

Teacher's Guide
for the Integrated Water, Sanitation and Hygiene Education, and HIV/AIDS
for Grades 1 to 7



Ministry of Education,
Government on the Republic of Zambia



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Introduction To The Guide

The school health and nutrition and HIV/AIDS components of BESSIP have developed the psychosocial life skills teachers lesson guide with a focus on water, sanitation hygiene and HIV/AIDS education. For grade 1 to 7 teachers to assist them teach life skills in a participatory manner.

These life skills are self-awareness, self-esteem, effective communication, decision making, problem solving, assertiveness, goal setting, value clarification, creative thinking, critical thinking, empathy & interpersonal relationships.

The guide covers the following themes, namely:

Hygiene education e.g. Personal, water, food and community hygiene.

Environmental education e.g. sustainable environment and living in harmony at both local and national level. HIV/AIDS facts, prevention, support, care for the affected and infected and making a living.

In this lesson guide, you will find suggested participatory activities such as the broken telephone line, role-play, guessing game, case studies, surveys, mime, gallery walk, etc. These have been especially designed to assist you to involve the pupils as much as possible in the learning process and equip them with skills to face the everyday challenges. These participatory activities have been explained in detail in the glossary of terms.

The suggested reference materials, teaching and learning aids in the lesson guides are not conclusive. The reference materials may not contain enough content to aid in lesson production. The teacher should refer to other materials for more information.

LESSON GUIDES BY GRADE

SUB-TOPIC

Proper use of toilets/safe excreta disposal

SUBJECT:	Environmental Science
GRADE:	1
TOPIC:	Personal Hygiene
SUB-TOPIC:	Proper use of toilets/safe excreta disposal
TEACHING AND LEARNING RESOURCES:	Toilets, Toilet paper, newspaper and any other suitable local materials, basin of water, container/jug, soap, or other soap alternatives

REFERENCES:	Environmental Science Teacher's Guide and Pupils' Book 1
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OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) name at least 3 types of toilets;
- b) mention three risks of not using safe excreta disposal;

Attitudes:

- a) appreciate proper use of toilets;
- b) appreciate that anyone can safely dispose stool;

Physical Skill:

- a) use the toilets properly all the time;

Psycho-social Life Skills:

- a) communicate to others the proper way of using the toilet,
- b) make responsible decisions when using the toilet.

INTRODUCTION:

The teacher will involve pupils in any participatory activity/activities that will lead to mentioning toilet facilities they use at home.

LESSON DEVELOPMENT:

In the first lesson, the teacher should use participatory activities that can be done to find out which types of toilets/ways of disposing of stool the pupils already know. They may also think of ways in which to find out which ways the children think are better than

others and why. Finally, help the children assess how everyone can in time have a good way of disposing of stools.

In the second lesson the teacher will focus on any kind of demonstration of proper latrine use conducted in the toilet. This may be done through a role-play and a demonstration of proper steps, or proper and improper steps.

In the third lesson may focus on participatory activities that help children bring out risks involved in not using toilets, e.g. defecating in the bush, flies settle on the stool then go on to their food. A simplified six-F diagram with cards/pictures/authentic materials, etc. may help the teachers to draw general lessons and help visualise the transmissions.

CONCLUSION:

A class discussion can follow on alternatives to use if toilets are not available.

MONITORING/EVALUATION:

Monitor improved habit and proper use of toilets amongst pupils, e.g. inspection of toilets regularly.

Types of food

SUBJECT:	Environmental Science
GRADE:	1
TOPIC:	Ecology
SUB-TOPIC:	Types of food
DURATION:	1 double lessons of 60 minutes
TEACHING AND LEARNING RESOURCES:	Charts of various types of food, actual types of foods found in the pupils' surroundings, chart, marker, under five card and manila paper
REFERENCES:	Grade 1 Environmental Science Teacher's Guide Grade 1 Home Economics Teacher's Guide

OBJECTIVES:

By the end of the two lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify types of food found in their areas;
- b) mention the sources of these foods;

Attitudes:

- a) appreciate the nutritional values of the food they eat.
- b) show willingness to eat a variety of foods.

Physical Skills:

- a) draw various types of foods;
- b) match the drawings of types of food with the words;

Psycho-social Life Skills:

- a) show awareness of the various types of food found in their community;
- b) make a decision to eat a variety of food everyday;
- c) communicate effectively to others on the nutritional value of the variety of foods.

INTRODUCTION:

The teacher should find an interesting participatory activity that will involve the pupils into naming types of foods found in their community e.g. guessing game, broken telephone line and word-picture matching.

LESSON DEVELOPMENT:

In the first lesson, the teacher will focus on identification of various foods found in the community, e.g. pupils who can manage to bring food from their homes can do so and those who cannot, can mention the foods that they eat everyday.

In the second lesson, the food will then be categorised according to sources (meat products, vegetable products and fruit products). The teacher will explain the importance of these foods to their health.

CONCLUSION:

The teacher should ask pupils to draw plants and animals that produce food in their community or they may match pictures drawn with words.

MONITORING AND EVALUATION:

Monitor, on a chart, the types of food pupils eat everyday. Check whether the pupils carry food to eat at break and what type they bring.

Sources of Water (could be taught in term 3)

SUBJECT:	Environmental Science
GRADE:	1
TOPIC:	Water and Hygiene
SUB-TOPIC:	Sources of Water (could be taught in term 3)
DURATION:	2 lessons of 30 minutes each
LEARNING AND TEACHING RESOURCES:	Charts showing various sources of water, word cards, used bubble gum (ubulimbo)
REFERENCES:	Grade 1 Environmental Science Teacher's Book Grade 1 Home Economics Teachers' Guide

OBJECTIVES:

By the end of these lessons, PSBAT (in any form the teacher chooses to use):

Knowledge:

- name sources of water in their area;
- identify unsafe water sources and risks associated with them;
- list ways of maintaining safe sources of water;
- discuss ways of keeping safe water from contamination;

Attitudes:

- encourage each other to drink water from safe sources;
- willingly be involved in keeping safe water from contamination;

Physical Skills:

- draw and label simple diagrams of sources of water in the area;
- write down names of safe and unsafe sources of water;

Psycho-social Life Skills:

- work as a team to maintain safe water sources;
- show awareness of risks associated with unsafe sources of water;
- communicate effectively the importance of getting water from safe water sources.

INTRODUCTION:

Teacher should give any participatory activity that pupils can use to lead them to the subject of sources of water, e.g. to find out where pupils wash before coming to school. This may be done through interviews, pair or group discussion.

LESSON DEVELOPMENT:

In the first lesson, the teacher should use any participatory activity/activities that will bring out the various names of water sources in the area, and identify those that are unsafe because of risks associated with them. This can be done through class discussion.

In the second lesson, the teacher will focus on ways of maintaining safe sources of water. Ways of keeping safe water from contamination should also be discussed. This can be done through a case study and visiting some nearby sources of water.

CONCLUSION:

The teacher should involve pupils in participatory activities that will ensure daily maintenance of safe water sources, keeping safe water from contamination and drinking safe water. This can be done through songs, demonstrations of physical skills and class discussion.

MONITORING AND EVALUATION:

The teacher can randomly interview individual pupils on how they store water safely in their homes, and if they drink safe water from safe water sources.

Safe disposal of Refuse

SUBJECT:	Environmental Science
GRADE:	1
TOPIC:	Community Hygiene
SUB-TOPIC:	Safe disposal of Refuse
DURATION:	2 lessons of 30 Minutes
TEACHING AND LEARNING RESOURCES:	Brooms, rakes, hoes, locally made brooms (ichipyango)
REFERENCES:	Environmental Science Grade 1 Teacher's Guide and Pupils Book

OBJECTIVES:

By the end of the series, PSBAT (in any form the teacher chooses to use):

Knowledge:

- identify refuse;
- state two methods of disposing refuse safely;
- name at least two items used for cleaning surroundings.

Attitudes:

- develop a habit of throwing refuse into appropriate places;
- appreciate a clean environment;
- develop a habit of cleaning surroundings;

Physical Skills:

- throw litter into the appropriate places;
- handle and use cleaning items properly.

Psycho-social Life Skills:

- show awareness that their health depends on a clean environment;
- make decisions on keeping the environment clean.

INTRODUCTION:

Teacher should/will come up with a participatory activity which may lead into pupils coming up with methods of refuse disposal, e.g. what they do with biscuit or sweet wrappers after eating the content.

LESSON DEVELOPMENT:

In the first lesson teacher will give pupils a chance to do participatory activities or survey a local environment and then compare and contrast. Teacher may come up with different ways of disposing refuse, e.g. throwing into the rubbish pits or dustbins and burning the refuse.

In the second lesson, the teacher will focus on identifying items used for cleaning surroundings. This may be done by practical participatory activities relating to cleaning the surrounding and disposing of litter such as sweeping litter and throwing, burning or burying refuse.

CONCLUSION:

The teacher may lead the pupils into an activity which brings out an awareness of a clean environment, and how best to keep it clean.

MONITORING AND EVALUATION:

Monitor improved practices on safe ways of disposing refuse by regular inspection of surroundings. Monitor improved disposal habits by the pupils.

Hand Washing

SUBJECT:	Home Economics
GRADE:	1
TOPIC:	Personal Hygiene
SUB-TOPIC:	Hand Washing
DURATION:	1 lesson of 30 minutes
TEACHING AND LEARNING RESOURCES:	Basin, water, jug, container, soap, ashes, salt, other traditional herbs(buba, muthanda, imbuu)

REFERENCES: School Health and Nutrition Teacher's Guide

OBJECTIVES:

By the end of this lesson, PSBAT (in any form the teacher chooses to use):

Knowledge:

- a) identify the critical times when they should wash their hands;
- b) state the items used in hand washing;

Attitudes:

appreciate the correct items that are used for hand washing;

Physical Skills:

demonstrate the correct way of hand washing at critical times;

Psycho-social Life Skills:

communicate effectively to others the importance of hand washing at critical times.

INTRODUCTION:

The teacher should engage pupils in a participatory activity that sets the mood for hand washing activity. This could be done through role-play and demonstration by pupils.

LESSON DEVELOPMENT:

The teacher should involve pupils in a participatory activity that will lead to the identification of critical times of hand washing and materials that can be used in correct hand washing. This could be done by pouring water from a jug into a basin or by using an improvised hand washing facility and using soap, ash or salt.

CONCLUSION

The teacher will involve pupils in an activity that will make them demonstrate the correct way of hand washing at critical times.

MONITORING AND EVALUATION:

The teacher should monitor hand washing at critical times through the `whispering game` and observations.

Hand Washing

SUBJECT: Environmental Science
GRADE: 2
TOPIC: Personal Hygiene
SUB-TOPIC: Hand Washing
Duration: 30 minutes
TEACHING AND LEARNING RESOURCES: Work cards, chalkboard chalk, water, soap, basin, Container

REFERENCES: Grade 2 Environmental Science Pupil's Book
Grade 2 Environmental Science Teacher's Guide
Grade 2 Home Economics Pupil's Book
Primary Health Education Book

OBJECTIVES:

By the end of this lesson, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) state the importance of hand washing;
- b) give reasons for washing their hands at critical times;

Attitude:

appreciate keeping his or her hands clean.

Physical Skill:

wash hands correctly;

Psycho-social Life skills:

- a) communicate effectively to others the importance of hand washing;
- b) decide to wash hands at critical times.

INTRODUCTION:

You may begin the lesson by actively engaging pupils in participatory activities that will bring out the correct techniques of hand washing. You may do this by using poems, songs, role-play or any other participatory method you may come up with.

LESSON DEVELOPMENT:

Teacher will develop a lesson that will bring out the importance of hand washing. Choose any participatory activity/activities for the pupils to bring out their past experience on the effects of not washing hands. You may use methods like role-play, group discussion, drawing and story telling.

CONCLUSION:

Teacher will prepare activities that will help pupils realise and appreciate proper hand washing techniques. For example, pupils may be engaged in activities where they talk about why they wash their hands at critical times or demonstrate proper and improper ways of hand washing and compare results. You may pick on one critical time e.g. before eating or after using the toilet.

MONITORING AND EVALUATION:

As a way of monitoring the improved practice of hand washing, the teacher could use activities such as whispering, observation, secret ballot or any other activity which may be convenient to the teacher.

Safe disposal of Refuse

SUBJECT:	Environmental Science
GRADE:	2
TOPIC:	Community Hygiene
SUB-TOPIC:	Safe disposal of Refuse
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Brooms, hoes, local brooms, rakes, shovel, dustbin, dustpan or any other appropriate alternative
REFERENCES:	Environmental Science – Grade 2 Teacher’s Guide and Pupil’s Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify items used for cleaning the surroundings;
- b) state the different ways of cleaning home surroundings;
- c) demonstrate knowledge of cleaning the surroundings;
- d) demonstrate knowledge of safe disposal of refuse and the results of not disposing waste well.

Attitudes:

- a) show appreciation of clean surroundings;
- b) demonstrate correct ways of cleaning the surrounding;
- c) appreciate items used for cleaning the environment;

Physical Skills:

- a) practice correct ways of sweeping or cleaning the surroundings and the safe way of disposing refuse;
- b) draw items used for cleaning the environment;

Psycho-social Life Skills:

- a) effectively communicate on safe ways of disposing refuse;
- b) make decisions on which items to use in cleaning the surrounding;
- c) solve problems relating to safe disposal of refuse.

INTRODUCTION:

Teacher should begin with a practical participatory activity of pupils sweeping the front of that classroom. Then follow it up with an activity that will bring out issues of proper ways of cleaning and proper ways of refuse disposal and correct use of items.

LESSON DEVELOPMENT:

The first lesson will focus on identifying items used for cleaning the surroundings. S/he may also look at the different ways of cleaning and the safe disposal of refuse. This may be done by participatory activities such as field trip and role-play.

The second lesson should focus on demonstrating the correct ways of sweeping the surrounding and the results of not disposing the refuse correctly. This may be done by participatory activities such as drama and pair or group discussion.

CONCLUSION:

The teacher may ask pupils to draw some of the items that are used for cleaning the surroundings and disposing of refuse. This could be done through giving pupils a task of disposing of waste in the school area in a safe way. Or identifying pits to use in their community.

MONITORING AND EVALUATION:

Monitor improved practices of cleaning the surrounding and safe disposal of waste through daily inspection by the teacher while encouraging pupils to do the same in their community.

Importance and use of food

SUBJECT:	Environmental Science
GRADE:	2
TOPIC:	Ecology
SUB-TOPIC:	Importance and use of food
DURATION:	1 double period
TEACHING AND LEARNING RESOURCE:	Chart showing all types of food, word cards, pictures of healthy and unhealthy girls and boys showing signs due to poor diet
REFERENCES:	Grade 2 Environmental Science Teacher's Book Grade 2 Home Economics Teacher's Book

OBJECTIVES:

By the end of the 2 lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) mention foods they eat at home;
- b) explain the importance of food;
- c) classify the foods into plant, fruit, animal

Attitude:

appreciate the importance of eating all types of food.

Physical Skills:

- a) draw different foods;
- b) classify different foods;

Psycho-social Life Skills:

- a) solve health problems related to poor diet;
- b) advise others on the need for a variety of food;
- c) communicate effectively as they encourage others to eat a variety of food.

INTRODUCTION:

The teacher will prepare a participatory activity in which the pupils will mention the types of food they eat throughout the year. The teacher may ask pupils to discuss in pairs or groups.

LESSON DEVELOPMENT:

In the first lesson, the teacher will focus on the importance of food. The teacher may make pupils role-play and discuss in groups to bring out the importance of food to human life.

In the second lesson the teacher will focus on classification of food under food for body repair, food for energy and heat and food for protection against disease. The teacher may use groups in the classification of food. Teacher may use actual foods or chart for this activity.

CONCLUSION:

The teacher should ask questions about varieties of food. Teacher may also give a follow up activity, e.g. drawing types of food.

MONITORING AND EVALUATION:

The teacher will monitor pupil's diets at home, e.g. through interviews and visits to their homes.

SUBJECT: Environmental Science
GRADE: 2
TOPIC: Safe use of latrines
DURATION: 2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES: Tissue paper, newspaper, or any other appropriate local material, water, soap, water container, ashes/disinfectant

REFERENCES: Grade 2 Environmental Science Teacher's Guide and Pupil's Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) state the correct use of the latrine/toilet;
- b) wipe their bottoms correctly after using the toilet/latrine;
- c) give reasons why it is important to wash their hands after using the toilet/latrine;

Attitudes:

- a) encourage each other to use the latrine/toilet correctly;
- b) show willingness to wash their hands after using the toilet/latrine.

Physical Skills:

- a) demonstrate the correct use of the toilet/latrine;
- b) the proper hand washing after using the toilet/latrine;

Psycho-social Life Skills:

- a) communicate to others about proper hand washing;
- b) make decisions about using the toilet/latrine properly;
- c) show awareness of the dangers of not using the toilet properly.

INTRODUCTION:

The teacher may involve pupils in a brief activity, which is participatory and sets their mood into the use of toilets/latrines and hand washing, e.g. find out where pupils relieve themselves at home and at school in various circumstances.

LESSON DEVELOPMENT:

In the first lesson, the teacher should focus on ways of disposing off faeces and demonstrate the proper use of a latrine/toilet. This could be done through role-play, demonstration of proper steps, miming and drama.

Lesson two will focus on the risks involved in not using toilets properly and washing hands correctly.

The teacher should use participatory techniques such as story telling, role-play, demonstration and discussions.

CONCLUSION:

The teacher may pose questions about what a person who makes the toilet dirty and messes up his/her hands in the process do to himself/herself and others. This could be done through a discussion and question and answer.

MONITORING AND EVALUATION:

The teacher should monitor and evaluate the improved habits and correct use of toilets by pupils, e.g. through random interviews, observations and spot checks on toilets.

Monitoring may be done through the whispering game, e.g. how they should wipe their bottoms.

Refuse disposal practices of the Local Community

SUBJECT:	Environmental Science
GRADE:	3
TOPIC:	Community Hygiene
SUB-TOPIC:	Refuse disposal practices of the Local Community
DURATION:	30 minutes
TEACHING AND LEARNING RESOURCES:	Dustbin, rubbish pit, picture of a dumping site, Incinerator

REFERENCE: Grade 3 Home Economics Teacher's Guide

OBJECTIVES:

By the end of this lesson, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) name the refuse disposal practices in the local community;
- b) explain the significance of correct refuse disposal;
- c) discuss the best ways of disposing off refuse;

Attitudes:

- a) exhibit the acceptable ways of disposing off refuse;
- b) willingly sensitise others on the proper ways of disposing of refuse;

Physical Skills:

- a) demonstrate good refuse disposal practices;
- b) draw indicators of cleanliness in form of dustbin, rubbish pit and incinerator;

Psycho-social Life Skills:

- a) communicate effectively good refuse disposal practices;
- b) show awareness of the best practices of refuse disposal.

INTRODUCTION:

The teacher should lead the pupils into a participatory activity that will set the stage for discussing the correct refuse disposal practices. This may include group discussion, role-play and field visit.

LESSON DEVELOPMENT:

In the lesson, the teacher should prepare participatory activities which should focus on naming of the refuse disposal practices and bring out the significance of the correct refuse disposal.

The teacher may come up with practical activities in which pupils will demonstrate correct refuse disposal in the school community e.g. sweeping, picking up litter and disposing it in the bin or pit.

CONCLUSION:

The teacher should come up with participatory activities such as brainstorming and question and answer to show the pupils' understanding of correct practices of refuse disposal and willingness to sensitise other members of the community.

MONITORING AND EVALUATION:

The teacher and pupils could monitor improved practices of refuse disposal by checking for indicators of cleanliness, e.g. good bin use, refuse pit and no careless dumping of refuse in the local community.

Worms

SUBJECT:	Environmental Science
GRADE:	3
TOPIC:	Hand washing
SUB-TOPIC:	Worms
DURATION:	3 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Soil/worms/chart showing different types of worms/ Basin of water, soap/soap alternative

REFERENCES: Grade 3 Environmental Science Teacher's Guide and Pupils' Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- name at least two types of worms;
- state how worms may be transmitted from an infected person to a healthy one;
- mention at least three ways of preventing worm transmissions;

Attitudes:

- appreciate the importance of hand washing;
- willingly prevent worm transmission;

Physical Skills:

- develop an art of drawing;
- investigate soil for living organisms;
- wash hands correctly to prevent worm transmission;

Psycho-social Life Skills:

- communicate effectively information on the prevention of worm transmission;
- make correct decisions on hand washing at critical times.

INTRODUCTION:

The teacher should come up with a participatory activity related to hand washing. This could be done through a song, demonstration, role-play making, story and guessing game.

Lesson Development:

In the first lesson, the teacher will give pupils an activity which will lead them to discover worms in the soil. This could be done through field trips and question and answer.

In the second lesson, the focus will be on the transmission of worms using the simplified 6F diagram. The teacher could do this through brainstorming and group discussion.

In the third lesson, the focus will be on barriers on worm transmission as they relate to their local environment. This could be done by filling in the barriers through question and answer.

CONCLUSION:

The teacher will give a participatory activity in which pupils give true or false answers to statements on hand washing, worm transmission routes and barriers. This could be done through asking pupils to pick statements at random.

MONITORING AND EVALUATION:

The teacher will monitor improved practices of hand washing and other ways of preventing worm transmission.

Treatment and storage of drinking water

SUBJECT:	Environmental Science
GRADE:	3
TOPIC:	Sources of water
SUB-TOPIC:	Treatment and storage of drinking water
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Charts, word cards, pot water, storage container, bucket and questionnaire
REFERENCE:	Grade 3 Science Teacher's Guide

OBJECTIVES:

By the end of these, lessons PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify the sources of drinking water;
- b) describe the treatment and storage of drinking water;

Attitude:

appreciate the importance of interchanging gender roles;

Physical Skills:

demonstrate the effective ways of treating drinking water;

Psycho-social Life Skill:

think critically on the dangers of drinking contaminated water.

INTRODUCTION:

Involve the pupils in participatory activities of your choice that will bring out different sources of drinking water the pupils use by drawing, naming and many more.

LESSON DEVELOPMENT:

In the first lesson you may focus on categorising different sources of drinking water pupils use by e.g. mapping, ranking, use of questionnaire and many more. Putting more emphasis on the dangers of drinking contaminated water from the sources the pupils will high light.

In the second lesson may focus on the treatment and storage of drinking water with particular emphasis on boiling and chlorination. Participatory activities like discussion, role-play and many more could follow on promoting gender roles in the treatment and storage of drinking water.

MONITORING AND EVALUATION:

As you evaluate your lesson focus on the progression in children's learning and be aware of successes and failures of objectives.

Fishing, hunting and farming occupations

SUBJECT:	Environmental Science
GRADE:	3
TOPIC:	Living in harmony at local level
SUB-TOPIC:	Fishing, hunting and farming occupations
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Pictures of the local environment, pictures of fishermen, hunter and farmer, Wild Life Conversation charts
REFERENCES:	Grade 3 Environmental Science Teacher's Guide and Pupils' Book

OBJECTIVES:

By the end of these lessons PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) explain what fishing, hunting and farming are;
- b) identify good and bad practices in each of the three occupations;
- c) give reasons why people engage themselves in these occupations;

Attitudes:

- a) appreciate the value of each of the occupations to the community;
- b) respect the importance of these occupations to the community;

Physical Skill:

participate in farming projects at school and at home;

Psycho-social Life Skills:

- a) communicate effectively the dangers of poor farming practices and excessive fishing and hunting;
- b) show awareness of the importance of plant and animal life to human beings;
- c) apply critical thinking on the good and bad fishing, farming and hunting practices in their community.

INTRODUCTION:

The teacher will devise a participatory activity in which pupils bring out the three occupations: fishing, hunting and farming. This could be done through group discussion and miming.

LESSON DEVELOPMENT:

In the first lesson, the teacher will focus on what fishing, hunting and farming occupations are and the environmentally good and bad practices found in each occupation. This should be done through participatory activities such as group work, pair work, field work (especially where farming and fishing are concerned).

For the second lesson, the teacher should plan participatory activities that will bring out reasons why people engage themselves in these occupations. Examples of participatory activities may be debate, group discussion, role-play, visits/field trips (with people in these occupations).

CONCLUSION:

The teacher should plan an exercise to help pupils bring out good and bad practices that characterise the occupations of fishing, hunting and farming and their contribution to good nutrition.

MONITORING AND EVALUATION:

Teacher develops a system of monitoring pupils' participation in activities that involve food production and change of attitude towards fishing, hunting and farming.

Water Borne Diseases

SUBJECT:	Environmental Science
GRADE:	3
TOPIC:	Water Hygiene
SUB-TOPIC:	Water Borne Diseases
DURATION:	4 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Charts, water, soap, ash, bottle chlorine
REFERENCES:	Grade 3 Environmental Science Pupil's Book Grade 3 Environmental Science Teacher's Guide

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) list water borne diseases;
- b) identify ways in which water borne diseases are transmitted;
- c) identify signs and symptoms of water borne diseases;
- d) state ways of preventing water borne diseases;

Attitude:

willingly prevent transmission of water borne diseases by observing high standards of hygiene;

Physical Skills:

- a) demonstrate correct ways of water treatment to:
 - prevent water borne diseases;
 - take preventive measures in the spread of water borne diseases;

Psycho Social Life Skills:

- a) communicate effectively on prevention of water borne diseases; and
- b) think critically about ways of transmission and prevention of water borne diseases.

INTRODUCTION:

Teacher should involve pupils in a participatory activity/activities that will bring out the signs and symptoms of water borne diseases by using, e.g. poems, role-play and songs.

LESSON DEVELOPMENT:

In the first lesson the teacher will focus on bringing out 3 types of water borne diseases, i.e. diarrhoea, cholera and dysentery and signs and symptoms of each disease. This may

be done by engaging pupils in participatory activity/activities such as group discussions, picture/word matching and many others suitable for the class.

In the second lesson the teacher will focus on the transmission and prevention of the diseases discussed in lesson 1. Methods such as whispering game, use of simplified version of 6F diagrams, may be used.

In the third lesson the teacher will prepare a lesson on transmission of bilharzia. This could be done by filling in the missing parts to complete the circle.

In the fourth lesson, the teacher may engage pupils in participatory activities that will focus on the signs, symptoms and prevention of bilharzia. Activities may include role-play, word matching, picture discussion and story telling.

CONCLUSION:

The teacher may involve pupils in activities that may look at what communities/school would do if they had an outbreak of diseases like cholera and dysentery. The activities could be done through role-play, group discussion, case study and field trip.

MONITORING AND EVALUATION:

The teacher will monitor improved hygienic practices on protection of water sources, safe disposal of faeces and hand washing, e.g. teacher may use the duty rota that is gender inclusive, whispering game and use of suggestion box.

Effects of improper disposal of dry and wet refuse

SUBJECT:	Environmental Science
GRADE:	4
TOPIC:	Community Hygiene
SUB-TOPIC:	Effects of improper disposal of dry and wet refuse
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Charts, showing proper refuse disposal, brooms, cards

REFERENCE: Grade 4 Home Economics Teacher's Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify the best way/effective ways of disposing of dry and wet refuse;
- b) describe the effects of improper refuse disposal;

Attitudes:

- a) willingly dispose of the refuse correctly;
- b) appreciate the importance of cleaning the environment;

Physical Skills:

- a) dispose wet and dry refuse disposal properly;
- b) develop good behaviour on the disposal of refuse;

Psycho Social Life Skills:

- a) communicate effectively to others on effects of the improper ways of refuse disposal;
- b) work as a team to dispose of the dry and wet refuse properly; and
- c) show awareness of the proper refuse disposal practices.

INTRODUCTION:

The teacher will begin the lesson by focussing on the meaning and classification of the refuse by question and answer, group discussion or any other participatory method the teacher may find useful.

LESSON DEVELOPMENT:

In the first lesson the teacher will use any participatory activity that will bring out best ways/effective ways of disposing of dry and wet refuse e.g. case study, drama, role-play and many more. The teacher may give examples such as use of rubbish bin/dust bin, burying, burning and many more. The teacher may also involve the pupils in identifying how they dispose of the refuse e.g. by having a field trip round the school.

In the second lesson will focus on the effects of improper disposal of dry and wet refuse. Participatory activities such as role-play, drama, song, poem and many more may be used.

CONCLUSION:

The teacher may involve the pupils in a participatory activity to collect information in the community on how refuse is disposed of. This could be done through role-play, drawing, song and many more the teacher will find useful.

MONITORING AND EVALUATION:

The teacher may inspect pupils sweep the classroom and school surrounding and how they dispose of the refuse collected.

Care of trees and plants

SUBJECT:	Environmental Science
GRADE:	4
TOPIC:	Plants
SUB-TOPIC:	Care of trees and plants
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Water, watering cans, buckets, hoe, hand fork, soap, ash, basin, jug/cup
REFERENCES:	Grade 4 Environmental Science Teacher's Guide Grade 4 Environmental Science Pupil's Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- state the importance of trees/plants;
- list methods of caring for trees/plants;
- mention proper ways of watering trees/plants;

Attitudes:

- appreciate the value of trees/plants;
- show willingness in caring for trees/plants;
- realise the importance of gender equity as they fare for trees/plants;

Physical Skills:

- water trees/plants correctly;
- aerate the soil;
- wash their hands properly after work;

Psycho-social Life Skills:

- awareness is their responsibility of caring for trees/plants;
- create good inter personal relations as they work together; and
- think critically on ways and means of caring for tree/plants.

INTRODUCTION:

The teacher will lead the pupils into a participatory activity/activities that will bring out the existence of tree/plants, e.g. field i.e. they can go round and name trees in the school, poems, "who am I" game.

LESSON DEVELOPMENT:

The teacher will use participatory activity/activities which will enable the pupils to bring out the importance of trees and/or plants. This may be done through group discussions, questions and answer, role-play and story telling. The teacher should focus on proper methods of caring for tree/plants, e.g. correct aerating or watering. This would best be done by demonstration.

N.B: The teacher should remember to remind the pupils on the proper ways of hand washing.

CONCLUSION:

The teacher should engage pupils in participatory activities that should focus on each pupil or in groups to identifying and to care for a tree/plant in the school.

MONITORING AND EVALUATION:

The teacher should monitor the way pupils care for their trees/plants by e.g. inspecting as they water, aerate, and mulch. S/he could also award marks.

NOTE: The lesson may be covered in the hot season under a shade for pupils to appreciate trees.

SUBJECT:	Environmental Science
GRADE:	4
TOPIC:	Hand washing
SUB-TOPIC:	Worms
DURATION:	2 lessons of 30 Minutes
TEACHING AND LEARNING RESOURCES:	Worms/Chart showing worm prevention
REFERENCES:	Environmental Science Teacher's Guide and Pupils' Book 4

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

identify signs and symptoms of worm infestation;

Attitudes:

- a) practice good hygiene to prevent worm infestations;
- b) demonstrate willingness to seek help/treatment when infested with worms;

Physical Skills:

examine themselves for worm infestation;

Psycho-social Life Skills:

- a) think critically on how to prevent oneself from worm infestation;
- b) be assertive in seeking help and treatment for worm infestation;
- c) communicate effectively amongst themselves, with their teachers and parents;
- d) make decisions in seeking help or treatment when infested with worms.

INTRODUCTION:

The teacher should engage the pupils in a participatory activity that will help them to focus on signs and symptoms of worm infestations and their treatment. This may be in form of a story or mini-drama, etc.

LESSON DEVELOPMENT

The first lesson will focus on symptoms and prevention of worm infestations. The teacher should prepare participatory activities to bring out real experiences through pair or group discussion based on, e.g. charts.

The second lesson will focus on examination and treatment of worm infestation. The teacher may invite a local health worker to give a talk to the class on worm infestations

and their treatment. The health worker may examine the pupils for worms and if possible treat them or give a talk

CONCLUSION:

The teacher may come up with an activity that will review the signs/symptoms, prevention and treatment of worm infestations, e.g. pupils to expand on their knowledge of the 6F diagram or write an exercise on the topic.

MONITORING AND EVALUATION:

Monitor improved practices on hand washing at critical times.

Monitor pupils found with worms to ensure that they get treatment.

SUBJECT:	Environmental Science
GRADE:	5
TOPIC:	Community Hygiene
DURATION:	2 lessons of 40 Minutes each
TEACHING AND LEARNING RESOURCES:	Charts showing refuse, cleaning items, etc.
REFERENCE:	Grade 5 Environmental Science

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) describe some refuse disposal practices of the local community;
- b) name some indicators of cleanliness;

Attitudes:

- a) appreciate a clean environment;
- b) show willingness to participate in community hygiene activities.

Physical Skills:-

properly clean the local (school) environment.

Psycho-social Life Skills:

- a) effectively communicate with family and community on safe refuse disposal;
- b) think critically in assessing community practices in relation to hygiene;
- c) make decisions in coming up with indicators of cleanliness in the local community.

INTRODUCTION:

The teacher should come up with participatory activities to act as a recap from grade 4 work on effects of poor community hygiene. This may be in the form of class discussion and question and answer session.

LESSON DEVELOPMENT:

The series will consist of 2 lessons of 40 minutes each. The teacher can arrange a field trip to some nearby locations to show good and bad disposal practices of the local community. Through a general discussion pupils should come up with lists of good and bad disposal practices observed. The teacher can then lead them into discovering some indicators of cleanliness, e.g. refuse pits, latrines, clean water supply, no blocked sewers and drainages.

The second lesson will focus on leading the pupils into a hands on experience in community hygiene activities. Teacher may lead the class to clean at a nearby community water source.

N.B.: Teacher should choose an activity that will not pose a health risk to the children.

CONCLUSION:

The teacher should give a simple written test to summarise the bad disposal practices in the local community and list down the good indicators of cleanliness..

MONITORING AND EVALUATION:

The teacher should monitor refuse disposal practices in the school by daily inspection.

Common Parasites and Bacteria transmitted by Dirty Hands

SUBJECT:	Environmental Science
GRADE:	Grade 5
TOPIC:	Transmission of Diseases
SUB-TOPIC:	Common Parasites and Bacteria transmitted by Dirty Hands
DURATION:	40 minutes
TEACHING AND LEARNING RESOURCES:	Tissue paper, water, basin, soap, jug chart, word cards, strips of arrows and any other suitable local materials e.g. ash, newspaper etc.
REFERENCES:	Grade 5 Environmental Science – Teacher’s Book Grade 5 Home Economics – Teacher’s Book and any other suitable books

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) name common parasites transmitted by dirty hands;
- b) identify the diseases that these parasites cause;
- c) suggest preventive measures that can be taken to stop the transmission;
- d) explain how dirty hands transmit parasites;

Attitudes:

- a) appreciate the washing of hands at critical times;
- b) show willingness to wash hands and encourage others to do the same;
- c) desist from shaking hands indiscriminately;

Physical Skills:

demonstrate proper ways of washing hands;

Psycho-social Life Skills:

- a) effectively communicate to others the importance of washing hands at critical times;
- b) show awareness of washing their hands at critical times in a proper way;
- c) make decisions about washing hands at critical times;
- d) solve problems by improvising in the absence of known cleaning materials.

INTRODUCTION:

The teachers should come up with any brief participatory activity that will make pupils arrive at naming common parasites that cause diseases related to not washing hands

correctly at critical times. This could be done through question and answer session, role-play and case study.

LESSON DEVELOPMENT:

In the first lesson, the teacher should use an activity/activities that would lead pupils into naming parasites that are common in their area and can cause diseases related to not washing hands correctly at critical times, e.g. a sketch showing someone playing with wet soil for case study.

Other activities could include identifying other diseases that these parasites cause e.g. anaemia (inadequate blood) and coughing etc. This can be done by matching parasites to diseases they cause.

The second lesson should focus on how dirty hands transmit parasites and how this transmission can be prevented. Activities may include 6F diagram. Demonstrations of correct hand washing at critical times.

The teacher should also engage pupils into a participatory activity arriving at suggesting preventive measures, e.g. washing of hands with soap, ash, cutting of nails short if not kept clean, correct disposal of waste, avoiding indiscriminate shaking of hands and deworming.

CONCLUSION:

Teacher could give homework to pupils to research on locally known diseases caused by parasites that are transmitted by dirty hands, their prevention and treatment e.g. a matrix table may be used.

MONITORING AND EVALUATION:

Monitor improved habits on hand washing, especially at critical times, e.g. through observation, interviews.

Deforestation

SUBJECT:	Social Studies
GRADE:	5
TOPIC:	Preservation of Nature
SUB-TOPIC:	Deforestation
DURATION:	2 lessons of 30 minutes each
TEACHING AND LEARNING RESOURCES:	Wheel burrow, spade, water, soap, ash, and container
REFERENCES:	Grade 5 Social Studies Pupil's Book Grade 5 Social Studies Teacher's Guide

OBJECTIVES:

By the end of the lessons, PSBAT (in any form(s) you choose to use).

Knowledge:

- a) state the causes of deforestation;
- b) mention 5 effects of cutting down trees;

Attitudes:

- a) appreciate the value of trees;
- b) willingly plant new plants;

Physical Skills:

- a) demonstrate the correct ways of planting and caring for trees;

Psycho-social Life Skills:

- a) work as a team in the planting and caring of trees; and
- b) communicate effectively on the effects of deforestation.

INTRODUCTION:

The teacher should come up with brief participatory activity/activities which will bring out the definition of deforestation.

LESSON DEVELOPMENT:

In the first lesson the teacher will focus on the causes of deforestation. The teacher may use participatory activities such as role-play, drawing, group discussion and many more.

For the second lesson the teacher should come up with a practical activity to demonstrate planting and caring of trees. The teacher may lead the pupils into planting and caring for trees in the school surrounding. After the practical activity pupils should wash their hands properly.

CONCLUSION:

The teacher may use a rota to ensure that the pupils will care for the newly planted trees in the school or carry out a survey on the effects of deforestation through a questionnaire.

MONITORING AND EVALUATION:

The teacher should monitor the growth rate of the plants and keep a record of such growth.

Worms

SUBJECT:	Environmental Science
GRADE:	6
TOPIC:	Personal Hygiene
SUB-TOPIC:	Worms
DURATION:	3 lessons of 40 minutes each
TEACHING AND LEARNING RESOURCES:	Soil/worms, cards, arrows, plain chart, markers, water

REFERENCES: Grade 6 Environmental Science Teacher's Guide and Pupil's Book

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) you choose to use):

Knowledge:

- a) name common worms that affect human beings in the area;
- b) state how such worms are transmitted;
- c) explain ways in which worm transmissions can be prevented;
- d) state measures to be taken when infected with worms;

Attitudes:

- a) accept that anyone may get worm infection;
- b) accept that worm transmissions can be prevented;
- c) willingly receive treatment when infected with worms;
- d) show willingness to wash hands at critical times.

Physical Skills:

- a) draw various types of worms;
- b) investigate the presence of worms in the soil;
- c) demonstrate the correct way of hand washing;

Psycho-social Life Skills:

- a) communicate effectively to others on worm transmission, prevention and treatment;
- b) make decisions on the importance of hand washing at critical times;

INTRODUCTION:

The teacher to come up with any participatory activity that will lead the pupils to the concept of worms through, constructing sentences from jumbled words correctly: you/ill/worms/might/get/if/you/be.

LESSON DEVELOPMENT:

In the first lesson, the focus should be on naming the types of worms as well as investigating the presence of worms in the soil. The teacher should use participatory activities such as group discussion and field visits.

In the second lesson, the teacher should prepare a participatory activity which will focus on the transmission of worms from various sources to human beings as well as how transmission can be prevented. The 6F diagram on disease transmission may be very helpful in this lesson.

In the third lesson, the teacher should involve pupils in participatory activities that will lead them to finding out what to do when one gets infected with worms. These may include role-play, mini drama and miming.

CONCLUSION:

The teacher should summarise the lesson by ask questions on various types of worms and how worm transmission can be prevented or a study tour of a clinic to find out information on worm transmission prevention.

MONITORING AND EVALUATION:

The will monitor improved knowledge of the worm transmission, prevention and treatment. This could be done by visiting the local clinic or interview pupils.

NOTE: These lessons should be taught in term 1.

Food Chains

SUBJECT:	Environmental Science
GRADE:	6
TOPIC:	Ecology
SUB-TOPIC:	Food Chains
DURATION:	2 lessons of 40 minutes each
TEACHING AND LEARNING RESOURCES:	Charts showing plant and animal sources of food
REFERENCES:	Environmental Science Teacher's Guide Book 6 and Pupil's Book 6

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) classify plant and animal sources;
- b) define food chain;
- c) explain food chain;

Attitudes:

- a) appreciate the existence of plants and animals as sources of food;
- b) appreciate the interdependence between animals and plants.

Physical Skill:

draw simple food chains;

Psycho-social Life Skills:

- a) show awareness of the dangers of destroying plant and animal life indiscriminately;
- b) communicate effectively to others the importance of plant and animal life.

INTRODUCTION:

The teacher should involve pupils in participatory activities which will focus on the different types of food from plants, and animals which they normally eat. The activity (ies) may be a song, poem, role-play and guessing game.

LESSON DEVELOPMENT

In the first lesson, the teacher should initiate an activity which will lead pupils into classifying foods according to plant source or animal source. The activity may be classifying foods into plant source or animal source using the foods on charts in pairs, groups or individually.

The teacher may proceed in another activity to demonstrate the interdependence between plants and animals for food. The lesson should at this stage bring out the concept of a food chain. The food chain with three trophic levels is all what is required at this stage, e.g. Grass → Grasshopper → Bird.

The second lesson should consist of an activity to physically study some simple food chains. The activity may be a field trip in the sports grounds, nearest bush, game conservation area, etc.

CONCLUSION:

Teacher may ask the pupils to draw at least three simple food chains of their choices. Pupils may use cardboard paper to make food chains and can display them in their classroom.

Pupils may also come up with an action plan in protecting and enhancing plant and animal life. The action plan should address issues of how to combat deforestation, indiscriminate killing of animals and how pupils can participate in tree planting.

MONITORING AND EVALUATION

The teacher will monitor activities of pupils' clubs (e.g. Chongololo) involved in the tree planting and dissemination of information on conservation.

Safe Refuse Disposal

SUBJECT:	Environmental Science
GRADE:	6
TOPIC:	Community Hygiene
SUB-TOPIC:	Safe Refuse Disposal
DURATION:	2 lessons of 80 minutes each
TEACHING AND LEARNING RESOURCES:	Types of rubbish and dirt, chart of pupils cleaning surrounding, brooms, dust bin, hoes, shovels, wheel burrow
REFERENCES:	Primary School Health Education. SHN Teacher's Guide

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) name the methods of refuse disposal;
- b) state the advantages and disadvantages of each method;
- c) list types of materials to be used in the different methods of refuse disposal;

Attitudes:

- a) show willingness to sweep or pick up rubbish whenever they see it;
- b) appreciate a gender inclusive cleaning rota;

Physical Skills:

- a) dig a rubbish and compost pit in the right position with correct measurements;
- b) sort out rubbish which can or cannot rot;

Psycho-social Life Skills:

- a) make correct decisions to dig the pits with correct measurements; and
- b) communicate effectively to others the importance of safe refuse disposal.

INTRODUCTION:

The teacher will lead the pupils into participatory activity/activities that will lead into identifying different types of dirt and rubbish. This could be done through field trips, group discussion and brainstorming.

LESSON DEVELOPMENT:

The first lesson will focus on making compost manure. The teacher will lead pupils into participatory activity/activities which will demonstrate the correct preparation of compost

manure. The activity or activities may involve: - a game to sort out rubbish that rots and that doesn't rot, digging a compost pit with correct measurements, the correct layering of the rubbish, ash and soil.

N.B.: In both lessons teacher must ensure gender equity in terms of participation in the activities.

CONCLUSION:

As a way of concluding, the teacher should engage the pupils in participatory activities that will focus on, e.g. drawing a three-dimensional compost pit, or making a gender inclusive cleaning rota. This can be done through group discussion and brainstorming.

MONITORING AND EVALUATION:

The teacher will physically inspect how the pupils clean the school area, equipment used and how they dispose off the rubbish collected.

Care and cleaning of pit latrines

SUBJECT:	Home Economics
GRADE:	7
TOPIC:	Hygiene
SUB-TOPIC:	Care and cleaning of pit latrines
DURATION:	4 lessons of 40 minutes each
TEACHING AND LEARNING RESOURCES:	Brooms, soap, ash, buckets, water, latrine lid
REFERENCES:	Environmental Science Pupil's Book Grade 7 Environmental Science Teacher's Book Grade 7 Home Economics Pupil's Book Grade 6 and 7 Home Economics Teacher's Book Grade 6 and 7

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify proper cleaning materials;
- b) keep pit latrines clean;
- c) care for the pit latrines;

Attitude:

appreciate the importance of care and cleaning of latrines;

Physical Skill:

demonstrate the care and cleaning of the pit latrine; and

Psycho-social Life Skill:

- a) communicate to others about the consequences of using a dirty pit latrine.

INTRODUCTION:

Teacher may lead the pupils into an activity/activities that will depict the effects of not taking care of the pit latrines, e.g. a role-play, poem and drama.

LESSON DEVELOPMENT

The teacher should think of any participatory activity which may focus on identifying the materials needed for cleaning the pit latrines e.g. each pupil to pick one cleaning material, name it and say the use.

The teacher will lead the pupils into an activity, which will emphasise the need for proper care of the pit latrine, e.g. doing a role-play or a game, which will bring out alternative materials they could use in place of bought items.

The teacher will lead the pupils into an activity/activities which will involve proper latrine cleaning techniques, e.g. demonstration of proper and improper steps of cleaning the pit latrines.

CONCLUSION:

Prepare activities that will ensure the daily cleanliness of the pit latrine e.g. producing a duty rota or provision of cleaning materials.

MONITORING AND EVALUATION

As teacher evaluates the lesson s/he should focus on individual learner's cognitive social/spiritual/moral/physical and emotional needs.

Water Sources

SUBJECT:	Environmental Science
GRADE:	7
TOPIC:	Water Hygiene
SUB-TOPIC:	Water Sources
DURATION:	2 lessons of 40 minutes each
TEACHING AND LEARNING RESOURCES:	Questionnaires, Data collection and analysis Chart
REFERENCES:	Environmental Science Teacher's Guide and Pupils' Book Grade 7

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) identify hygienic and unhygienic practices at water points or sources in the community;
- b) analyse the data collected;

Attitudes:

- a) appreciate the importance of looking after water sources well;
- b) develop a sense of responsibility for communal facilities;

Physical Skills:

- a) collect data and analyse it;
- b) clean and maintain water sources;

Psycho-social Life Skills:

- a) effectively communicate to others on the need to have safe water sources;
- b) make decisions on keeping the water sources safe;
- c) use critical thinking to analyse practices at water sources.

INTRODUCTION:

The teacher will involve pupils in participatory activities which may lead them to come up with different sources of drinking water in their community. This could be done through group discussion and question and answer.

LESSON DEVELOPMENT:

In the first lesson the teacher will engage pupils in participatory activities which will focus on appropriate ways of making pupils to go out and survey the water sources. Teacher may design his own form for pupils to use in the survey or can refer to the one attached for guidance.

For the second lesson, the teacher will focus on data analysis. This could be done through compiling and analysing in, e.g. graphs, pie chart, tables and diagrams.

CONCLUSION:

A class discussion can follow on actions that can be taken to address unhygienic practices at water sources.

MONITORING AND EVALUATION:

The teacher should monitor improved practices at water sources by making frequent visits.

Ecology

SUBJECT:	Environmental Science
GRADE:	7
TOPIC:	Environmental Management
SUB-TOPIC:	Ecology
DURATION:	2 lessons of 40 Minutes each
TEACHING AND LEARNING RESOURCES:	Charts, word cards, the environment
REFERENCES:	Environmental Science Pupils' Book and Teacher's Guide Book 7

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- classify members of a food chain as producers, consumers and decomposers;
- link different food chains to form webs;
- explain a food web;

Attitudes:

- practice good hygiene to prevent worm infestations;
- demonstrate willingness to seek help/treatment when infested with worms;

Physical Skills:

- demonstrate the skill of planting and nurturing of trees;
- draw food webs;

Psycho-social Life Skills:

- show awareness of the effects of destroying vegetable on food chains and food webs;
- think critically when classifying members of a food chain and when linking them up to form food webs;
- effectively communicate with each other, with their teachers and their parents on the importance of all the members of food chains;
- make decisions on when and where to plant trees.

INTRODUCTION:

Teacher should initiate an activity to bring out the issue of inter-dependence in the body, e.g. how the parts of the body depend on each other in order for the body to function effectively. This could be done through song and story line.

LESSON DEVELOPMENT:

The first lesson should focus on classifying members of a food chain as producers, consumers and decomposers. This could be done by using participatory activities such as word/work cards, charts and matching.

The second lesson should focus on developing food webs from food chains. This could be done by using participatory activities such as charts, games, songs and work/work cards.

CONCLUSION:

The interdependence of all members of a food chain or food web should be emphasised by the teacher through participatory activities, e.g. using word cards.

MONITORING AND EVALUATION:

Monitor improved attitudes of pupils towards environment, e.g. participating in tree-planting in the school and the community.

Safe disposal of Refuse

SUBJECT:	Environmental Science
GRADE:	7
TOPIC:	Community Hygiene
SUB-TOPIC:	Safe disposal of Refuse
DURATION:	3 lessons of 40 minutes each
TEACHING AND LEARNING RESOURCES:	Communities near school, survey sheet
REFERENCE:	Environmental Science Hand book, any other relevant materials on community hygiene

OBJECTIVES:

By the end of these lessons, PSBAT (in any form(s) the teacher chooses to use):

Knowledge:

- a) collect data on refuse disposal in the school and surrounding community;
- b) analyse data collected;
- c) suggest safe ways of disposing of refuse.

Attitudes:

- a) encourage each other and the community to practice methods of safe refuse disposal;
- b) practice methods of safe refuse disposal;
- c) appreciate cleanliness in the school and surrounding community;

Physical Skills:

- a) conduct the survey;
- b) dispose of refuse safely;

Psycho-social Life Skills:

- a) communicate effectively when conducting the survey;
- b) work together with the community in disposing of refuse safely.

INTRODUCTION:

The teacher will come up with a participatory activity to draw from pupils how they dispose of refuse, e.g. the teacher may use a quiz, (set of leading questions), pair work and group discussion.

LESSON DEVELOPMENT:

This being a practical topic, for lesson one, the teacher will introduce and discuss the survey instrument with the pupils to ensure its clarity. A mock survey would be

conducted in class to validate the instrument. A sample questionnaire may include questions such as the ones below.

NOTE: After the first lesson, the teacher will seek permission from the local authority in the area to conduct the survey.

SAMPLE QUESTIONNAIRE

WASTE DISPOSAL							DRY	WET
Does the household have a rubbish pit? Yes <input type="checkbox"/> No <input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>
1. If no, where does the family dispose of								
(a) dirty water	(garden	anywhere in the yard	in flowers	pond	toilet			
(b) left over food	(as above and	rubbish pit	rubbish heap	feed domestic animals & pets				
(c) faeces (bury	neighbour's	rubbish	rubbish	bush	own toilet	communal		
	toilet	pit	heap			toilet		
2. Do you separate refuse/rubbish that rots (e.g. leaves, grass) from the one that does not rot (e.g. glass, plastic)								
	Yes	No						
3. (a) How do you dispose of refuse that rots, doesn't rot?								
We	bury	burn	recycle	make compost				
What to observe (options as in 3a above)								
We	bury	burn	recycle	make compost				
- Maintenance of surroundings								
		clean	dirty					

For lesson two, the pupils will go out to conduct the survey. The teacher will use any appropriate method of organising pupils for the survey, e.g. pairs and small groups. At the end of the second lesson the teacher will collect the questionnaires for safe-keeping.

Lesson three will focus on data analysis and make recommendations to the local authority on safe ways of refuse disposal.

CONCLUSION:

Teacher with pupils will make a plan of action to go and demonstrate safe refuse disposal.

MONITORING AND EVALUATION:

Monitor impact of the survey, e.g. through observations, interview with school pupils, and the community.

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