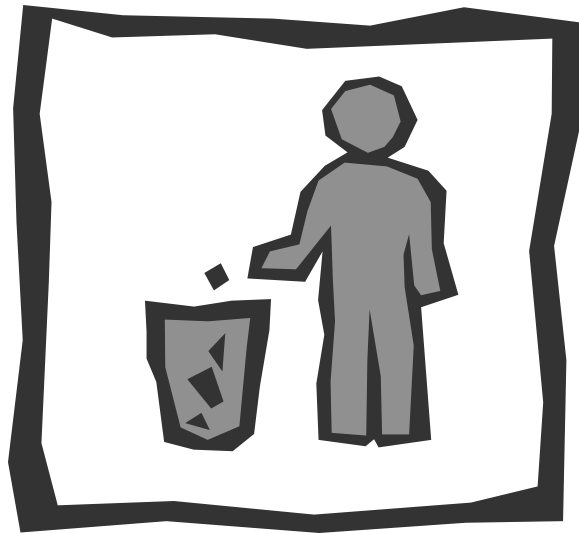


E. IMPLEMENTATION SECTION

CATEGORY 1

MANAGING YOUR GARBAGE



CATEGORY 1: MANAGING YOUR GARBAGE

Overall objective:

To improve the management of garbage in schools, to educate students and teachers about solid waste issues, including why it is important to reduce the amount of garbage each person generates.

Schools in Jamaica generate large amounts of garbage each day. Much of it is packaging, especially for food and drinks. Because garbage is unclean and unhealthy, as well as expensive to dispose of and a burden to the environment, we must learn to reduce the items we throw away. We must reuse or recycle whatever we can. We must manage our garbage better.

But how can schools manage their garbage better? The questions that need to be asked are: Is all garbage equally harmful? What are the consequences for human health of poor garbage management? Whose problem is it? What role do students and community members have to play in creating a cleaner healthier community?



SCHOOLS MUST CHOOSE AT LEAST ONE ACTIVITY FROM THIS CATEGORY



CASE STUDY: CRAIGHTON ALL AGE

Craighton All Age School is in the hills overlooking Kingston, near the district of Redlight. It is a small school - 180 students. The school used to have a major problem with drink containers, both juice boxes and PET plastic bottles. These containers were thrown in a pile near the school.

The students at Craighton cleaned up the garbage pile and planted their organic garden in its place. They then banned all drink containers from the school grounds. Students were asked to bring fruits from home, such as limes, oranges, otaheiti apples, etc. and the canteen staff made fresh juices every day, which the students drank out of reusable plastic cups.

The students benefited by more nutritious drinks and less garbage.

PROPER GARBAGE MANAGEMENT IS ESSENTIAL FOR A CLEAN, HEALTHY AND SAFE SCHOOL

ACTIVITY: COMPOST HEAP

Objectives:

Students will:

1. Explain how natural systems work
2. Define the term "biodegradable"
3. Make compost for use in gardens
4. State the advantages of using compost
5. Reduce garbage on school grounds
6. Involve parents by bringing organic waste from home

Starting your compost heap is one of the very first activities you should do, because it takes time for waste to break down and you will need the compost as fertilizer for your garden. You do not need a big hole to make a compost heap; in fact, a hole makes it difficult to reap and turn compost. If possible, build your compost heap in a shaded spot. If you put it in direct sunlight, it will dry out quickly and need more care.

Start collecting your compost materials. Many schools do not generate enough organic materials so ask children to bring waste from home.

Here's what can go into a compost heap:

- Fruit and vegetable peelings (e.g. banana peel, orange skins, yam skins, potato peel)
- seaweed
- coffee grounds, tea bags
- garden cuttings (e.g. grass, small leaves)
- animal manure, chicken, horse or cow is best. Not dog or cat!
- a little dirt
- small amounts of wet, torn up newspaper

Although you can build a container for the compost heap with wood and chicken wire, it is not absolutely necessary.

- 1 Start by digging up the ground where you plan to put the compost heap. Then put some cut grass and bigger leaves on the bottom.
- 2 Layer all the other materials until you have a pile; the best size is about 3-4 feet square and 3-4 feet high. (A bucket is much too small, but a 45-gallon drum can work for a small garden.)
- 3 Add some dirt and water. Don't make it too wet. The compost should be damp but not rotting.
- 4 Keep adding layers until your compost heap is the right size.
- 5 Cover the final layer with grass cuttings, which will reduce the number of fruit flies.
- 6 Check the compost heap every day or two and make sure it doesn't dry out. Take a fork and turn the heap every week or two.

If you cover the compost heap with a black garbage bag, it will heat up and work faster. After a while stop adding new stuff and leave the compost heap to break down, still turning it occasionally, making sure it doesn't dry out. When it has formed a rich crumbly soil it is ready to be added to your garden

Do not put food scraps like leftover lunch, cheese, meats or oils into your compost heap! No human, dog or cat manure! No crackers or bread! No glass, plastic, tins or wood!

IF YOU FOLLOW THESE RULES, YOU WILL NOT HAVE RATS OR SMELLS.

BACKGROUND INFORMATION LINKS

- ∞ **How does a leaf turn to soil?**
- ∞ **How long does it take garbage to biodegrade?**

ACTIVITY: VERMICOMPOSTING

Vermicomposting refers to using earthworms to process garbage. Earthworms are nature's own recyclers, they are cultivators of the soil and they improve aeration, drainage and fertility. The composting or mature earthworms (*Eisenia foetida*) eat and digest the garbage, then excrete a fertile soil-type material rich in calcium, nitrogen, phosphorous and potassium.

Objectives:

Students will:

1. Explain how natural systems work
2. Define the term "biodegradable"
3. Make compost for use in gardens
4. State the advantages of using compost
5. Reduce garbage on school grounds
6. Involve parents by bringing organic waste from home

TO MAKE THE WORM COMPOST YOU NEED:

- A container for the worms to live in
- Waste materials for the worms to feed on (as with a regular compost)
- A supply of mature worms

THE WORM CONTAINER

Boxes can be provided with the worms inside by persons who set up worm composts. Students then put cut up organic waste into the boxes. This may be a good option for many schools. A regular dustbin with a tight-fitting lid and ventilation/drainage holes also makes a good worm container. The container must provide moist but ventilated and drained surroundings, as the worms dislike too much water.

THE WORMS

The worms must be mature worms and are best sought from persons with an already established

worm composting system. These sources can often provide bins. Worms and the compost that comes with them should have hundreds of eggs to get you started. If the supply has no eggs, 100-150 worms will be needed to get the compost going.

MAKING THE COMPOST

1. Place a thin layer (3 inches) of rich soil on the boards in the bin
2. Put worm compost or pile of worms on top of this
3. Add a 4 inch layer of organic scraps. No more food should be added until the worms have begun to break this down. Layers up to 6 inches thick can be added after this (usually after 1-2 weeks).
4. Stir when putting in additional layers of food to distribute worms

Decton Hylton at the International School of Jamaica will come to your school and help you set up your vermicomposting project. Contact JET and we will put him in touch with you. The Ja 4H Clubs also does vermicomposting.

ACTIVITY: GARBAGE AUDIT

Objectives:

Students will:

1. Identify the type and quantity of solid waste produced by the school at the beginning of the project
2. Compare these figures with figures collected at the end of the project to see whether garbage levels have been reduced

HOW TO START

- Make sure there are bins in classrooms and in different places around the school grounds, especially where garbage is generated, e.g. the tuck shop or canteen.
- Identify and list the four (4) items of garbage your school generates in large quantities by examining your garbage containers. (If one of these items is a reusable or recyclable item, this will be useful to you for the reuse, recycle activity.)
- Start on a day when the garbage bins are full. Ensure all trash has been picked up from the school yard and put in the bins.
- Issue students with gloves and dust masks and have them sort the garbage into piles (e.g. Juice boxes, plastic bottles, paper, etc.)
- Do not collect or audit food items such as fruit peels and leftover scraps
- Have other students count and record the garbage in a book, including the date of the audit.

You can either repeat this process weekly, or whenever the garbage bins are full, OR you can decide to have different garbage bins for each of your four items. This works quite well in a small school. Have the students paint labels on garbage drums.

Whichever method is used, garbage should be counted regularly and you must record your results at each audit in order to calculate your monthly figures.

Once the monthly figures have been calculated an **Audit chart** can be created. This chart should show that the amount of garbage generated is being reduced. The garbage audit book will be inspected by the judges.

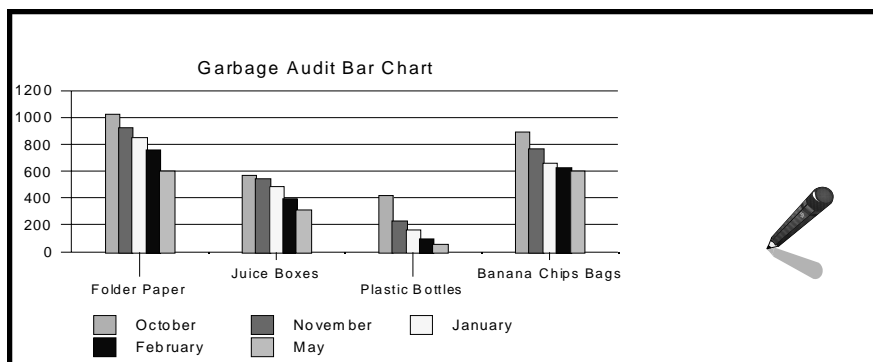
Each class should participate in this activity to get a better understanding of how much garbage is being generated. Suggest a competition between classrooms to see which can produce the least garbage.

MAKING THE AUDIT CHART

Draw up an Audit Chart on cartridge paper (see example on page 22) listing the four most numerous items of garbage. Enter the figures for each garbage item every month. Students can decorate the chart. This chart is to be displayed in a place where the students can look at it each month. When the figures for garbage are audited for the last time in June, the students will see if they have effectively reduced their garbage.

Category 1: Managing Your Garbage

Sample Audit Chart				
	Folder Paper	Juice Boxes	Plastic Bot- tles	Banana Chips Bags
October	1020	568	423	892
November	924	543	226	765
January	845	486	164	659
February	761	395	98	623
May	603	311	59	602



**BACKGROUND INFORMATION
LINKS**

- ∞ **How long does it take garbage to biodegrade?**
- ∞ **Valuing trash to secure cash**
- ∞ **How to recycle paper**
- ∞ **Polystyrene fact sheet**

This activity can be infused into the following area of the Primary curriculum

Grade 3

Term 3; Unit 1; Unit title: Living and non-living things in my environment

Focus Question 3: How are living and non-living things affected by changes in the environment?

Objectives

Pupils will:

- ◆ Discuss the importance of proper disposal of waste
- ◆ Use tally marks to record data

Procedures/activities (Page 278)

#3 Select an area in the schoolyard or community and tally the numbers and types of garbage (eg. juice boxes, plastic containers or bags, old cans) and report this information using a bar graph. Create a poster to convey the message that it is wrong and unhealthy to litter and dispose of garbage improperly

#4 In groups discuss and then record what effects littering and other improper disposal practices have on living (including human beings) and non-living things

ACTIVITY: CLASSROOM SAMPLE STUDY

Objectives:

Students will:

1. Estimate the type and quantity of garbage produced by the school using a sample of the waste produced by one class
2. Reduce the amount of waste produced by the end of the study

HOW TO START

- Select one class in the school to be the sample. Carry out your study for thirty days.
- Identify and list the items of garbage the class generates on a daily basis by examining the garbage containers in the classroom. If you cannot count every day, then it should be done at least once or twice a week. (If one of these items is a reusable or recyclable item, this will be useful to you for a reuse/recycle activity.)
- Assign monitors to ensure that all classroom garbage is thrown in the bins. Issue students with gloves and dust masks and have them sort the garbage into piles. (e.g. juice boxes, plastic bottles, paper and plastic snack bags) Do not collect or audit food items such as fruit peels and leftover scraps.
- Have other students count and record the garbage in a book for this purpose, including the date of the audit. This will

help in creating audit charts. Your audit book will be inspected by the judges.

MAKE AN AUDIT CHART

Draw up an Audit Chart (see example below) listing the items of garbage. Enter the figures for each garbage item each day. This chart is to be displayed in a place where students refer to it easily. When the figures for garbage are audited for the last time on the thirtieth day, you will be able to estimate the amount of garbage produced by the class for a month.

Then calculate roughly the amount of garbage produced by the school, by multiplying your figure by the number of classrooms in the school. Work out how much garbage is produced per student each day.

This study is to be repeated at the end of each term and the garbage levels at the beginning and the end of each term compared and analysed using the audit chart.

BACKGROUND INFORMATION LINKS

- ∞ [How long does it take garbage to biodegrade?](#)
- ∞ [Valuing trash to secure cash](#)
- ∞ [How to recycle paper](#)
- ∞ [Polystyrene fact sheet](#)

SAMPLE CLASSROOM AUDIT CHART				
	Folder Paper	Juice Boxes	Plastic Bottles	Banana Chips
January 1	200	52	110	93
January 2	170	40	100	82
January 3	150	35	98	64

This activity can be infused into the following areas of the Primary curriculum

Grade 4 Mathematics

Term 1; Unit 4; Unit title: Statistics

Focus question: How do I collect, organise, display and interpret information taken from my environment?

Objectives

Pupils will:

- ◆ Use sampling techniques to collect information and conduct a survey
- ◆ Present data using pictographs and bar graphs
- ◆ Classify and sort collected data
- ◆ Identify the population in any given problem situation

Procedures/activities (Page 68):

#3 Discuss what is required for the production of a graph

a. Deciding on a topic to survey b. deciding on the population and sample c. collecting data through observation/questionnaire d. recording data e. graphing data

#4 Work in groups to carry out their own production of one type of graph using the steps cited in activity

#3

#6 Read and interpret information from bar and line graphs

Grade 5 Mathematics

Term 1; Unit 4; Unit title: Statistics

Focus question 2: How can I display and interpret information collected?

Objective

Pupils will:

- ◆ Draw pictographs, circle graphs, line graphs, bar graphs, double bar graphs to show given data and interpret such graphs when given them

Procedure/activity (Page 59)

#1 Discuss and draw graphs of various types to display information they have been given or they have collected. Discuss the most appropriate type of graph to draw in each situation and why

ACTIVITY: LITTER WARDEN PROGRAMME

Objectives:

Students will:

1. Keep classrooms and school yards clean
2. Discuss the topic "Garbage is everybody's problem"
3. Exercise proper waste handling
4. Demonstrate a sense of responsibility for their environment

Discuss the need to keep the environment clean. Involve the students by getting them to decorate garbage drums with slogans that promote putting trash in the cans. This will make the drums more appealing and encourage students to dispose of litter properly.

Start a **Litter Warden programme**. This can also be an activity of the environment club. Litter wardens can be selected from each class, grade level, house, or can be environment club members. Litter wardens should be clearly identified (by use of badges, sashes, special uniforms) and should decide how their duties are to be carried out.

Litter wardens could inspect school grounds daily or weekly. They could grade areas of the school and report to assembly how well the school is doing. Competitions can be held between classes, grades and houses to see who keeps their area the cleanest. Litter wardens could give talks to the school on how much garbage the school is producing. Litter wardens must not simply pick up litter, but must observe students littering and take steps to encourage them not to do so.



Useful Garbage Management Tips



1. Separate your garbage, it's easier to manage this way.
2. Label your bins properly to guide students where to throw their garbage.
3. Use less paper by using both sides of the paper, by using bulletin boards instead of handouts and by creating your own message pads from used paper.
4. Use reusable plates and cups that can be washed in your own canteen and eliminate the use of disposable boxes..
5. Reduce or eliminate burning. Identify what is burned: plastics and rubber should never be burned.
6. Start an advocacy campaign to have the garbage at your school collected regularly.

This activity can be infused into the following areas of the Primary curriculum

Grade 1

Term 1, Unit 1, Unit title: Who Am I?

Focus question 2: To which group do I belong?

Objectives

Pupils will:

- ◆ Identify groups to which they belong (class, school, religious group, club, race, family, country)
- ◆ Talk about why groups have rules
- ◆ Show by their behaviour that they value rules and regulations
- ◆ Discuss the responsibilities of members of groups

Procedure/activity (Page 13)

#2 Discuss the rules and responsibilities of a group to which they belong and how these rules affect members of the group. Discuss relationships made/broken as a result of not observing values such as honesty and truthfulness

Grade 3

Term 2, Unit 1, Unit title: Providers of Goods and Services

Focus question 3: How do rules help workers at the workplace?

Objective

Pupils will:

- ◆ Develop and implement activities for maintaining the cleanliness of home, school, community

Procedures/activities (Page 229-230)

#2 In groups discuss and list the rules at home, school and the workplace, and then group them e.g. safety rules, rules for cleanliness. Establish rules for the class. List and display them using the computer or other resource. Identify and design an appropriate compliance strategy for each rule.

#3 In groups plan strategies to monitor the successful implementation of the rules. Prepare, from discarded material, receptacles for classroom garbage disposal, and discuss the appropriateness of their use

ACTIVITY: WASTE REDUCTION CAMPAIGN

Objectives:

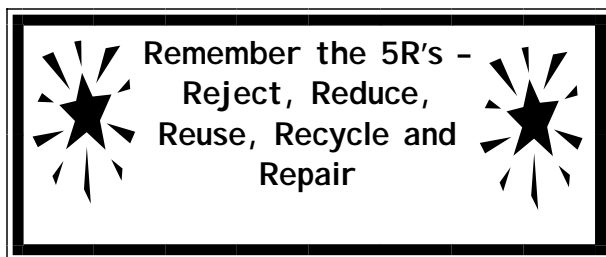
Students will:

1. Describe what happens to garbage when it is thrown away
2. Explain the benefits of garbage reduction and reduce the amount of garbage produced by the school
3. Assess the financial and other costs of garbage disposal
4. State the consequences to human health of not handling garbage properly
5. Explain why the only ultimate solution to solid waste problems is reduction

It is easiest to do a waste reduction programme in conjunction with some kind of garbage audit. Students must have some appreciation of the amount and type of garbage the school generates before they can fully appreciate the effects of reduction.

Discuss with students how garbage is handled once it is thrown away. Here are some questions they could answer:

- Is garbage burnt on school grounds?
- What are the health effects of this?
- Is garbage transported to a dump?
- Is the garbage at the dump burnt?
- What are the community health effects of this?
- What are the costs of managing the dump?



Students can consider the hidden costs, such as air and water pollution and the threats to the health of those people working on the dump.

Research can be done into how much garbage disposal costs the school and the community - include the cost of a groundsman, if applicable. Discuss with students who should pay these costs. Should it be the people who buy the packaging? The companies who produce it? All taxpayers, whether or not they buy the package?

Ask students to consider how the garbage could be reduced. Some ideas could be:

- **An outright ban of packaging such as juice boxes, plastic bottles, etc.**
- **Allowing students to bring items of packaging containers onto the school grounds, but insisting that the containers must be taken home with them. This will encourage students to put the responsibility for garbage disposal where it belongs - with the producers, buyers and users of packaged products.**
- **Reuse and recycling projects. Ensure paper is used on both sides. Consider a compost heap for organic waste. Plan craft projects, such as paper mache, to use wastepaper. Consider providing nutritious juices in reusable plastic cups instead of sodas. This works best in a small school, but can also be done as a class project.**

Measure the results of your efforts. Have you produced less garbage? Has the school benefited in any way?

BACKGROUND INFORMATION LINKS

- ∞ **Zero waste lunch**
- ∞ **How long does it take garbage to biodegrade?**
- ∞ **Valuing trash to secure cash**
- ∞ **How to recycle paper**
- ∞ **Polystyrene fact sheet**



ACTIVITY: REUSE, RECYCLE PROJECTS

Objectives:

Students will:

1. Define the terms 'reuse' and 'recycle'
2. State the benefits of reusing and recycling
3. Assess the economic and other costs of garbage disposal.

Recycling/reuse projects are very good ways to reduce the amount of garbage thrown away. A product is recycled when it is collected after consumer use and reprocessed into the same or another item.

A product is reused when it is used more than once before it is discarded, either for the same or different things.

Most of us reuse some things every day without really thinking about it. For example, we share the newspaper with other people or we pass on children's outgrown clothes to younger children. However, the recycling industry in Jamaica is just beginning.

Students are asked to choose one item of garbage that can be recycled or reused and to think of innovative and creative ways to ensure it is not used only once and thrown away.

- Can it be used to make craft products?
- Or can it be sold to a industry that will reprocess it into another usable product?
- Can the students think of a way for their recycled/reused item to generate income?

The items you choose for recycling/reuse should be volume items and should be easily identified through a garbage audit or through observations. Examples might be glass bottles,

plastic (PET) bottles or tin cans. Paper can be reused in all kinds of projects. Juice boxes can be used for craft items or planting seedlings. See how creative you can be.

If you select a recycle/reuse item, have students label two or three garbage bins around the school which will be used for this item only. You can paint the drums creatively.

SEPARATING THE RECYCLABLE/REUSABLE ITEM

After the drums have been labeled "Plastic Bottles" or "Juice Boxes" or whatever you decide to recycle/reuse, students must be told that only those items go into the labeled drums.

The Judges will inspect how the items have been reused or recycled. Making a craft display of reused ideas will gain high marks. Students must be encouraged to bring these items from home as well as to collect them on the school grounds.

COMPACTING AND STORING

If you are recycling an item to take to a recycling company, depending on the item, you may need to flatten it as much as possible to maximize storage space. When the collection drum is full, the items can be removed and stored in old feed bags until sale or transportation to the recycling company takes place.

RECORDING

Students should count and record the recycle/reuse item during the collection period. This task can be undertaken by the Environment Club and/or different grades.

RECYCLING AND REUSING

Category 1: Managing Your Garbage

The meaning and importance of recycling and re-using should be discussed so that the students understand why it is important to reduce their garbage and to put all litter and trash into garbage cans. Make sure there are trash bins in each classroom and at various other points on the school grounds. Ask students to brainstorm all the ways garbage can be reduced and make a list of their ideas.

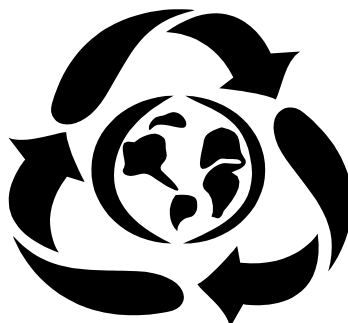
Why recycle and reuse? Some reasons are:

- **Burning can cause asthma attacks and other respiratory illnesses**

- **Garbage dumps are already too full**
- **Garbage blocks gullies and causes flooding**
- **Garbage creates an unhealthy environment because it encourages disease carriers such as flies, rats and mosquitoes**
- **Many items are made from non-renewable resources**
- **Students can brainstorm other reasons**

BACKGROUND INFORMATION LINKS

- ∞ **How long does it take garbage to biodegrade?**
- ∞ **Valuing trash to secure cash**
- ∞ **How to recycle paper**



This activity can be infused into the following areas of the Primary and ROSE curricula

Grade 1

Term 3; Unit 1; Unit title: Myself At School

Focus question 1: How do I know my school?

Objective

Pupils will:

- ◆ Tell ways in which they can take care of the school and the things in it

Procedure/activity (Page 62)

#3 Talk about items in the school they should care for (e.g. buildings, plants, furniture, equipment) and how they should care for them. Develop a class project on care of the school e.g. "Care our school campaign", making use of discarded materials

Grade 2

Term 2; Unit 2; Unit title: Satisfying Our Needs

Focus question 2: How am I educated?

Objective

Pupils will:

- ◆ Draw and make models of important features of places in the environment

Procedure/activity (Page 132)

#10 Use discarded objects (e.g. juice boxes) to construct a model of their school

Grade 2

Term 3; Unit 1; Unit title: This Is My Community?

Focus Question 3: Who are the people in my community?

Objective

Pupils will:

- ◆ Make objects for named purposes using given materials

Procedure/activity (Page 157):

#10 Design and make a recycling bin for the classroom in order to separate garbage into groups. Consider ways to recycle/ dispose of different types of garbage. Write labels and instruction cards to be posted in the classroom

Grade 4 Visual Arts

Term 1; Unit 2; Unit title: Seeing & Working Like An Artist

Focus question 2: How can I use forms and textures to create an object?

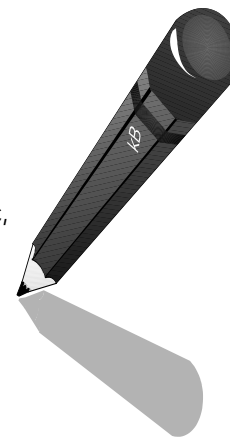
Objective

Pupils will:

- ◆ Explore a variety of forms and their potential for composition building

Procedure/activity (Page 181)

#1c Use any number of found and discarded objects/materials e.g. wood blocks, plastic, cord, cardboard to create an interesting composition



Grade 6 Music

Term 1; Unit 2; Unit title: Music In Everyday Life

Focus question 3: How do I sequence sounds to create songs and accompaniments reflecting styles, moods and structures?

Objective

Pupils will:

- ◆ Make up suitable accompaniment to reflect mood, styles and structures in songs created

Procedure/activity (Page 74)

#2 Create accompaniment appropriate to style, mood, structure and period of the songs performed in class

NOTE FOR THIS INFUSION : Accompaniment can be made from waste material

Grade 8 Resource and Technology

Module: Design Arts

General objective 4: To protect and conserve in the environment

4.3 (Page 134)

Topic/content outline

-Utilizing discarded/waste materials

-Types of waste/scrap materials—recyclable, biodegradable, re-workable, reusable

Expected outcomes and skills

The student should:

-Demonstrate an understanding of the potential environmental and economic viability of reuse and recycling

Suggested activities

-Have students collect packaging from products they buy during a week. Sort them into categories e.g. paper, plastics, then make a display on recycling

4.4 (Pages 134-135)

Topic/content outline

Designing for conservation

Expected outcomes and skills

The student should:

-Explore the design potential of a range of reusable materials

Suggested activities

-Choose a re-workable material and develop use for it

Module :- Home and Family

General objective 4: Protecting and conserving resources in the environment

4.4 (Page 174)

Topic/Content outline

-Utilizing discarded materials

Expected outcomes and skills

-Design and make articles from discarded materials

Suggested activities

-Use the design process to plan and make articles from discarded materials

ACTIVITY: STORING, HANDLING AND DISPOSING OF GARBAGE PROPERLY

Objectives:

Students will:

1. State the health consequences of poor garbage handling
2. Outline correct ways to store, handle and

Students will observe or interview school staff to learn:

- how and where garbage is stored on the school grounds, in what kinds of containers, and for how long;
- how garbage is disposed of, how often, where it goes and whether it is burned or buried on the school grounds.

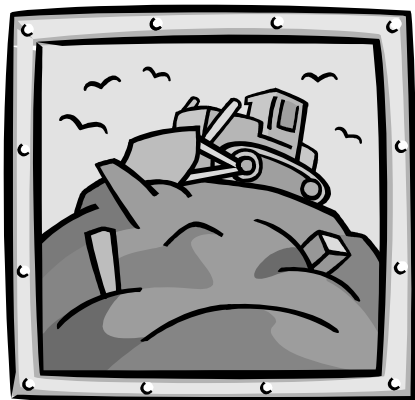
Students will discuss the advantages and disadvantages of different methods. Problems of

garbage collection, storage and disposal should be outlined and students should understand the environmental and health effects of burning as a method of garbage disposal.

Students should brainstorm to find alternatives to burning garbage and display knowledge of the environmental and health effects of burning.

BACKGROUND INFORMATION LINKS

- ∞ Environment and Health
- ∞ How long does it take garbage to biodegrade?
- ∞ Valuing trash to secure cash
- ∞ How to recycle paper
- ∞ Polystyrene fact sheet
- ∞ Earth facts– Why burning is a bad idea



Garbage reduction and efficient garbage management are needed to decrease the strain on the earth



Ensure safe waste handling at all times!

This activity can be infused into the following areas of the Primary and ROSE curricula

Grade 4 Social Studies

Term 2; Unit 2; Unit title: How we affect the environment as we meet our economic needs

Focus question 1: How do we affect the environment as we meet our economic needs in (a) agriculture (b) tourism (c) mining (d) manufacturing (e) trade?

Focus question 2: How can we preserve the environment as we meet our economic needs?

Objectives

Pupils will:

- ◆ Show willingness to keep waste at a minimum and dispose of it in ways that are least harmful to the environment
- ◆ Begin to develop the habit of behaving in ways that will minimise/prevent environmental damage in their home, school and community

Procedures/activities (Page 292)

#2 Observe the school compound to see what people do with waste and

(a) discuss the types of waste seen and the methods of disposal used

(b) Evaluate the environment of the school compound in relation to methods of disposal (cleanliness, smell, beauty)

Procedures/activities (Page 300)

#1a Go on a walk about the school compound and identify areas where damage to the environment is evident e.g. burning area, littered areas, waste water flow.

#1b Make and distribute fliers and posters to inform the school community about the problems identified and suggest the need for corrective measures to be taken

#1c Develop a class plan and share with school population and implement plan. Plans could include sorting waste from school in biodegradable and non-biodegradable waste, then disposing of them appropriately and making compost for the school garden

Grade 7 Social Studies

Unit 3: Social and environmental issues

Subtopic A: Good health practices (Pages 36-39)

Specific learning outcomes:

Knowledge

Students should be able to:

4 Explain the importance of keeping healthy

Attitude

Students should:

2 Demonstrate a willingness to keep themselves and the environment clean and safe

Content

9 Some common health problems, their symptoms, causes, effects and treatment: typhoid, asthma, gastroenteritis, malnutrition, hepatitis

Learning activities

6 Matching causes and effects of health issues

10 Making suggestions re classroom health rules and sanctions



Grade 8 Resource and Technology

Module: Industrial techniques

General objective 4: Protecting and conserving resources in the environment

4.1 (Pages 209-211)

Topics/Content outline

- Definition of waste
- Safe disposal of waste
- Pollution control

Expected outcomes and skills

Students should:

- Understand the effects of waste on the environment
- Appreciate the importance of safe disposal of waste
- Recognise the importance of pollution control

Suggested activities

- Compile list of harmful effects of waste
- List methods of safely disposing of waste
- Compose songs and poems on waste disposal
- Field trip to an industrial plant to observe pollution control measures

Grade 9 Language Arts

Unit 1; Theme: The environment/the community

Module 1: Understanding the environment

3 Brainstorm problems facing the environment and how to solve them

Tasks and activities (Page 90)

4 Discuss pictures illustrating environmental hazards- fire, water, garbage, destruction of trees. Get students to discuss

ACTIVITY: CRADLE TO GRAVE STUDY ON SELECTED ITEMS OF SOLID WASTE

Objectives:

Students will:

1. Identify what items of packaging are made from through "cradle to grave" studies
2. What happens when it is thrown away

A "Cradle to Grave" study involves looking at the lifespan of a selected item of garbage from its raw material state to when it is disposed of.

Students can therefore undertake research about one item of garbage in order to learn:

- what natural resources the item is made of
- the industrial processes used to make it
- what other raw materials are used

- what the product is used for
- how it is disposed of
- what are its recycling or reuse possibilities
- how long the item takes to biodegrade
- what happens if it is burnt, etc.

An education campaign about the item should be undertaken for other students in the school and posters displayed.

BACKGROUND INFORMATION LINKS

- ∞ [Environment fact sheet-Paper](#)
- ∞ [How long does it take garbage to biodegrade?](#)
- ∞ [Polystyrene fact sheet](#)



ACTIVITY: LITTERLESS LUNCH CAMPAIGN

Objectives:

Students will:

1. Explain how making informed choices about packaging can reduce garbage
2. Explain how individual choices can have positive effects

Help students brainstorm all the ways they can avoid having trash left over from their lunches. For example:

- bring all foods in reusable containers and lunch boxes
- take any used packaging or napkins back home in lunch boxes
- ban juice box containers and plastic bottles from school grounds

- put fruit and vegetable scraps in a bin marked for compost
- work cooperatively with canteen staff or vendors on school property to avoid food packaging
- award prizes to students who consistently bring litterless lunches
- Discuss nutritional value of different foods, (e.g. - a banana vs. sandwich biscuits). Show how even the packaging of the banana is better.

BACKGROUND INFORMATION LINKS

- ∞ How long does it take garbage to biodegrade?
- ∞ A zero waste lunch

