

SGREEN

Recycle at School

Teaching Resources for Kindergarten



SGREEN

Recycle at School



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SGREEN Background Information



Environmental education has been promoted among schools for many years. Many schools have set up recycling bins on campus to cultivate the habit of recycling waste in students. According to the most updated data from the Environmental Protection Department, Hong Kong's waste recycling rate is around 31%. What is the meaning to school? In view of the "Municipal Solid Waste Charging Scheme" which will be officially launched next year, how should schools prepare for it?

To get ready for "Municipal Solid Waste Charging Scheme", Ocean Park Conservation Alliance has been established to create recycling database in school through the implementation of SGREEN activities to formulate long-term waste reduction and recycling plans to cultivate recycling habits. Schools can also experience the management of waste recycling supply chain to ensure the process is effective and smooth.

For students, the habit of recycling can be cultivated through SGREEN activities, and thus actions of waste recycling, waste reduction and reuse in school can be encouraged.

Introduction of SGREEN Toolkit



The SGREEN toolkit is designed to support teachers in organising recycling-related educational activities and to help teachers promote the concept of recycling in schools. It is hoped that through different teaching activities and school-wide extended activities, recycling awareness in the school will be aroused, thereby formulating recycling goods and directions through an established recycling database.

KG SGREEN Suggested Activity



SGREEN is a year-round activity throughout the entire school year. Schools can use themed teaching/themed activity days to teach children about environmental recycling and cultivate the habit of recycling in daily school life. Through activities, children can eventually bring the practice of recycling into their daily lives.



Main Learning Objective:

- Waste classification
- Three-colour recycling bins
(blue — paper, yellow — can and brown — plastic)
- Reuse, recycle and reduce





Suggested Teaching Materials

<<Deep Sea Adventure>>

Ocean Park Website → Education and Conservation → Teaching resources → Whiskers and Friends Kindergarten Education Kit → Conservation Series
<https://www.oceanpark.com.hk/tc/education-conservation/education/teaching-resources/conservation-series>



Scan this QR code for downloading
《Deep Sea Adventure》



Waste sorting station in classroom

- Cardboard / plastic storage boxes
- Colored paper

Three different types of recyclables

Plastics : Plastics bottles (drinks), Yakult bottles, takeaway utensils

Papers : One-sided paper, newspaper

Cans : Cans (drinks and canned food)

****All recyclable garbage collected as teaching materials must be cleaned and processed first (especially aluminum cans) to prevent children from being injured when they come into contact with the teaching materials.**

Objectives of Suggested Activities



Teachers can adjust the content based student's abilities and prior knowledge.

Teaching objectives of themed activity



K1

Through a 3-phased activity, children should be able to

- recognise plastic waste (plastic bottles)
- recognise brown recycling bins and corresponding waste (plastic bottles)
- understand recycle steps before putting plastic bottles to recycle
- develop concept of recycling, reuse and reduce

K2

Through a 3-phased activity, children should be able to

- recognise plastic waste and waste paper
- recognise recycling bins and their corresponding waste (brown — plastic bottles; blue — waste paper)
- understand recycle steps before recycling plastic waste and waste paper
- develop concept of recycling, reuse and reduce

K3

Through a 3-phased activity, children should be able to

- understand the way of sorting different waste
- state the three-colour recycling bins and their corresponding waste (brown — plastic bottles; blue — waste paper; yellow — metal cans)
- understand recycle steps before recycling different waste
- develop concept of recycling, reuse and reduce

Relevant Knowledge & Concept

To Appreciate,
Respect and Care
for Nature



To Live an
Environmentally-friendly
Life



Nature and Living



Suggested Classroom Activities : K1



Preparation

1. Develop basic concept of plastic bottles through daily school life
2. Invite children to collect several cleaned plastic bottles(recommended number to collect 2–3 bottles) at home one day early and bring them back to school

Introduction

1. Demonstrate that plastic is a common marine waste / waste using stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories about plastic waste)
2. Show the effect of waste on human and marine animals / animals / environment (can be adjusted according to the themes) using stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories about plastic waste)

Part 1 : Waste sorting

Main learning objective :
Plastics waste (Plastic bottles)

1. Understand children’s prior knowledge of plastic bottles
2. Introduce plastic waste (plastic bottles) using stories
3. Distinguish plastic waste (plastic bottles) from different types of recyclable wastes using games
4. Show that plastic bottles in daily life are recyclable wastes, and introduce the substitutes of plastic bottles

Example

1. Use the plastic bottles that children brought to introduce the characteristics of plastic bottles.
2. Invite children to form groups (the number of children in each group can be adjusted according to the number of people in each class / original grouping), and find plastic bottles from the prop box prepared by the teacher.
3. Ask children where they usually see/use plastic bottles daily.
 - a. Follow-up question -> What we can use to replace plastic bottles?
(Questions can be adjusted according to children's abilities and can be open-ended questions or multiple-choice questions)
4. Show that plastic is recyclable waste and plastic bottles are one of the recyclable plastic wastes using stories ("Deep Sea Adventure" (From Ocean Park) / Children's stories about plastic waste).
5. Set up waste sorting stations (as study corners or in other forms) to build up children's understanding of plastic waste (plastic bottles) through games.
 - a. Start with plastic bottles. After children can distinguish plastic bottles from different types of items, add other recyclable plastic waste (it is recommended to be items that children are more likely to come into contact with in daily life – for example Category 6 plastics: Yakult bottles/ Category 7 plastic: plastic tableware)
6. Extended activities:
 - Matching: What can replace plastic bottles/plastic tableware (optional)
 - a. Plastic bottles -> water bottles
 - b. Plastic tableware -> reusable tableware (optional)

Part 2 : Three-colour recycling bins

Main learning objective:
Brown recycling bin – recycle plastic (Refers to supplementary powerpoint slide 9)

1. Recognise brown recycling bins using a scenario activity
2. Distinguish plastic bottles from different types of recyclable wastes, and put them into the recycling bins correctly
3. Carry forward the practice in activity to school life
4. Cultivate children's habit to recycle plastic bottles in brown recycling bins in daily life

Example

1. Review waste sorting with children (plastic waste / plastic bottles).
2. Scenario: After the plastic bottles found their companions, they could not find their home. Children were invited to bring the plastic bottles "home".
 - a. The teacher can first prepare a three-colored recycling box and place corresponding waste in the box as example (The teacher can collect it in advance – it is recommended to use children's familiar items)
 - b. Introduce children to three-colour recycling bins as a home for different types of waste (Focus on brown recycling bins)
 - i. Invite the children to observe first, and then ask the children which one is the home of the plastic bottles
 - c. Invite children to take plastic bottles back to their "home" from different corners of the classroom (Teacher can set up the scene in advance)
3. Summarise the game and encourage children to help take plastic bottles to the brown recycling bin when they see them in the future.
4. Extended activities:
 - a. Teachers can set up brown recycling bins in the classroom and encourage children to use them in daily life

Part 3 : Steps before recycling

Main learning objective:
Things to do before putting
plastic bottles to recycles
(Refers to supplementary
powerpoint slide 11)

1. Introduce steps before recycling plastic bottles using a scenario activity
2. Invite children to process the plastic bottles collected with teachers

Example

1. Scenario: related to plastics or recycle plastic waste.
(Teachers can set suitable scenario for students)
(For example, the character has set up a plastic recycling bin at home and wants to collect plastic waste at home for recycling. But over time, he/she discovers that the recycling bin in his/her home begins to smell, ants and flies appear near the recycling bin.)
 - a. Follow-up question: (Questions can be adjusted according to scenario development and students abilities.) Is it good for the character to cause the surrounding environment to be dirty because he/she wants to sort and recycle plastic bottles?
 - b. Through the story, did the character handle the recyclables in correct way?
2. Prepare props for children to practice handling correct recycling steps. (remove the caps / remove the labels) – (The difficulty can be adjusted according to children's ability or different levels can be set for children to choose)
3. Invite children to process the plastic bottles that have been collected but have not been processed before recycling. (Teacher can handle the cleaning part according to the children's abilities, or teacher can assist children together)
4. Use the remaining waste materials to become eco-friendly handicrafts/collage materials for art classes.

Suggested Classroom Activities : K2



Preparation

1. Develop basic concept of plastic waste and paper waste through daily school life
2. Invite children to collect plastic wastes at home (it is recommended to focus on the types of plastic waste that children are easily exposed to in daily life) and waste paper (for example, newspapers, single-sided waste paper, etc.)

Introduction

1. Use stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories related to plastic waste/Children's stories related to waste paper recycling) as an introduction to bring out that both plastic and waste paper are recyclable waste
2. Use stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories related to plastic waste) to bring out the impacts of trashes on human and marine animals / animals / environment (Can be adjusted according to the story)

Part 1 : Waste sorting

Main learning objective :
Plastic waste and waste paper
(plastic waste that children come
into contact commonly in their
daily life)

1. Understand children’s prior knowledge of recyclables
2. Introduce plastic waste and paper waste using stories
3. Introduce the characteristics, similarities, and differences of plastic and waste paper
4. Distinguish plastic waste and paper waste from different types of recyclable wastes using games
5. Show that plastic wastes and paper wastes in daily life are recyclable wastes
6. Introduce substitutes of plastic bottles, and the methods of reusing paper waste

Example

1. Use the plastic waste and waste paper brought to school by the children to introduce the characteristics, similarities, and differences of plastic and waste paper.
2. Invite children to divide into groups (the number of children in each group can be adjusted according to the size of each class/original grouping), and find plastic waste and waste paper from the prop box prepared by the teacher.
3. Invite children to classify the collected waste according to the different plastic and waste paper characteristics.
4. Ask children where they usually see/use plastic products.
 - a. Follow-up question -> What can replace plastic products?
 - b. Follow-up question -> Are there any ways to reduce waste paper?
5. Use stories ("Deep Sea Adventure" (From Ocean Park) / Children's stories related to plastic waste/Children's stories related to waste paper recycling) as an introduction to bring out that both plastic and waste paper are recyclable waste.
6. Teachers can set up waste sorting station in the classroom in the form of study corners or other forms to encourage children to consolidate their understanding of plastic waste and waste paper through games.
7. Extended activities:
 - a. Matching: What can replace plastic bottles/plastic bags/plastic tableware?
 - Plastic bottles -> water bottles
 - Plastic bags -> environmentally friendly bags
 - Plastic tableware -> reusable tableware
 - b. Reuse of waste paper: use recycled waste paper as drawing materials or recycle waste paper left over from drawing work

Part 2 : Three-colour recycling bins

Main learning objective :
Blue recycling bin — recycle paper
Brown recycling bin — recycle plastic (Refers to supplementary powerpoint slide 9)

1. Identify brown and blue recycling bins using a scenario activity
2. Distinguish plastic wastes and paper wastes from different types of recyclable wastes, and put them into the recycling bins correctly
3. Carry forward the practice in activity to school life
4. Cultivate children's habit to recycle plastic wastes and paper wastes in brown and blue recycling bins in daily life

Example

1. Review waste sorting with children (plastic waste and waste paper).
2. Scenario game introduction: (Teachers can create appropriate scenario by themselves)
The collected waste in school could not fit in the bin in the classroom. Invite children to help sort out the recyclable plastic waste and waste paper and process them separately.
 - a. Teacher can first prepare a three-colour recycling box and place corresponding waste in the box as an example (Teacher can collect it in advance – it is recommended to use children's familiar items)
 - b. Introduce children to three-colour recycling bins as homes for different types of garbage (Focus on brown recycling bins and blue recycling bins)
 - i. Let children observe the waste in the recycling bin and try to put the sorted recyclable waste into the correct recycling bin
 - c. Invite children to take plastic bottles back to their "home" from different corners of the classroom (The teacher can set up the scene in advance)
3. Summarise the game and encourage children to help carry plastic waste and waste paper to the brown and blue recycling bins when they see it in the future.
4. Teachers can set up blue and brown recycling bins in classrooms and encourage children to use them in daily life.

Part 3 : Steps before recycling

Main learning objective :
Things to do before recycling plastic waste and waste paper
(Refers to supplementary powerpoint slide 11–14)

1. Introduce steps before recycling plastic wastes and paper wastes using a scenario activity
2. Invite children to process the plastic wastes and paper wastes collected with teachers

Example

1. Scenario: related to plastic or waste paper recycling.

(Teachers can set up appropriate situations by themselves)

(For example, After the art lesson, there was a lot of leftover paper and recyclable plastic materials on the children's desks. Some children decided to throw them all into the trash bin while the others recalled that the teacher had just taught recycling, so they collected them from their classmates and ask teachers to help recycle their waste paper and plastic materials.)

- a. Question: (Adjust the questions according to the scenario and the children's abilities) The recyclable plastic materials and waste paper are mixed together, what should we do now?
- b. Plastic and waste paper are different recycling materials. Do you still remember which recycling bin they should be placed in?

2. Different materials have different steps before recycling. Introduce the connect recycling steps to children.
3. Invite children to process the recyclable waste collected in the classroom that has not been processed before recycling. (Teachers can assist children from the side)
4. Turn the remaining waste materials into eco–friendly handicrafts/collage materials for art classes.

Suggested Classroom Activities : K3



Preparation

1. Develop basic concept of plastic bottles through daily school life
2. Invite children to collect plastic wastes (it is recommended to focus on the types of plastic waste that children are easily exposed to in daily life), paper wastes (for example, newspapers, single-sided waste paper, etc.) and cans at home before the activity

Introduction

1. Use stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories related to plastic waste/Children's stories related to waste paper recycling) as an introduction of common trashes in daily life
2. Use stories (“Deep Sea Adventure” (From Ocean Park) / Children's stories related to plastic waste) to introduce the impacts of trashes on human and marine animals / animals / environment (Can be adjusted according to the story)

Part 1 : Waste sorting

Main learning objective :
three main types of recyclables:
plastic, paper and metal

1. Understand children’s prior knowledge of recyclables
2. Introduce three main types of recyclables using the recyclables that children brought
3. Introduce the characteristics, similarities, and differences of recyclables
4. Recognise the sorting methods of different recyclables
5. Distinguish different types of recyclable wastes using games

Example

1. Invite children to show and share with their classmates what recyclable waste materials they have collected at home.
2. Summarise the children's sharing and use the recyclable waste collected by the children to introduce to the children that garbage can be divided into different types.
3. Invite children to divide into groups (the number of people in each group can be adjusted according to the number of people in each class/original grouping), and try to classify the waste according to different characteristics.
4. Invite each group of children to share the group's waste sorting results.
5. Summarise the children's sharing and summarise the three major types of recyclable waste based on the children's sorting results — waste paper, aluminum cans, and plastic bottles.
6. Invite children to adjust their original sorting methods according to the three major categories of recyclable waste. (Teachers can assist children who have not fully understood the concept.)
7. Invite children to try sorting different waste in daily life.

Part 2 : Three-colour recycling bins

Main learning objective :
Blue recycling bin — recycle paper
Yellow recycling bin — recycle metal
Brown recycling bin — recycle plastic (Refers to supplementary powerpoint slide 9)

1. Introduce three recycling bins (Blue, yellow and brown)
2. Distinguish three main types of recyclables from different types of wastes, and put them into the recycling bins correctly
3. Carry forward the practice in activity to school life
4. Cultivate children's habit to recycle different types of recyclables into recycling bins

Example

1. Review the three major types of recyclable waste and the methods of waste sorting with children.
2. Ask about the disposal methods of children's waste after sorting:
 - a. Why do we need to sort waste?
 - b. How should the sorted waste be disposed? (Ask children how they can deal with sorted waste/invite children to share their experience in recycling waste (if any))
3. Summarise the children's sharing and introduce the three-colour recycling bins (blue waste paper, yellow aluminum cans, and brown plastic bottles) to the children.
4. Invite children to put the sorted waste into three-colour recycling bins, and invite children to share why they chose that color recycling bin. (For example, if a child puts waste paper into a blue recycling bin, the teacher can ask the child why he puts the waste paper into the blue recycling bin.)
5. Summarise the results of children's waste recycling and invite them to apply it daily.

Part 3 : Steps before recycling

Main learning objective :
Things to do before recycling plastics, paper and cans
(Refers to supplementary powerpoint slide 11–16)

1. Introduce steps before recycling three main types of recyclables using a scenario activity
2. Invite children to process the recyclables collected with teachers

Example

1. Scenario: related to plastic waste, waste paper, and aluminum can recycling.
(Teachers can set up appropriate situations by themselves)
(For example, someone puts the aluminum can directly into the recycling bin after drinking soft drink)
 - a. Ask children whether the character's behavior in the story is correct
 - b. If children point out that it is incorrect, ask children what the character did wrong
 - c. How should we deal with the same situation?
2. Summarise the children's sharing and explain that before waste sorting and recycling, we must pre-process it.
3. Introduce different methods of recycling waste to children, including plastic bottles, which should be cleaned first, and the bottle caps and stickers should be removed; aluminum cans should be cleaned, etc.
4. Invite children to check whether the recyclable waste that has been put into the recycling bin has been properly disposed. If not, the teacher can help the children handle it together.
5. Use the remaining wastes as materials for creating handcrafts/collages during art lessons.

Roles of Seahorse Rangers

| | |
|-------------|--|
| Leading | Play the role of group leader in group activities and lead students to participate in activities |
| Encouraging | Invite other children to join the activity actively |

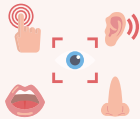
It is suggested that K3 Seahorse Rangers can assist teachers in implementing classroom activities; Seahorse Rangers in the K2 and K1 can help lead their classmates to participate in activities



Suggested Extended Activities

Relevant Knowledge & Concept

To Observe
by Using
the Senses



To Appreciate,
Respect and
Care for Nature



To Live an
Environmentally-
friendly Life



Nature
and Living



Recycling at School – Activity throughout the whole school year

Aim: Establish recycling target and incorporate recycling habit in children

Example

1. Schools can set up recycling bins in different places in the school/or set up recycling corners in classrooms and inform children that if they have recyclable waste, they can put it in the recycling corner after proper treatment.
2. Teachers can encourage children to actively participate in recycling activities by recycling points. (or other methods used in schools to encourage children to participate actively)
 - a. For example, used paper from drawing class, etc.
3. Keep record of the amount of waste in recycling bins/corners and share the results with young children.
 - a. Record the number of recyclables collected in school (Teacher can help in calculations)
 - b. Invite children to make a pictogram for their class / for whole school
 - c. Record monthly reclamations throughout the year
 - d. Prepare for the municipal solid waste charging scheme in the coming year

Sharing of recycling results at home

Example

1. After established recycling habits in school, children are encouraged children to practice recycling at home.
2. Share the recycling efforts regularly.
For example: What recyclables were collected/what recycled materials were reused, what artworks were transformed into during this period, etc.

Upcycling

Example

Whole class/whole school participation for a large-scale project: make use of environmentally friendly recycling bins/environmentally friendly materials to create an ecological corner.

- K1 children are suggested to be responsible for simpler parts. (e.g., material collection)
- K2 children are suggested to help with material processing. (e.g., paper cutting)
- K3 children are suggested to be responsible for the integration part. (e.g., combination of materials)

Roles of Seahorse Rangers

| | |
|---------------|---|
| Leading | Become a team leader to encourage participation from students in activities |
| Collaboration | Discuss upcycling design with other students and divide duties within rangers |



SGREEN
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SGREEN Toolkit

Supplementary powerpoint

Teaching resources

Poster