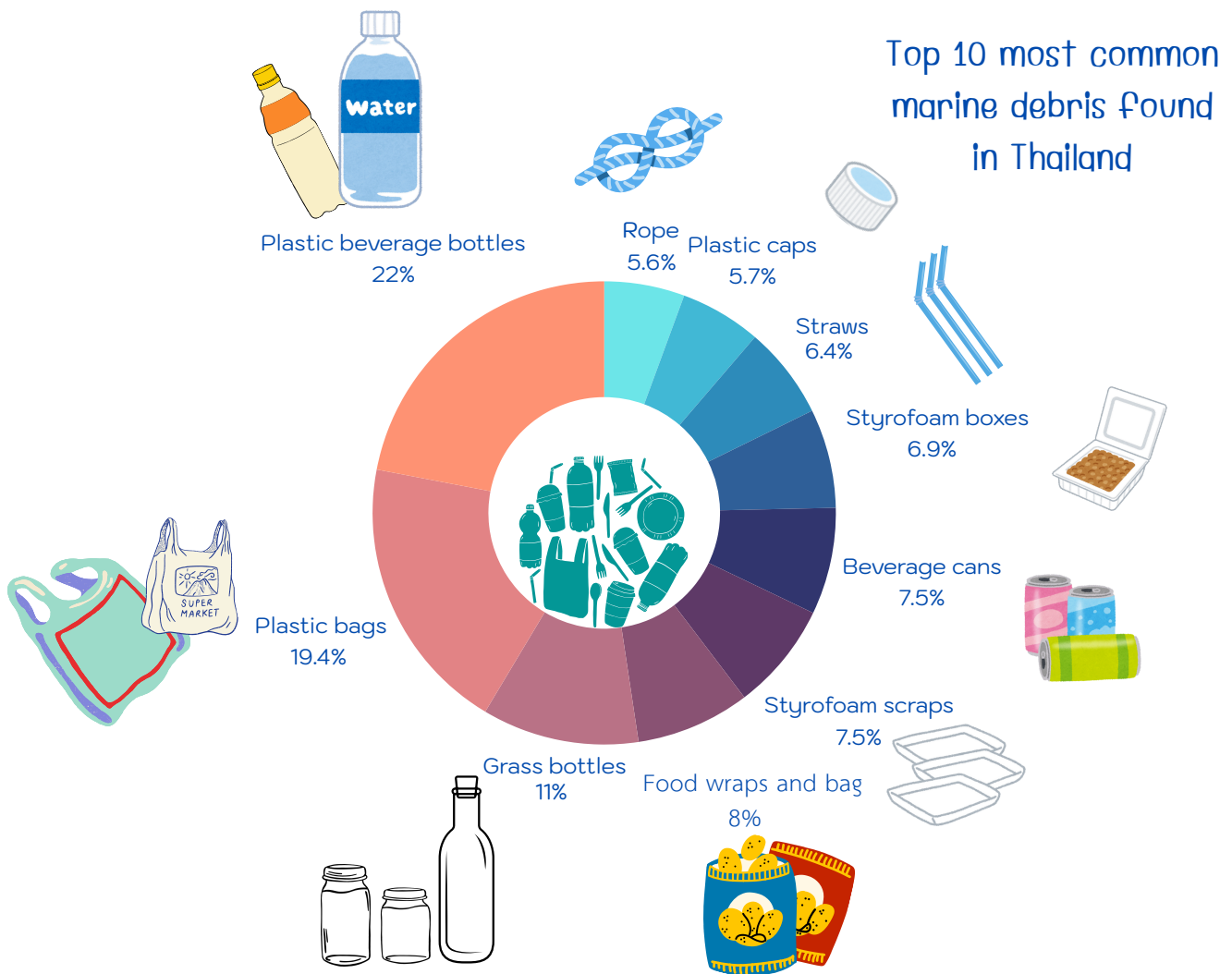
Plastic production process

1.2 The destination of plastic is marine debris

The sea is a vital source of food and resources for life on Earth, but it is increasingly becoming a dumping ground for waste, particularly plastic. The growing issue of plastic waste in the ocean is caused by improper management, leading to leakage into marine environments. 80 percent of marine debris originates from land-based sources, while the remaining 20 percent comes from activities at sea.

Marine debris situation

In 2020, the Pollution Control Department estimated that 23 coastal provinces generated 11 million tons of solid waste, with 2.86 million tons improperly disposed of. Among this, approximately 0.34 million tons were plastic waste, and 0.03–0.05 million tons became marine debris (Department of Marine and Coastal Resources, 2023).



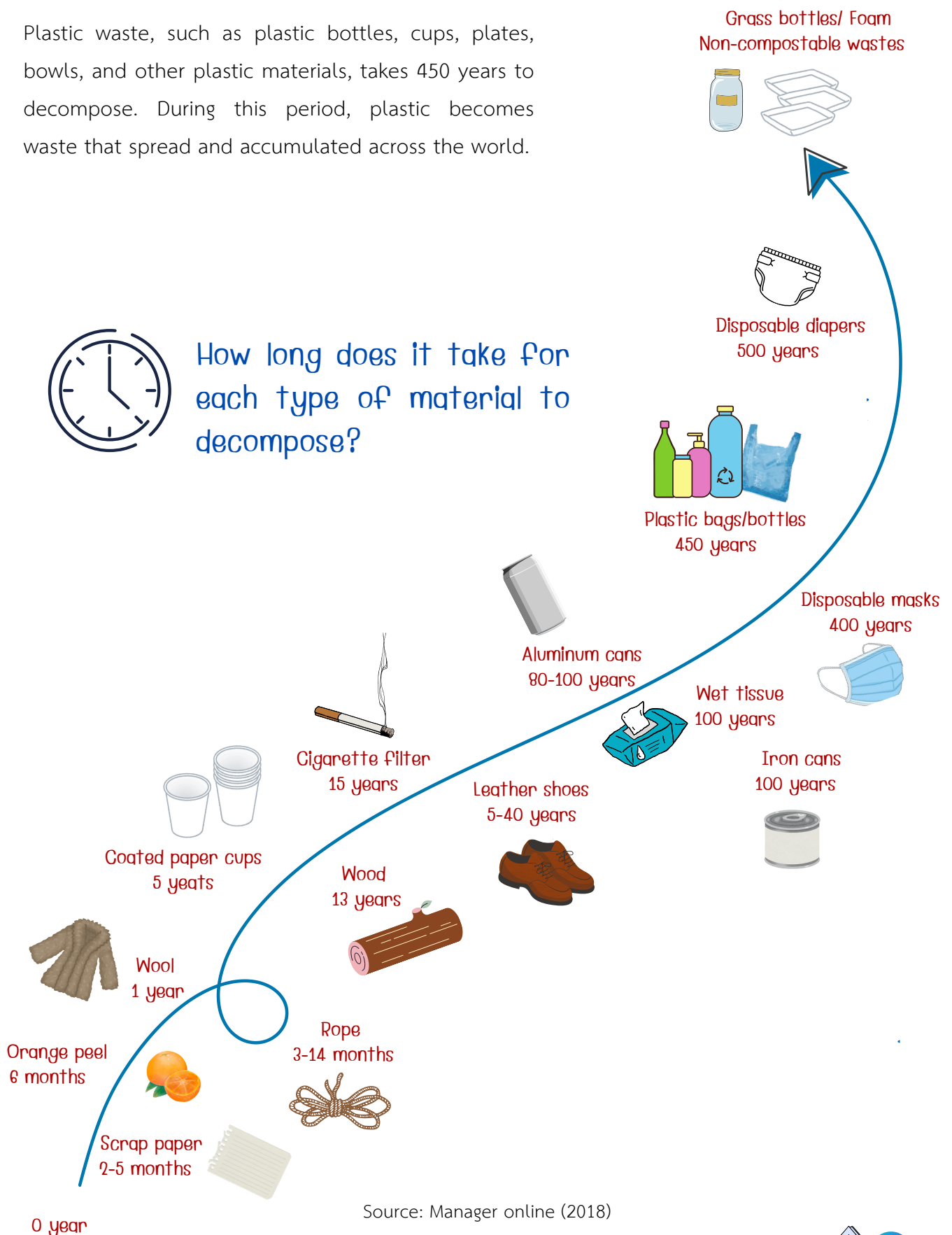
Data source: Department of Marine and Coastal Resources (2020)

1.3 How long does plastic waste take to decompose?

Plastic waste, such as plastic bottles, cups, plates, bowls, and other plastic materials, takes 450 years to decompose. During this period, plastic becomes waste that spread and accumulated across the world.



How long does it take for each type of material to decompose?



1.4 Impact of plastic waste

> Impact on the ecosystem

Plastic waste directly impacts marine ecosystems such as coral reefs, seagrass beds, and mangrove forests. Marine endangered animals such as turtles, dolphins, whales, and dugongs, from ingesting marine debris or becoming entangled in it, leading to severe injuries or organ damage.



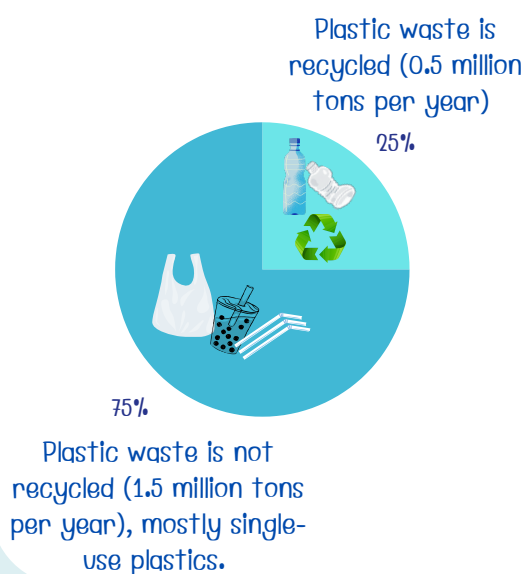
> Impact on economic

Plastic waste in the sea affects the economy and tourism by ruining the natural beauty of tourist destinations. Additionally, it clogs drainage systems, leading to flooding in affected areas.

> Impact on health

Plastic waste can be broken down into smaller particles through exposure to sunlight (photodegradation), releasing toxic chemicals into seawater. These chemicals can be transferred along the food chain and affect human health when contaminated aquatic animals are consumed.

1.5 Situation of plastic waste in Thailand



Plastic waste in Thailand accounts for 12 percent of the total amount of waste generated, or approximately 2 million tons per year (Pollution Control Department, n.d.). Plastic waste leaks into the environment due to consumers not separating waste, a lack of understanding of recycling, and improper disposal. As a result, plastic waste often ends up in landfills mixed with other solid waste (Thatsathorn Phumiyut, 2022).

1.6 Guidelines for plastic waste management

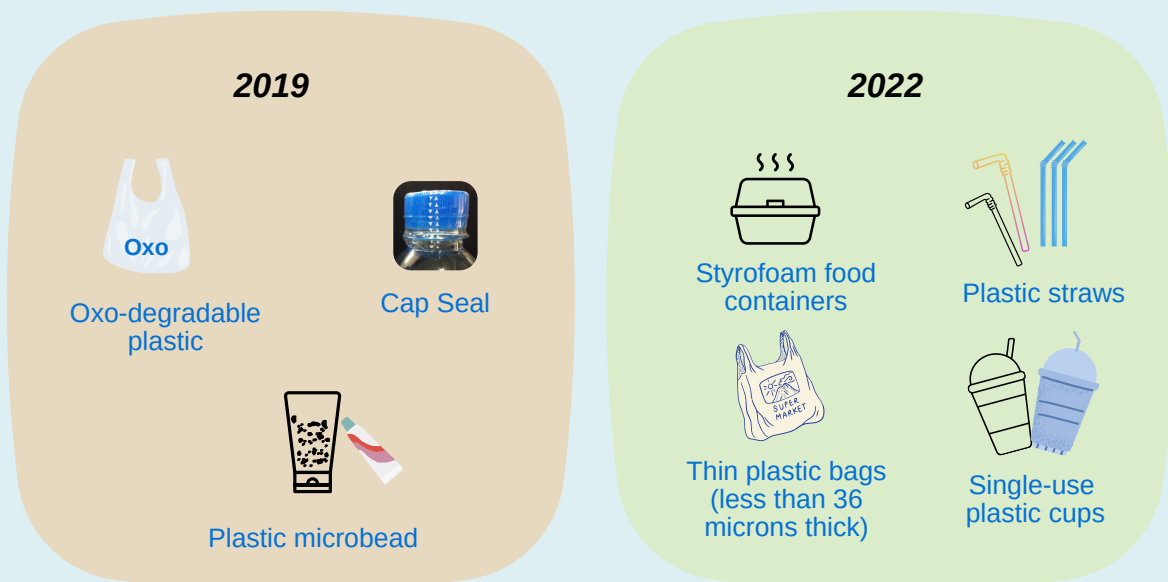
1) Roadmap for plastic waste management in Thailand

Thailand has recognized waste and marine debris as a national priority and has developed concrete waste management plans for the short, medium, and long term. The 2018–2030 Roadmap for Plastic Waste Management outlines two key goals.

Thailand's Roadmap on Plastic Waste Management 2018 - 2030

Target 1:

Reduce and replace some single-use plastic by using environmentally friendly alternatives



Target 2:

Achieve 100% plastic waste integration into the circular economy by 2027



Data source: Pollution Control Department (n.d.)

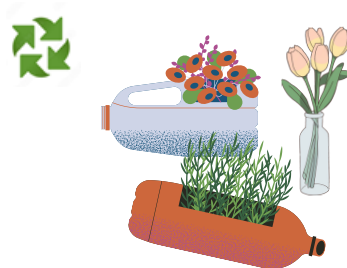
2) Plastic waste management techniques

4R principle is a key guideline for managing plastic waste effectively: Reduce, Reuse, Replace, and Recycle. This approach aims to minimize waste generation, eliminate unnecessary plastic use, and maximize the benefits of plastic resources.



Reduce

Reducing the use of plastic will reduce the amount of plastic waste generated daily. Reducing the use of plastic can be done in many ways, such as using washable personal drinking glasses instead of drinking from plastic bottles or using stainless steel straws instead of plastic straws.



Reuse

Reusing plastic involves cleaning used plastic by washing and drying it, allowing it to be reused effectively.



Recycle

Recycling plastic waste means turning it into new products. One example is using recycled plastic to make road paving blocks.



Replace

Replace: Use natural, biodegradable products instead of plastic to reduce plastic waste. Examples include bamboo drinking straws as alternatives to plastic straws and bamboo-handled toothbrushes instead of plastic-handled ones.



3) Example of plastic waste management in schools

The school milk bags students drink daily are a huge part of the plastic waste generated in schools. There are many different methods of managing waste from school milk bags, throwing them in the trash, burning them, selling them to junk shops, or repurposing them into useful items. Most school milk bags are thrown away in trash cans, emitting foul odors, and disposed of in landfills. These bags take 400–450 years to decompose, leading to an accumulation of milk bag waste in landfills.

To manage this recyclable plastic effectively, waste separation at the source is essential. By directing milk bags into the recycling process, the volume of landfill waste can be reduced, and the bags can be repurposed into reusable products. Recycling school milk bags helps circulate resources, giving used plastic a new purpose and value. Recycling school milk bags is a way to circulate resources so that used plastic can become valuable again.

The steps for managing school milk bags are as follows:

- 1) The student drinks the whole bag of milk.
- 2) Cut the milk bag flat to make cleaning easier.
- 3) Wash thoroughly ensuring no milk residue remains to prevent spoilage.
- 4) Dry the milk bags to reduce the smell.
- 5) Collect when the milk bag is completely dry.
- 6) Sell milk bags to junk shops/send them to relevant agencies for recycling.



2. Steps to becoming a “plastic waste free school”

2.1 Why should schools be “plastic waste free school”?

The waste-free concept focuses on preventing or reducing waste generation at its source as much as possible. If waste generation cannot be prevented, items should be reused or recycled. Waste that cannot be recycled should be turned into energy by burning it as fuel.

Being a "plastic waste free school" is the starting point for creating knowledge, understanding, and awareness among youth about environmental problems, which contribute to solutions for the plastic waste problem.

Schools play an essential role in educating and raising youth awareness about waste management and environmental conservation. Increasing youth knowledge and awareness will lead to behavioral change by encouraging them to reduce plastic use in daily life. This helps schools achieve a plastic waste free environment and also lays the groundwork for a recycling-oriented society.



2.2 Steps to becoming a plastic waste free school

The steps to reach the goal of being a plastic waste free school begin with setting policies and important school missions. After that, a formal working group must be appointed, and students must be selected to join the working group. The activities included enhancing knowledge and awareness among students, teachers, and school staff about plastic pollution, reducing plastic use in daily life, proper waste sorting, and recycling. The final important step is monitoring and evaluation to help identify their outcomes, problems, and challenges. The results can be used as information to improve operations and make them more efficient. Schools can apply the steps in this manual as appropriate and consistent with the school context in order to reach the goal of being a “plastic waste free school”.



Step 1 Setting school policy to be “plastic waste free school”



School administrators approve the idea of a plastic waste free school and provide support. School administrators jointly set policies, vision, goals, and measures to be a “plastic waste free school”. Examples of measures include reducing plastic waste in schools by reducing plastic packaging in school cafeteria shops, refraining from selling plastic bottled water, and encouraging students to bring reusable drinking glasses/water bottles, etc.

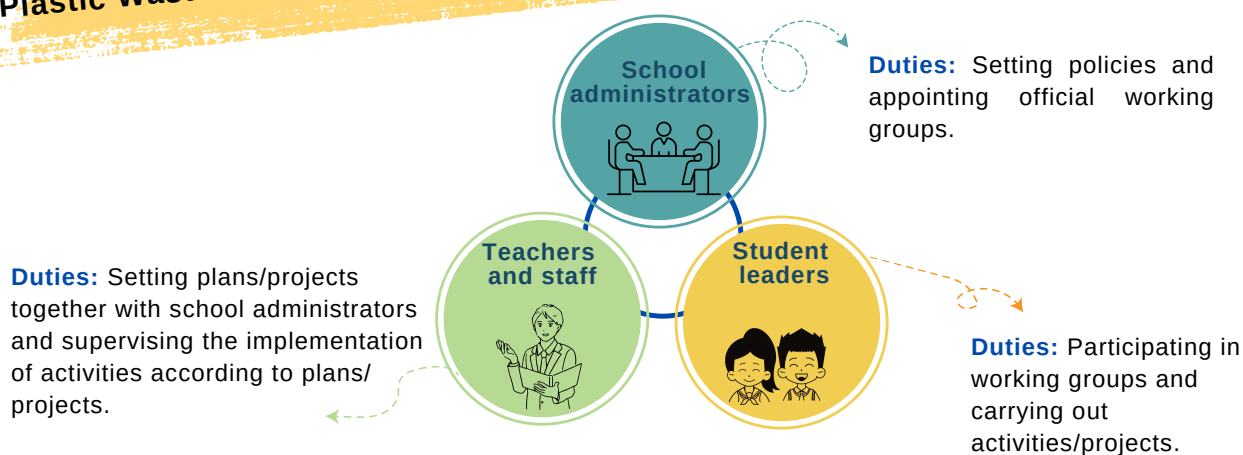


Improving the school environment to encourage plastic reduction and proper waste separation behaviors can be done by preparing standard sorted trash cans, posting educational signs to provide knowledge about the dangers of plastic waste, ways to reduce plastic use, waste separation, etc.

Step 2 Set up a working group and select students to join the working group

Appoint an official plastic waste free school working group. The group should consist of school administrators, teachers, staff, and student leaders. This group will be responsible for setting plans/projects, organizing plastic waste free school activities, collecting data on activity results, and summarizing results.

Plastic Waste Free School Working Group



Step 3 Activities to enhance knowledge and awareness about plastic waste problems and ways to reduce plastic use (Teaching Day I)



Objectives

The goal is to enhance students' knowledge and understanding of the problems, causes, and effects of plastic waste and raise their awareness about reducing plastic use.



Instructional media/Equipment

- 1) Slides presenting the waste around (the origins, problems, causes, and effects of plastic waste), including the situation of plastic waste in the area.
 - 2) Cards or posters showing the impact of marine debris. (The front is plastic waste, such as straws, plastic bags, nets, ropes, etc. The back has pictures of animals affected by marine debris).
 - 3) Worksheets for answering questions about waste and waste management.
 - 4) Learning evaluation form.
-



Implementation steps

- 1) The teacher educates students about the waste around (the origins, problems, causes, and effects of plastic waste), including the situation in the area.
- 2) Open the cards/posters about the effects of marine debris. The first step is to allow students to look at the side of the marine debris and ask them to identify the effects of each type of marine debris on aquatic animals. After that, open the cards/posters on the back to reveal the answer.
- 3) Students answer questions on the worksheet or engage in group activities to discuss waste problems (problems, causes, and effects) and what they can do to reduce waste.
- 4) Selected students or volunteers present the results of their activities.
- 5) The teacher gives an overview of the waste around us, its effects, and ways to reduce plastic waste.
- 6) Evaluate learning outcomes by having students complete evaluation forms.



Educating students about the waste around us.

Examples of Teaching Day 1 activities



Using cards/posters to educate about the effects of marine debris.



Students do group activities/answer questions on worksheets.



Methods for measuring and evaluating learning

- 1) Observing students' understanding and interest in activities.
- 2) Using student learning evaluation forms



Teacher tips

- 1) To attract students' attention, games related to waste management may be included in the activity.
- 2) If the students participating in the activity are younger children, using worksheets might be inappropriate. The activity may be changed to drawing a picture or answering questions instead.
- 3) In carrying out the activity, steps/processes can be adjusted as appropriate, and the situation can be changed, such as having students look at the impact card first to attract attention or answering questions on the pre- and post-educational worksheets to evaluate the results.

Step 4 Activities to assess the school's plastic waste situation (waste profile)



Objectives

To raise student awareness of the school's waste situation, school waste will be classified to help students understand the type and the amounts of waste generated in the school each day. Waste flow will show where each type of waste ends up, especially plastic waste. In addition, waste classification will help students identify ways to reduce and manage each type of waste correctly and appropriately.



Instructional media/Equipment

- 1) Magic pens/paints, post-it notes, poster paper, masking tape, and scissors.
- 2) Slides presenting types of waste or examples of each type of waste, especially plastic waste.
- 3) Learning evaluation form.



Implementation steps

- 1) The teacher educates students about the types of waste, their sources, and the routes of each type of waste by using presentation slides or waste samples.
- 2) Divide students into groups for group activities. Each group will receive supplies, including pens/magic paints, post-it paper, poster paper, masking tape, and scissors.
- 3) The teacher explains to students the process of creating a waste profile, which consists of collecting waste generated in the school, classifying waste, and putting each type of waste on poster paper. When collecting waste, the teacher must determine the appropriate area and duration for the activity.
- 4) Students collect waste and put it on poster paper. They then work together to analyze the sources of waste, waste routes, and ways to reduce each type of waste.
- 5) Each group of students presents the types of waste found, the sources of waste, the routes of waste, and methods or guidelines for reducing every kind of waste.
- 6) The teacher summarizes the types of waste found in schools and the most common ones, their sources, their routes, and the guidelines or methods for reducing waste.



Educate students about the types of waste.



Students create a waste profile for the school.

Example of waste profile activities



Examples of waste profiles and guidelines for reducing each type of waste.



Each group of students presents the results of their school's waste profile.



Plastic waste found in schools





Methods for measuring and evaluating learning

- 1) Observing students' understanding and interest in activities.
- 2) Using student learning evaluation forms.



Teacher tips

- 1) There should be a designated area where students can safely go to collect waste in school.
- 2) There should be measures regarding cleanliness and hygiene during activities; for example, after finishing collecting waste, hands must be washed before continuing with activities.
- 3) The activity should be adapted to suit the age/ability of the students and the situation. For younger students, drawing waste instead of physically collecting it may be a better alternative. If a large number of students are participating, each group can send 1-2 representatives to collect waste to minimize confusion.



Step 5 Activities to reduce the amount of plastic created by students (Plastic Free Day)



Objectives

Organize a Plastic Free Day activity to reduce the amount of plastic waste generated in schools each day. Cafeteria shops can participate Plastic Free Day activities by reducing and eliminating the use of single-use plastics such as foam cups/bowls, plastic cups, and plastic bags. Alternative options included containers that can be washed and reused and environmentally friendly packaging such as paper cups, paper plates, banana leaves, etc.



Instructional media/Equipment

- 1) Sign sheet on advertising board to publicize activities.
 - 2) Printed media to enhance knowledge and awareness of reducing plastic use. (see appendix).
-



Implementation steps

- 1) School administrators, teachers, staff in charge of cooperative and cafeteria operations, janitors, and other staff involved in waste management join in discussions to determine the type of plastic that the school can reduce, determine the number of Plastic Free Days to be organized, and plan activities.
- 2) The plastic waste free school working group meets to discuss and assign activities related to each working group, such as student leaders publicizing Plastic Free Day activities in the classroom and morning assembly.
- 3) Summary of the steps for carrying out Plastic Free Day activities. Schools can choose approaches that are appropriate to their context and needs, such as reducing the use of plastic cups by switching to reusable cups instead.
- 4) Publicize the date and details of the Plastic Free Day activity. Examples of public relations include using signboards, publicizing the morning assembly activities, and the school's public address system by student leaders.
- 5) Organize Plastic Free School Day activities according to the plan.
- 6) Evaluate the results of Plastic Free Day activities by recording the number of participants and gathering relevant waste management data.



Examples of Plastic Free Day activities

Before the Plastic Free Day event



Posting signs to publicize activities.



Students use reusable cups/shops in the cafeteria, changing from plastic cups to paper cups.

Organizing Plastic Free Day activities



Methods for measuring and evaluating learning

- 1) Observing changes in student behavior.
- 2) Collecting data on the number of students and staff who come to school on Plastic Free Day to estimate the amount of plastic that can be reduced on that day.



Teacher tips

- 1) Reducing plastic should focus on changing to reusable packaging.
- 2) Organizing Plastic Free Day activities may begin on significant environmental awareness days to make students aware of the importance of reducing plastic use, such as World Environment Day, International Plastic Bag Free Day, etc.

Step 6 Waste separation and proper plastic waste management activities (Teaching Day II)



Objectives

Strengthen students' knowledge about different types of waste, their final disposal locations, and the proper use of trash cans so that they can separate waste correctly (organic waste, recyclable waste, general waste, and hazardous waste).



Instructional media/Equipment

- 1) Presentation slides on waste separation
- 2) Examples of various types of waste, such as cans, plastic bottles, glass bottles, paper, etc.
- 3) Net bags/large bags for storing waste.
- 4) Information on recycled waste prices



Implementation steps

- 1) The teacher teaches students about different types of waste, separation, and value of each type of waste.
- 2) Divide students into groups and give each group equipment, including garbage bags, various types of waste, and information on the price of recycled waste.
- 3) Explain to students the waste separation activity.
- 4) Each group of students sorts the waste and identifies the value of different waste materials.
- 5) Each group of students presents the results of their activities.
- 6) The teacher summarizes the activity.





Educating students about waste separation and proper plastic waste management.



Students classify waste and calculate waste value using recyclable price data.



Examples of Teaching Day II activities



Students present the results of waste separation activities and waste valuation.



Example of calculating the price of recycled waste.



Methods for measuring and evaluating learning

- 1) Observing students' understanding and interest in activities.
- 2) Using student learning evaluation forms.



Teacher tips

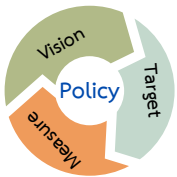
- 1) Waste samples used in activities should be cleaned beforehand to ensure they do not pose any harm to students.
- 2) Various types of waste should be used in activities, such as waste that can be recycled/resold at a reasonable price and waste that cannot be recycled/resold at a low value.

Step 7: Monitor and evaluate activities and announce the “plastic waste free school” policy that will be implemented



Monitoring and evaluation

Follow up and evaluate the success of the “plastic waste free school” activity by collecting data on the reduction in plastic waste within the school, the utilization of plastic waste, and the cooperation of students and personnel in managing plastic waste, etc.



Announcement of the “plastic waste free school” policy to be implemented

The “plastic waste free school” activity, led by a working group consisting of school administrators, teachers, staff, and student leaders, resulted in empirical results and learning. Lessons learned from past activities can be used to formulate a “plastic waste free school” policy that is appropriate to the school’s context and should be implemented in the future. This policy will serve as a guideline for sustainably operating a plastic waste free school. An example of setting a policy is reducing the use of plastic in schools by designating one day per week as a Plastic Free Day.



3. Key success factor of “plastic waste free school”

3.1 Key success factor of “plastic waste free school” activity



- **Understanding the situation, problems, and causes of school waste generation.**

Understanding the types, quantities, and sources of waste in schools allows for proper and effective waste management.



- **School administrators recognize the importance of plastic waste management.**

School administrators who are aware of the significance of plastic waste management are the important factors in enabling the school to develop into a sustainable plastic waste free school. Administrators play an important role in setting operational plans, setting up the school's waste management system, and determining who is responsible for "plastic waste free school" activities.



- **Setting clear goals and success indicators**

Clear operational directions, goals, and indicators for plastic waste reduction enable effective monitoring and evaluation of activities, which will benefit planning and improving operations to be more efficient in the future.

3.2 Recommendations for managing plastic waste in school

Schools, as places where many people gather, generate significant amounts of plastic waste, primarily from packaging. This waste often comes from cafeteria shops and the growing trend of online purchases of goods and food. Guidelines for managing plastic waste in schools are as follows:



Regularly educate and raise awareness of the importance of reducing plastic waste and proper plastic waste management to students, teachers, staff, and parents

Provide standard waste sorting bins made of strong materials, have tight lids, and are hygienic.



Encourage students, teachers, and school staff to reduce the use of single-use plastic by using personal reusable containers such as glasses, lunch boxes, cloth bags, etc.



References

Department of Environmental Quality Promotion. (n.d.). *Zero Waste School Manual*. Ministry of Natural Resources and Environment.

Department of Marine and Coastal Resources. (2020, April 17). *The Department of Marine and Coastal Resources invites you to learn about marine debris part 3*.

<https://www.dmcr.go.th/detailAll/40627/nws/191>.

Department of Marine and Coastal Resources. (2023). *Report on the situation of marine and coastal resources and coastal erosion in Thailand 2021*. Ministry of Natural Resources and Environment.

Manager online. (2018, August 30). *Decomposition time of each type of material*.

<https://mgronline.com/infographic/detail/9610000086956>.

Pollution Control Department. (n.d.). *(Draft) Thailand's Roadmap on Plastic Waste Management 2018-2030*. Ministry of Natural Resources and Environment.

Thatsathorn Phumiyut. (2022, January 14). *Plastic waste*. <https://www.onep.go.th/ขยะพลาสติก/>





Appendix



Appendix A

Examples of plastic free school activities in pilot schools in Hatyai Municipality and Songkhla Municipality

Municipal schools in Hatyai Municipality and Songkhla Municipality implemented plastic free school activities according to the steps in the “Plastic Free School Manual” in the second semester of the 2023 academic year and in the first and second semesters of the 2024 academic year.

Hatyai Municipality	Songkhla Municipality
Municipal 1 school (Engsiangsamakkee)	Municipal 1 school (Thanon Nakhon Nok)
Municipal 2 school (Ban Hatyai)	Municipal 2 school (Uon Uh Tid)
Municipal 3 school (Sophonpittayakunanusorn)	Municipal 3 school (Wat Sala Hua Yang)
Municipal 4 school (Wat Khlong Rian)	Municipal 4 school (Ban Laem Sai)
Municipal 5 school (Wat Hatyai)	Municipal 5 school (Wat Hua Pom Nork)
Municipal 6 school (Hatyai Dream Kindergarten School)	



Photos of plastic free school activities

Teaching Day I

Activities to enhance knowledge and awareness about plastic waste problems and how to reduce plastic use.



Waste profile activities



Teaching day II
Waste separation
and proper plastic
waste management
activities.



Plastic Free Day

Municipal 1 school (Thanon Nakhon Nok)



Reduce the use of
single-use plastic
cups in cafeteria
shops.



Municipal 3 school (Wat Sala Hua Yang)

Reduce the use of single-use plastic containers in Children's Day activities in 2024.



Municipal 4 school (Wat Khlong Rian)

Reduce the use of single-use plastic cups in the cafeteria.



Municipal 5 school (Wat Hatyai)

Reduce the use of single-use plastic containers in stores in front of the school.



Appendix B Instructional media




Download the Plastic Free School Manual and instructional media.


Instructional media for Teaching Day I: Activities to enhance knowledge and awareness about plastic waste problems and how to reduce plastic use.


Name.....Class.....	
School.....	

“Waste Around Us”

(Students can answer questions by writing answers or drawing pictures.)

1. Where does waste come from? 

 2. If there is no waste management, what will happen to us in the next 20 years?

3. What can we do to reduce or manage waste properly? 

Worksheet



Presentation slides “Plastics waste and management.”




Evaluation form

Activity "Increasing knowledge and awareness about plastic waste problems and guidelines for reducing plastic use (Teaching Day I)"




Part 1: General information of the respondents.

- ☐ Teacher/Staff
☐ Student
 ☐ Primary school level.....
☐ Secondary school level

Part 2: Knowledge gained from participating in these activities

Topic	Level of knowledge received		
	High 	Moderate 	Low 
1. Source of waste			
2. Type of waste			
3. Negative effects of waste			
4. Reducing waste/plastic waste			

Part 3: Level of satisfaction with activities

Topic	Level of satisfaction		
	High 	Moderate 	Low 
1. Activities			
- Let's think and discuss: Waste around us			
- Group activities: Waste profile development			
2. Activities time			
3. Duration of activities			

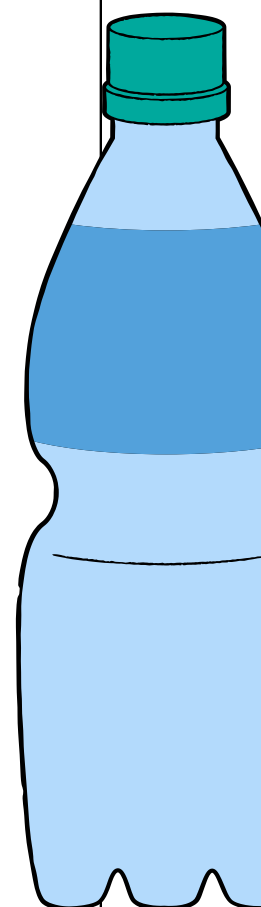
Suggestions

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Evaluation form

Instructional media for Teaching Day II: Waste separation and proper plastic waste management activities.



Presentation slides “Waste separation and proper plastic waste management”

Examples of public relations media for organizing Plastic Free Day

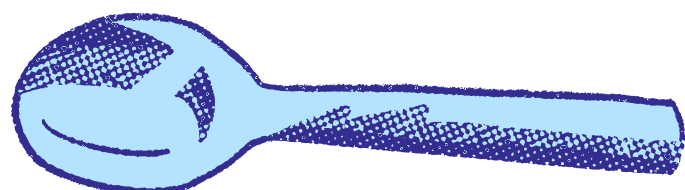
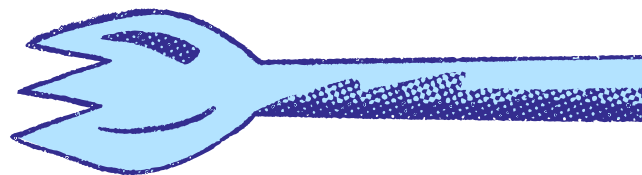


Signboard "Plastic Free Day"

Examples of public relations media to enhance knowledge and awareness about reducing plastic use.



Leaflet





by
Wongpanit Krabi Co., Ltd.

under
Plastic Smart Cities - TVA Project (PSC-TVA)
World Wide Fund for Nature Thailand (WWF Thailand)

