Risk Reduction Methods








Outcomes

- The learner will be able to act confidently on curiosity about natural phenomena;
- The learner will be able to interpret and apply scientific knowledge;
- The learner will be able to demonstrate an understanding of the interrelationships between science and the environment

Disaster Reduction Handbook For Foundation Phase Learners

Grades 1-3

Risk Reduction Methods: Disaster Reduction Handbook for Foundation Phase Learners, Grades 1-3

Produced by the United Republic of Tanzania with the support and technical assistance of the UNISDR Regional Office for Africa.

This educational material was produced in 2009 with the aim of supporting and facilitating the education of primary school pupils in Disaster Risk Reduction and promoting a culture of prevention and resilience to disasters.

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Contact Information
UNISDR Secretariat
International Environment House II
7-9 Chemin de Balexert
CH- 1219 Chatelaine, Geneva, Switzerland
Tel: +41 22 917 8908/8907
Fax: +41 22 917 8964
Email: isdr@un.org
www.unisdr.org and www.preventioweb.net

UNISDR Africa
UN Complex Block S, Level 1
PO Box 47074, Gigiri, Nairobi, Kenya
Tel: + 254 20 762 1569
Fax: +254 20 762 4726
Email: ISDR-Africa@unep.org
www.unisdrafrica.org

Colour coding

In order to facilitate the learning process this book is divided into different sections according to a specific grade. The three different colours will help you navigate your way around the book and easily find the section which you are looking for. The colour coding for the different grades is:

Exercises – Grade 1

Exercises – Grade 2

Exercises – Grade 3

Our 4 mori (friends)

Busu

Kima

Simba

and Twiga

have a rap to share with you.

BE AWARE
of risks and dangers that can become possible disasters

PREPARE
for the eventuality of a disaster and what you will do

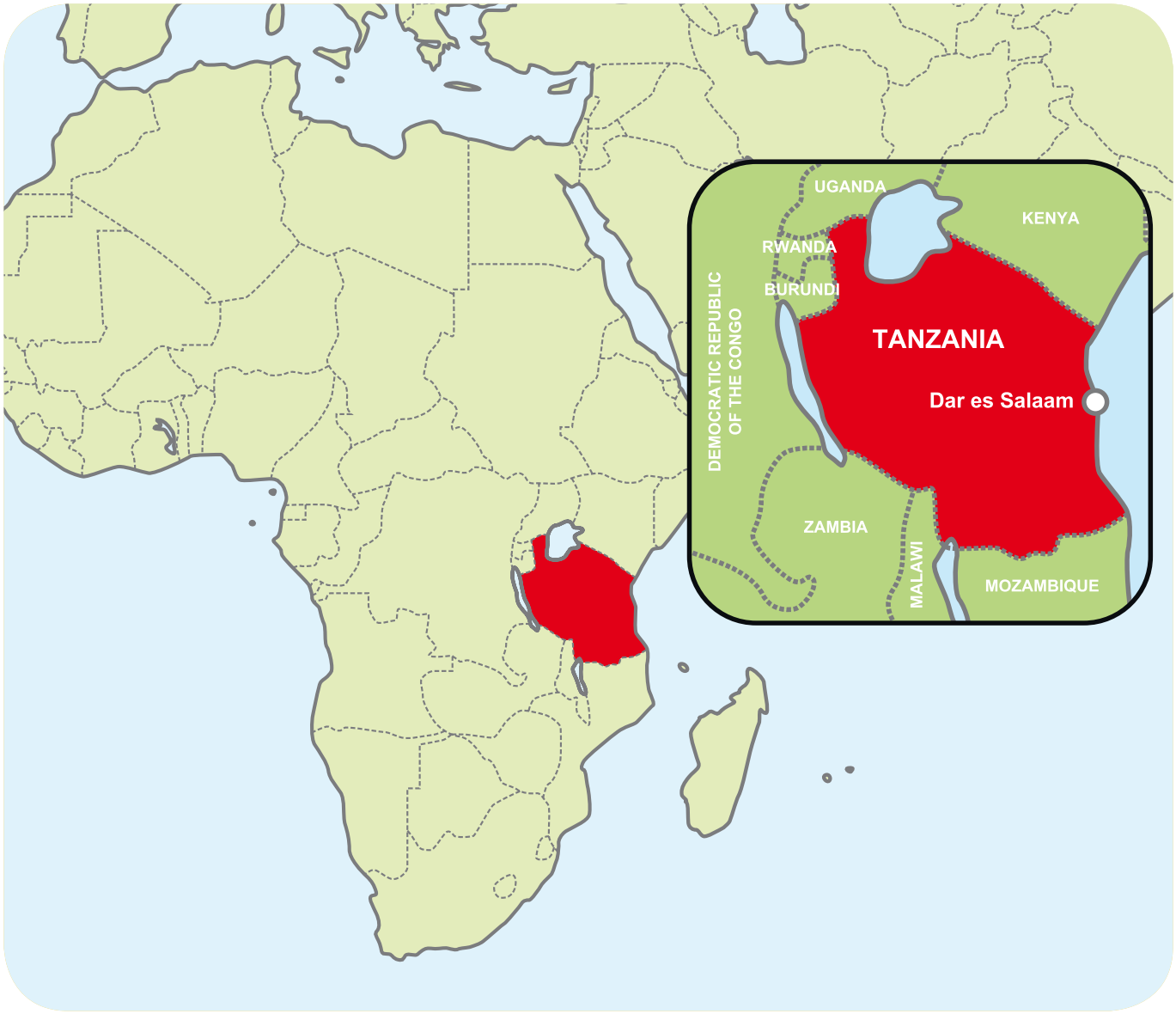
SHARE
your knowledge of what to do with others

Remember this MOTTO,
it could save your life

Chapter 1 – Country profile of Tanzania

1.1 Location

Tanzania is one of the three East African countries, which include Kenya and Uganda. It lies between longitudes 290 and 410 east and latitudes 10 and 120 south. The country shares borders with 8 countries. These include Uganda and Kenya on the north, Burundi and Rwanda on the northwest, Democratic Republic of Congo on the western side, Zambia on the southwest, Malawi and Mozambique on south east and southwest respectively. On eastern part the country bordered by India Ocean.



Chapter 1 – Country profile

1.2 Size

The country lays on an area of 945,000km2, of which 881,000km2 covers the mainland and 2,000km2 is Zanzibar. While 62,000km2 covers water bodies and 3,350km2 is forest and woodlands.

1.3 Administration

The country is divided into 26 regions, 21 in the mainland and 5 in Zanzibar Island. It has 140 administrative districts of which 130 are in Mainland and 10 in Zanzibar.

1.4 Population

The country estimated population of 34,569,232, of which 16,910,321 are males and 17,658,911 females. Out of these, Tanzania mainland has a total population of 33,584,607 and Zanzibar has 984,625.

1.5 Climate

Tanzania has a tropical type of climate. In the highlands, temperatures range between 10oC and 20oC during cold and hot seasons respectively; the rest of the country has temperatures never falling lower than 20oC.

Two rainfall regimes exist over Tanzania. One is Unimodal (November– April) and the other is Bimodal (Short rains in October – Mid January and Long rains in March – May). The former is experienced in Southern, southwest, central and western parts of the country, and later is found to the north and northern coast.

Chapter 1 – Country profile

1.6 Geographical Features

Tanzania is the biggest of the East Africa countries and has spectacular landscape of mainly three physiographic regions namely the island and coast plains to the east; the inland saucer-shaped plateau; and the highlands. The Great Rift Valley that runs from northeast of Africa through central Tanzania is another landmark that adds to the scenic view of the country. The rift valley runs to south of the country splitting at lake Nyasa; one branch runs down beyond lake Nyasa to Mozambique; and another branch to Northwest along side Burundi, Rwanda western parts of Tanzania and Uganda. The valley dotted by unique lakes which include lake Rukwa, Tanganyika, Nyasa, Kitangiri, Eyasi and Manyara.

Chapter 1 – Country profile

The uplands include the famous Kipengere, Udzungwa, Matogoro, Livingstone and Fipa plateau forming the southern highlands. The Usambara, Pare, Meru, Kilimanjaro, The Ngorongoro crater and Oldonyolengai, all form the northern highlands. From these highlands and the central saucer plateau flows the drainage system to the Indian and Atlantic Ocean. Mediterranean Sea and Inland drainage system.

Tanzania has nine major rivers which are Ruvuma, Rufiji, Ruvu, Ruaha, Malagarasi, Kilombero, Pangani, Kagera and Wami.

Chapter 2 – Key Concepts

Learning outcomes:

On completion of this workbook, learners must be able to:

- Demonstrate an understanding of the key concepts associated with disaster risk reduction;
- The learner will be able to act confidently on curiosity about natural phenomena;
- The learner will be able to make informed decisions regarding personal, community and environmental health;
- The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world;

What is a disaster?

- A disaster happens when a natural phenomena, like wind, fire or rain becomes a hazard and turns into a disaster.
- Disasters cause widespread losses and affect the lives of many people.
- Examples of disasters are floods, droughts, landslide and earthquakes.

What is a hazard?

- A hazard is potentially damaging physical event, phenomenon or human activity.
- Examples of hazards are too much rain which could lead to a flood or the absence of rain which could lead to a drought.

Chapter 2 – Key Concepts

What is vulnerability?

- Vulnerability is the extent to which people or buildings are likely to be damaged by a specific hazard.
- For example an over-populated poor community is more vulnerable than a wealthy community which can afford to put measures in place to minimize the damage caused by a hazard.

What is risk?

- Risk is the likelihood of suffering harm as a result of a disaster.
- For example poorer communities will be more at risk than other communities.

What is a threat?

- A threat is an indication of imminent harm or danger.
- For example the fact that a river MAY flood is a threat.

What is an emergency?

- An emergency is a local event within a community and only affects a limited number of people and/or property. It can be managed by the community using its own resources.
- An example of an emergency is a fire outbreak or a car accident.

What is manageability?

- Manageability is the degree to which a community can get involved and manage a hazard.
- For example educating a community about the importance of cleanliness so as to avoid the spread of cholera.

Chapter 2 – Key Concepts

What is early warning?

- Technology is used to give communities warning about looming risks and possible hazards. Some communities make use of the knowledge of the local people to warn against impending droughts or possible wild fires.
- An example of an early warning includes notifying a community of appropriate action to be taken in order to prevent death, injury or damage to property.

What is resilience?

- Resilience is the ability of a community that is exposed to hazards to adapt in order to reach an acceptable level of functioning.
- For example, resilience can be increased by learning from past disasters and improving risk reduction measures.

What is the Disaster Management Cycle?

- The disaster management cycle is all aspects of planning and responding to disasters.
- The disaster management cycle would include prevention, preparedness, response and recovery.

What is disaster risk reduction?

- Disaster risk reduction involves minimising vulnerability and disaster risks throughout a society so as to avoid or limit the impact of a disaster.
- Examples of disaster risk reduction include making people aware of risks around them and developing knowledge through education, training, research.

Exercises – Grade 1

Discuss with classmates and your teacher what hazards occur where you live and go to school. Choose one and draw a picture of it.

Exercises – Grade 2

You need to go and interview an older member of your family to find out what traditional early warning systems have been used effectively in your community over the years and how they have been passed down from generation to generation. Sketch your finding on a picture and report back to the class.

Exercises – Grade 3

In groups discuss the differences between an emergency and a disaster. Report back to class:

Use the following words as clues for your discussion:

- Wide spread loss
- Local event
- Hazard
- Limited number of people
- Natural phenomena

Chapter 3 – Types of disasters

Learning outcomes:

On completion of this workbook, learners must be able to:

- Demonstrate an understanding of the various types of disasters common in Tanzania;
- The learner will be able to act confidently on curiosity about natural phenomena;
- The learner will be able to make informed decisions regarding personal, community and environmental health;
- The learner will be able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his or her world;
- Use this knowledge to be able to:
    - make informed decisions about social and environmental issues and problems

1. Drought

A drought occurs when there is a shortage of rain and consequently not enough water for all or some living communities in an area.

Causes

Droughts can be caused by:

- A lack of rain;
- Human activity which causes changes in the ground surface and soil;
- Higher sea surface temperatures;
- Environmental ruin.

Natural & slow onset

General characteristics

- There is less available water than normal.

Impact

The impact of drought on a community is:

- Crops are affected and so farmers receive less money;
- The agricultural sector spends less money on agricultural development;
- The cost of food goes up;
- Inflation rates go up;
- Famine, illness, death, reduction of drinking water, migration, loss of livestock, break up of communities.

Exercises – Grade 1

A

B

C

D

Place the pictures in the right order.

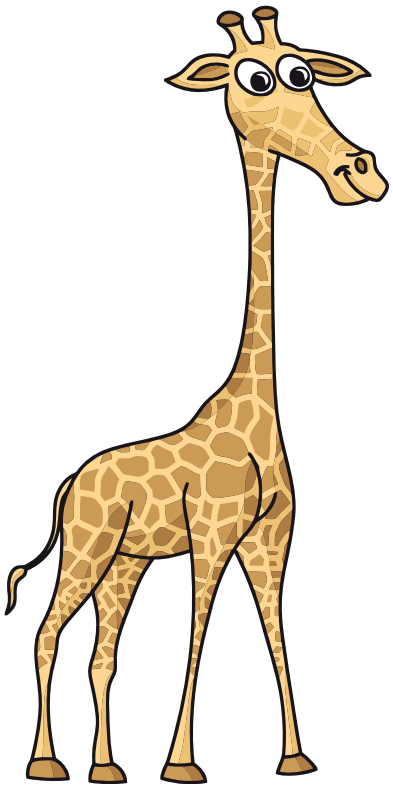
Remember what you have learnt about droughts and circle the letter corresponding to the picture which will take place first, then the picture which will take place second and so on. Ask your teacher to help you with the first one.

1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D

Exercises – Grade 2

Noemia lives in Mtwara. Her mom works at an organic market garden which supplies vegetables to a local restaurant. Over the last couple of months there has been very little rain and Noemia has heard her mom saying that they vegetables are very small and they are worried about what will happen to the crops if the rains don't come.

Find a partner and act out what happens next in the story.



Exercises – Grade 3

Discuss these two questions in groups and report back to class:

- Can we prevent droughts from occurring?
- Can we minimize the effects of droughts?

Use the following words as clues for your discussion:

- The way we use water
- Learning from history
- Building dams
- Crop planting techniques
- Water saving methods
- Being water-wise
- Rain water harvesting

2. Earthquake

An earthquake occurs when large masses of rock break and move against each other causing the ground to shake.

Causes

Earthquakes can be caused by:

- Rock along a fault under the earth's surface slips and moves into a new position.

General characteristics

Shaking of earth caused by waves on and below the earth's surface causing:

- Surface faulting;
- Tsunamis;
- Liquefaction;
- Aftershocks;
- Tremors, vibrations;
- Landslides.

Impact

The impact an earthquake causes on a community is:

- An earthquake causes physical damage. For example buildings can be damaged or destroyed completely. Fires often occur after an earthquake which causes additional damage. Landslides are associated with earthquakes and they can causes further damage. Dam walls can be damaged as a result of an earthquake which can also result in flooding.
- There are often high numbers of people injured after an earthquake. Think about the earthquake in China in 2008 where thousands of people were left dead or injured. If a building is not resistant to earthquakes the people inside the building can be trapped, injured or even killed.
- The general public health of a community is affected. Injuries such as fractures are very common. Water often becomes contaminated and sanitary conditions deteriorate.
- Water supply's are severely affected due to damage of water systems, pollution of open well and changes in the water table.

Exercises – Grade 1

Whole class activity.

On a large piece of poster paper ask your teacher to draw a picture of a house that has collapsed after an earthquake. The house was situated below a hill and a mud slide has occurred.

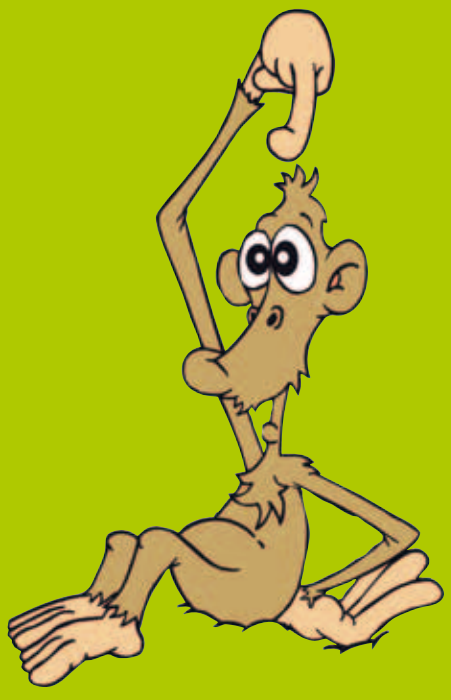
Go outside and collect anything you can that you can use to stick on the picture to make it look real. You can use things like sand, leaves, twigs, pieces of bark, grass, flowers. Also use the materials provided by your teacher (glue, wool, string, crayons) to turn the picture into a master piece.

Exercises – Grade 2

Complete the tables

Earthquake	1	2	5		3	7	6		8
Landslide	4			16				36	

Tsunamis	1	3	5		9	12	15		22
Aftershock	2			14				36	



Exercises – Grade 3

Solve the following problems:

- After the tremors from the earthquake subsided rescue workers realised that half of the children in the school were injured. If the school had 40 children in it, how many were injured?
- Thirty six of the school children will have to be transported to hospital by ambulance. If you round off to the nearest ten, how many beds will need to be made available in the hospital for the children?
- Ten aftershocks have already occurred. Experts are predicting double that number. How many aftershocks can be expected in total?
- Three out of the thirteen teachers at the school have gone missing. How many teachers are safe?
- There were ten major cracks in the walls of four of the school buildings. Multiply 10 x 4 to work out how many cracks there were in total.

3. Epidemics

An epidemic is when an infectious disease attacks many people in a community all at the same time. Examples of epidemics are outbreaks of cholera or meningitis.

Causes

Epidemics can be caused by:

- Unsanitary conditions;
- Poverty;
- Over- crowding;
- Malnutrition;
- Contamination of drinking water or food.

General characteristics

- There is a risk of diseases spreading;
- Numbers of infected people can become very large;
- Severe diseases can lead to disability or death;
- There is a risk of social or economic disruption;
- Lack of adequate professional people to assist;
- Lack of supplies needed to treat people;
- Danger of spreading the disease to foreign countries.

Impact

The impact of an epidemic on a community is:

- Illness;
- Social and political disruption;
- Increased trauma in emergency settlements.
- Death;
- Economic loss;

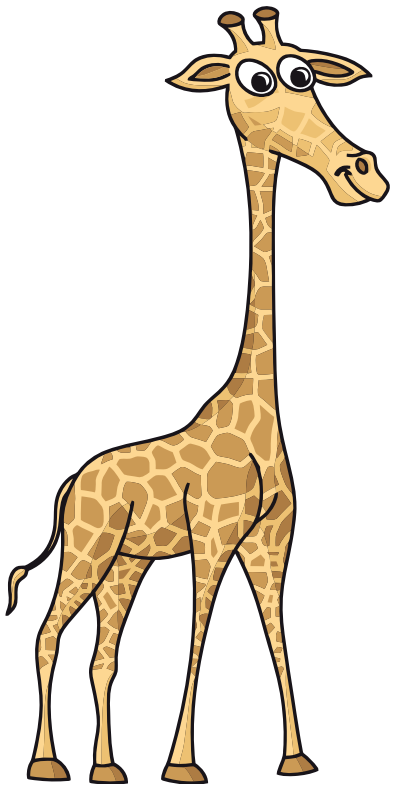
Exercises – Grade 1

Your teacher will tell you a story about an epidemic. Listen carefully. Does the story make you feel happy, sad or scared?

Exercises – Grade 2

Write a letter to a nurse asking her to come to your school and tell the children about the work she does in educating people about the prevention of contagious diseases.

Write a list of questions you would like to ask the nurse when she visits the school.



Exercises – Grade 3

Join columns A and B to make the statements true

A	B
Epidemics are caused by	illness, death and economic loss
Epidemics can cause	social and political disruption
The effect of an epidemic on a community is	contamination of drinking water or food
An example of an epidemic	an epidemic
Malnutrition can cause	is an outbreak of Cholera

4. Fire

A fire is the uncontrolled burning of a settlement, forest or transportation facility that destroys life and properties.

Causes

Fires can be caused by:

- Fire used in hunting and honey harvesting;
- Use of fire in clearing farms;
- Thoughtless smokers;
- Explosion of transportation facilities;
- Electricity leakage;
- Explosion of gases;
- Traditional beliefs (Some tribes believe that setting fires attracts rainfall);
- Thunderstorm;
- Negligence/ carelessness;
- Unplanned settlements;

Man made & rapid onset

General characteristics

- Electricity spark;
- Smoke.
- Smell of leaking gases/inflammable fuel;

Impact

The impact of a fire on a community is:

- Economic loss;
- Loss of properties;
- Destruction of ecosystem (wildfire);
- Disabilities;
- Loss of life;
- Destruction of settlements;
- Injuries;
- Social problems.

Exercises – Grade 1

Have a discussion with your teacher about your experience of fire.

What were the emotions you felt? Was it **happy**, **sad** or **scary**?

If you have not had an experience with a fire or don't know of any one who has had an experience with fire, try to imagine how it would feel.

Tell your teacher what you would do if you woke up in the night and your house was on fire.

Exercises – Grade 2

Can you find these words hidden in the puzzle? You may go across or down.

smoke
matches
fires
stop
burn
drop
roll
safety
fireman
water

B	W	S	A	F	E	T	Y
M	A	T	C	H	E	S	P
S	T	O	P	C	G	M	H
B	E	J	K	D	R	O	P
U	R	O	L	L	P	K	Q
R	M	R	F	I	R	E	S
N	F	I	R	E	M	A	N

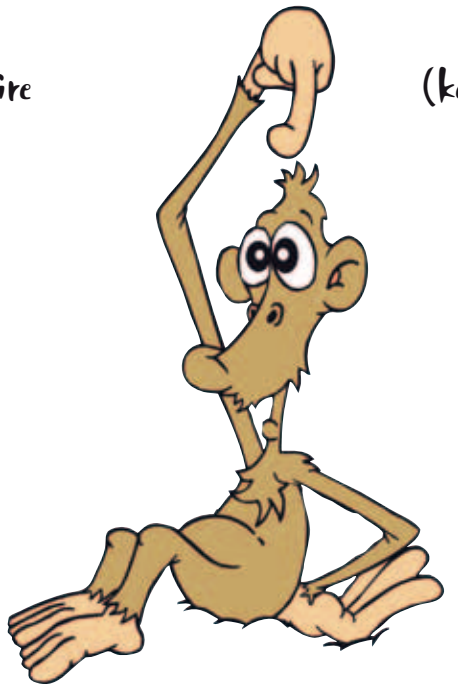
Exercises – Grade 3

Write a string poem

- To write a string poem you need to think of as many adjectives (describing words) as you can.
- Use these words to help you write your own poem about fire.

Here's an example to help you

Line 1	Fire, fire, fire	(keyword written 3 times)
Line 2	Orange, red, yellow fire	(describes what it looks like)
Line 3	Small, huge, big fire	(describes its size)
Line 4	Crackling, leaping, burning fire	(describes what it does)
Line 5	Glowing, flaming, roaring fire	(describes what it does)
Line 6	Fire, fire, fire	(keyword written 3 times)



5. Floods

A flood occurs when there is a significant rise of water level on a surface, in a stream, lake or ocean that destroys life and property.

Causes

Fires can be caused by:

- Naturally occurring flash, river and coastal flooding from intense rainfall or inundation associated with seasonal weather patterns;
- Human manipulation of watersheds, drainage basins and floodplains.

General characteristics

Natural & rapid onset

- Flash floods–Accelerated runoff, dam failure, breakup of ice jam;
- River floods–Slow buildup, usually seasonal in river systems;
- Coastal floods–Associated with tropical cyclones, tsunami waves, storm surges Factors affecting degree of danger: depth of water, duration, velocity, rate of rise, frequency of occurrence, seasonality.

Impact

The impact of a flood on a community is:

- Structures damaged by washing a way, becoming inundated, collapsing, impact of floating debris;
- Deaths;
- Possible outbreaks of malaria, diarrhea and viral infections;
- Contamination of wells and groundwater possible;
- Clean water may be unavailable;
- Harvests and food stocks may be lost to flood;
- Animals, farm tools and seeds might be lost;
- Environmental degradation.

Exercises – Grade 1

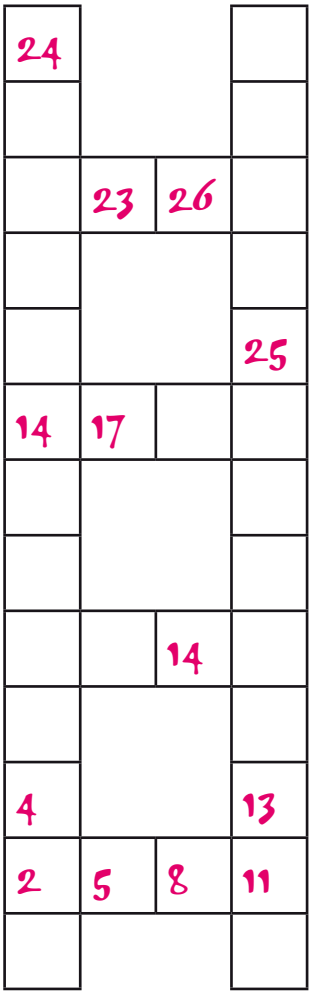
Whole class activity.

On a big piece of poster paper, make a mural of a flood scene which you can stick up on one of the walls of your classroom. Use paints, crayons, pieces of material and anything else you can find which will assist you in creating the mural.

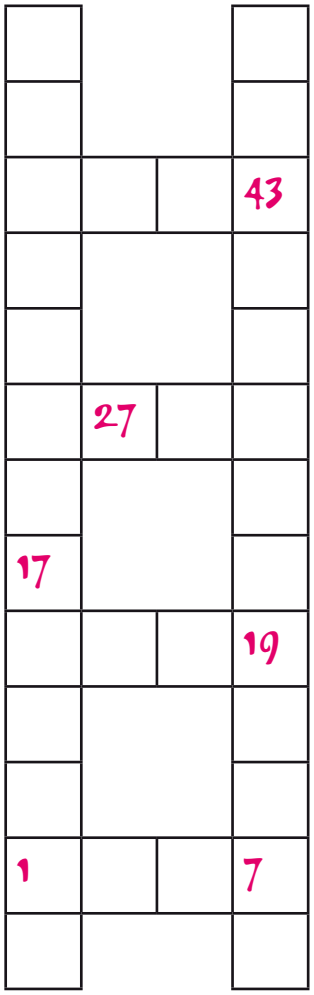
Exercises – Grade 2

Some times when there are floods people have to climb on to roof tops to escape the water.

Fill in the missing numbers as you climb up the ladder.



↑ +2
→ +3

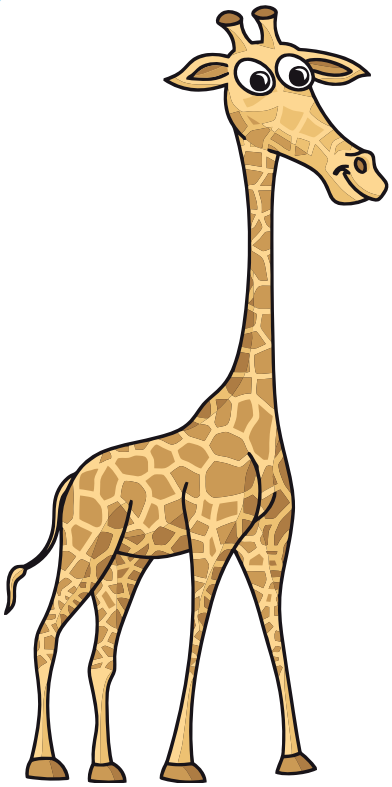


↑ +4
→ +2

Exercises – Grade 3

Design a stamp for flood awareness.

Your stamp will be stuck on to envelopes by people posting letters, so remember to be creative and use plenty of **bright** colours!



6. Accident

An accident is characteristically violent in nature and usually occurs with little or no warning.

Its effects can be limited or widespread.

There are two types of accidents namely transports accidents and industrial accidents.

6.1 TRANSPORTATION ACCIDENT

Transportation accidents occur due to collisions of vehicles or derailment of trains, aircraft crashes, sinking of ships and boats.

Causes

Transportation accidents can be caused by:

- High speed driving;
- Poor road conditions;
- Reckless driving;
- Brake failure.

General characteristics

- Reckless driving;
- Overloading;
- High speed driving.

Impact

The impact of a transportation accident on a community is:

- Loss of human life;
- Loss of properties;
- Injuries;
- Disabilities;
- Social problems.

6. Accident

6.2 INDUSTRIAL ACCIDENT

An industrial accident is technological in nature and is due to accidental release of harmful substances during production, transportation, handling and storage.

Causes

Industrial accidents can be caused by:

- Technological system failures;
- Failures of plant safety design or components;
- Natural hazards such as fire, earthquakes or landslides;
- Arson or sabotage.

General characteristics

- Leakage of inflammable gases/fuel;
- Electricity shock/fluctuation/leakage;
- Carelessness of industrial workers;
- Toxic releases.

Impact

The impact of an industrial accident on a community is:

- Physical damage – Damage or destruction may occur to structures and infrastructure. Transportation accidents damage vehicles and other objects on impact. Industrial fires may reach high temperatures and affect large areas.
- Casualties – Many people may be killed or injured and require medical treatment.
- Environmental – Contamination of air, water supply, land, and animal life may occur. Areas may become uninhabitable for humans and animals.

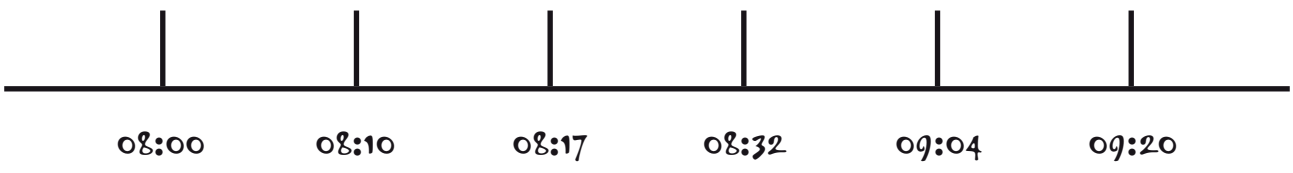
Exercises – Grade 1

Your teacher will give you magazines and newspapers. Cut out pictures of transportation or industrial accidents. Paste them in your workbook and then write some sentences explaining what has happened.

Exercises – Grade 2

Fill in the following events on a timeline putting them in order from what happened first to what happened last.

road is cleared	truck leaves depot	truck skids on wet road
brakes fail	truck is overloaded at depot	truck looses its load



Exercises – Grade 3

Complete the table using the words in the box:

Industrial		may	reach
	temperatures	and	can
affect	very		areas
Industrial	accidents	can	
caused	by		hazards
such		fire	
or			

landslides
be
fires
natural
high
large
earthquakes
as

7. Landslides

Natural & rapid onset

A landslide occurs when large quantities of mud plunge down a mountain.

Causes

Landslides can be caused by:

- Increase in water content caused by heavy rainfall or rising ground water;
- Increase in slope angle for new construction or by stream erosion;
- Breakdown or alteration of slope materials from weathering and other natural processes;
- Placement of underground piping for utilities, or use of landfill;
- Vibrations from earthquakes, blasting, machinery, traffic and thunder.

General characteristics

- Landslides vary in types of movement (falls, slides, topples, lateral spread, flows), and may be secondary effects of heavy storms, earthquakes, and volcanic eruptions;
- Landslides are more widespread than any other geological event.

Impact

The impact of a landslide on a community is:

- Anything on top of or in path of landslide will suffer damage. Rubble may lock roads, lines of communication or waterways. Indirect effects may include loss of productivity of agricultural or forestlands, flooding, reduced property values;
- Fatalities can occur due to slope failure.

Exercises – Grade 1

Choose between alternative 1 and alternative 2 to choose wisely on how to reduce your risk and personal safety if you were to encounter a landslide.

Question 1

Alternative 1

Build your house beneath a steep slope, or

Alternative 2

Build your house far from steep slopes or mountain edges

Mark with an X

Alternative 1	
Alternative 2	

Question 2

Alternative 1

Curl into a tight ball and protect your head if escape from a landslide is not possible, or

Alternative 2

Play with your friends beneath a steep slope after heavy rains

Mark with an X

Alternative 1	
Alternative 2	

Question 3

Alternative 1

After a landslide has occurred in an area close to where you live, watch out for exposed electrical wires, broken water pipes or damaged sewage lines and stay away from them.or

Alternative 2

After a landslide has occurred in an area close to where you live, go and find a broken water pipe and play hide and seek in it with your friends.

Mark with an X

Alternative 1	
Alternative 2	

Exercises – Grade 2

Fill in the beginning letter to create words in the word family "_and", as well as "_ide". See the example to help you.

L and	sl ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide
_____and	_____ide

Exercises – Grade 3

You are a newspaper reporter. You have been asked by your editor to write an article for this week's edition on how landslides in Tanzania have an impact on the environment.

Your story should give some detail on how landslides occur, the impact it has on the environment and ways in which the negative effects of landslides can be reduced. Remember that your article should educate the public so that they can be better informed about landslides. Use your study guide, consult the school library, conduct interviews and use the internet as resources for your research.

8. Strong winds

Strong winds occur when air moves at a high speed from high temperature area to low temperature area.

Impact

The impact of a strong wind on a community is:

- Structures lost and damaged by wind force, surge and landslides;
- Flying debris may cause casualties;
- High winds can ruin standing crops, tree plantations and food stocks;
- Severe disruption is possible as wind brings down telephone lines, electrical polls, antennas and satellite dishes. Transport may be affected.

Exercises – Grade 1

MY BIG BALLOON - traditional

I can make a big balloon.
Watch me while I blow.
Small at first, then bigger.
Watch it grow and grow.
Do you think it's big enough?
Maybe I should stop.
For if I blow much longer,
My balloon will surely POP!

Your teacher will read one line of the poem at a time to you, as a class you must read the line after her.

Find a partner and read the poem right through to them and then let them read it right through to you.

Discuss with your partner what will happen to the balloon if a strong wind suddenly starts blowing.

Exercises – Grade 2

Your teacher will give you each a balloon. Blow up your balloon and ask your teacher to tie a knot on it. Spend some time throwing it to a partner. Now go outside and throw the balloon to your friend.

Discuss these questions with your partner.

Is it more difficult to play with your balloon inside or outside in the wind?

What happens to the balloon in the wind?

Can strong winds affect us?

Do you think a strong wind can cause damage?

Exercises – Grade 3

The Beaufort Wind Scale is named after Sir Francis Beaufort. He developed the scale in 1805 to for sailors to estimate wind speed. It was later also adapted for use on land.

Force	Strength	Speed	Observations
0	Calm	less than 2 kilometers per hour (kph)	Tree leaves don't move, smoke rises vertically, sea is calm
1	Light Air	2-6 kph	Tree leaves don't move, smoke drifts slowly, sea is lightly rippled
2	Slight Breeze	7-11 kph	Tree leaves rustle, flags wave slightly, small wavelets or scale waves
3	Gentle Breeze	12-19 kph	Leaves and twigs in constant motion, small flags extended, long un-breaking waves
4	Moderate Breeze	20-29 kph	Small branches move, flags flap, waves with some whitecaps
5	Fresh Breeze	30-39 kph	Small trees sway, flags flap and ripple, moderate waves with many whitecaps
6	Strong Breeze	40-50 kph	Large branches sway, flags beat and pop, larger waves with regular whitecaps
7	Moderate Gale	51-61 kph	Whole trees sway, large waves ("heaping sea")
8	Fresh Gale	62-74 kph	Twigs break off trees, moderately high sea with blowing foam
9	Whole Gale	75-87 kph	Branches break off trees, shingles blown from roofs, high crested waves
10	Strong Gale	88-101 kph	Some trees blown down, damage to buildings, high churning white sea
11	Storm	101 kph-119 kph	Widespread damage to trees and buildings, mountainous waves
12	Hurricane	120 kph or greater	Severe and extensive damage

The Beaufort Wind Scale

Go outside and observe different clues as to how strongly the wind is blowing.

In pairs estimate the speed of the wind today by making use of the Beaufort Wind Scale.

9. Conflict

Man made & slow onset

Conflict is when a disagreement between two groups cause social and economic disruption in a community.

Causes

Conflict can be caused by:

- War;
- uprising from the radical or political groups;
- Civil unrest such as farmers and pastoralists in Kilosa and Ngorongoro Districts.

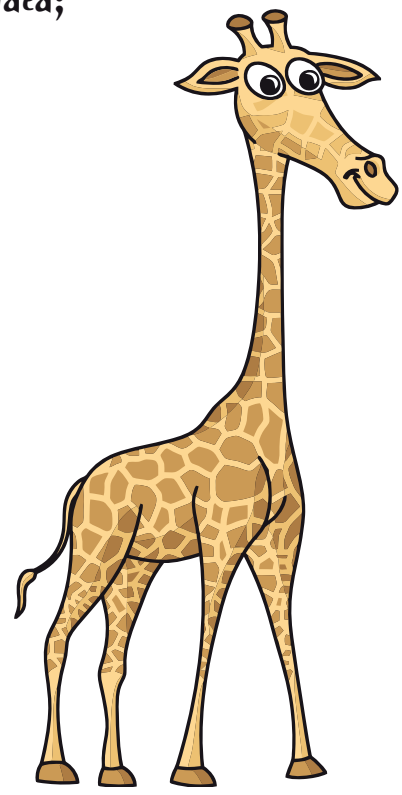
General characteristics

- Aggressive relationship;
- Economic instability.

Impact

The impact of conflict on a community is:

- Loss of means of livelihood;
- Communities becoming separated from any services previously provided;
- Loss of normal sources of food;
- Lack of shelter and household necessities;
- Lack of fuel for cooking;
- Lack of potable water;
- Communicable diseases and over-crowding;
- Additional burdens particularly for women heads of households;
- Possibly large numbers of unaccompanied children;
- Loss of land occupancy;
- Possible communication and logistics problems;
- Insecurity due to tensions and military activities.



Exercises – Grade 1

Re-write the sentence so that it becomes present tense:

In recent years conflict has been a problem in Tanzania.

Today _____

Re-write the sentence so that it becomes past tense:

Conflict leads to loss of land.

Yesterday _____

Re-write the sentence so that it becomes future tense:

Conflict is about two groups disagreeing.

Tomorrow _____

Exercises – Grade 2

Identify all the days of the week and the months of the year from the paragraph below and place them in their correct order.

The conflict between the two groups began on Friday the 6 September 2003. By Sunday no one knew for sure how long it would last. Most people hoped it would end by December, others knew deep down that it could go on until March or even April. Peace talks were scheduled for the second last Monday of October and were set to last until the next Wednesday. The biggest cause of the conflict was the civil unrest which started on Saturday 21 July 2003.

DAYS	MONTHS

Exercises – Grade 3

Convert the following sentence from minutes to hours:

The impact of the conflict on the community was seen 180 minutes after it began.

Convert the following sentence from hours to days:

The civil unrest lasted 120 hours.

Convert the following sentence from days to months:

The war went on for 31 days.

Convert the following sentence from hours to minutes:

Tension due to overcrowding felt as though it lasted for 2 hours.

Convert the following sentence from days to hours:

Resolution to the conflict could last up to 4 days.

Convert the following sentence from months to days:

Communication problems due to the conflict have lasted 2 months.

10. Volcanic Eruption

A volcanic eruption occurs when there is an explosive eruption of lava and gases emitted through craters, normally accompanied by quakes.

Causes

Volcanic eruptions can be caused by:

- Magma pushed upward through volcanic vent by pressure and effervescence of dissolved gases.

General characteristics

- Smoke;
- Lava flow.

Impact

The impact of a volcanic eruption on a community is:

- Death from mud flows, possibly lava flow and toxic gases.;
- Injuries from falling rocks, burns; respiratory difficulties from gas and ashes;
- Complete destruction of everything in the path of mud or lava flow;
- Collapse of structures under weight of wet ash, flooding, blockage of roads or communication system;
- Destruction of crops in path of flows, ash may break tree branches, livestock may inhale toxic gas or ash; grazing land may be contaminated.

Exercises – Grade 1

Paint a picture of a volcano.

Exercises – Grade 2

Work in groups of 4 and build a model of a volcano using paper mache. Once the paper mache has dried you can paint and label your volcano. Use a piece of cardboard as the base.

Exercises – Grade 3

Using a dictionary, an encyclopedia or the internet write down the meaning of the following words:

Lava

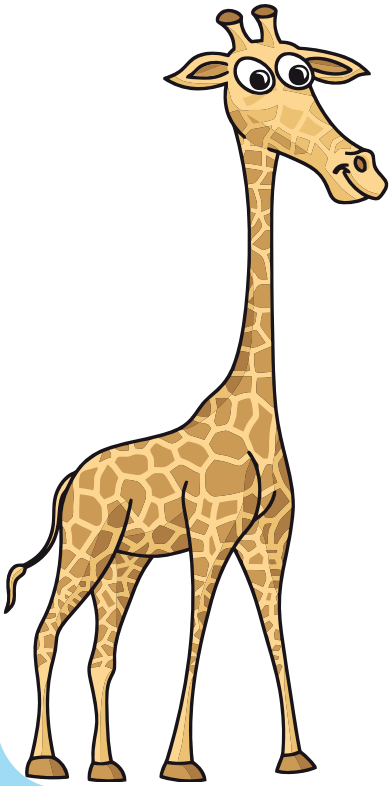
Magma

Magma chamber

The earth's crust

Vent

Volcanoes



11. Pest infestations

Pest infestations occur when there is an increase in pest numbers due to one or a combination of ecological factors including temperature, monoculture of crops, introduction of plants to new locations, introduction of pest species, overcoming genetic resistance in host, overcoming pesticide effects, conducive weather patterns, and migration.

Causes

Pest infestations can be caused by:

- Temperature – Often the most important factor that governs insect development is temperature. For insects, like locusts and the rice leaf;
- Moisture – Most insects that attack crops rely on adequate rainfall to

Promote egg hatching and host plant growth. For example, locust outbreaks and plagues seem related to the cessation of extended drought.

- Monoculture of crops – Genetically uniform crop monocultures provide greater opportunities for large infestations because there are fewer natural enemies of the pests attacking the crop. Therefore, when a single crop species replaces the natural plant community, it is more susceptible to attack by pathogens (any micro-organism or virus that can Causes disease), and insects. The larger the area planted with a single crop, the greater the potential for pest problems. Also, the longer a monoculture is maintained in the same area, the greater the number and severity of pests.

General characteristics

- Large numbers and varieties of pests;
- Lack of controls on imported plant products.

Impact

The impact of a pest infestation on a community is:

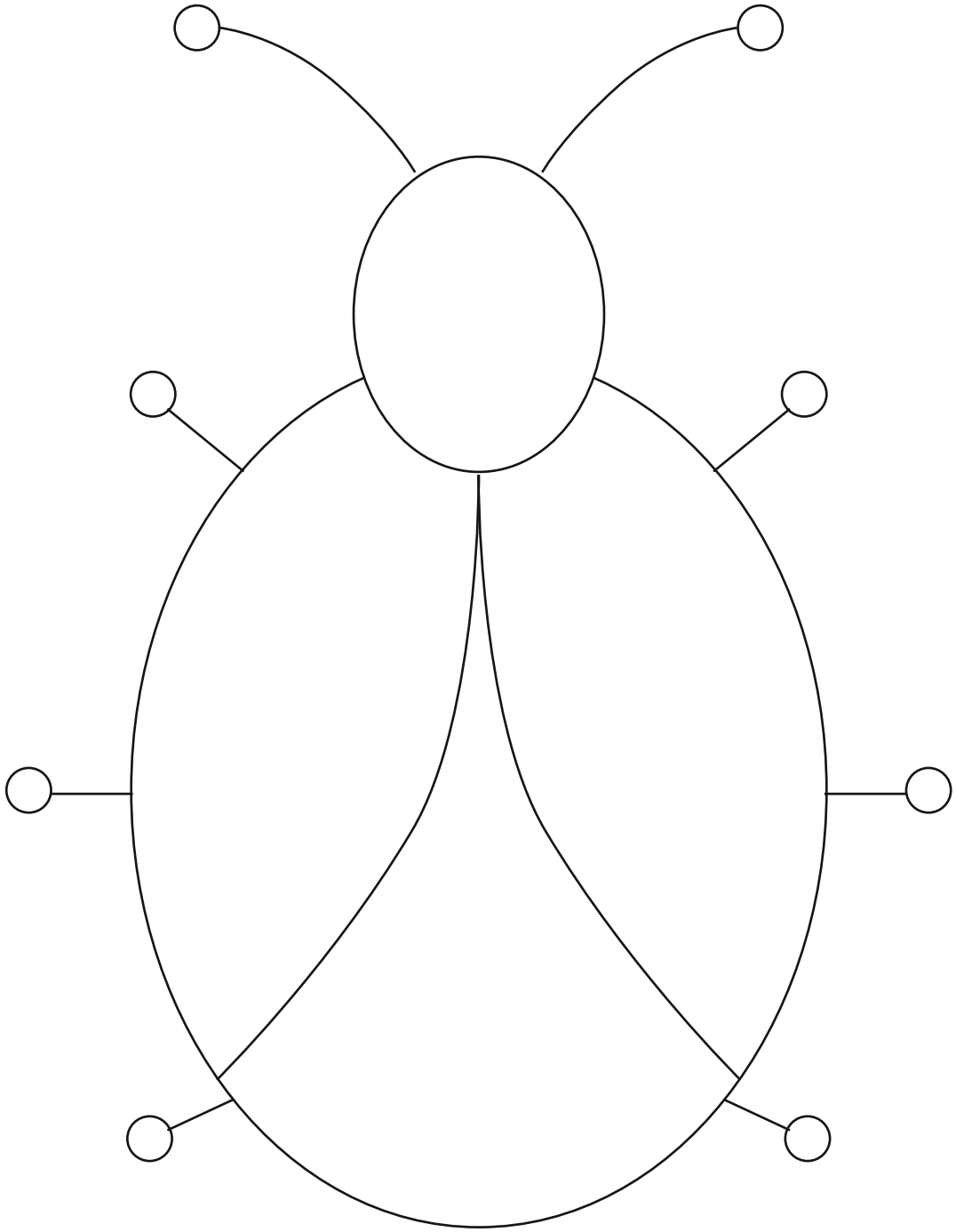
- Crop losses could lead to food shortages and even famine.

Exercises – Grade 1

Using egg boxes, pipe-cleaners and any other material that you would like, make a bug.

Exercises – Grade 2

Write a shape poem about bugs.



Exercises – Grade 3

Get into groups of 6.

Write a play about how a swarm of locusts destroyed the maize crops on a farm.

Each group should have a chance to act out the play to the rest of the class.

12. Refugees Influx

A refugee influx is a mass exodus of people moving outside their country of origin for reasons of conflict or fear of persecution. The reasons can also be because of their ethnicity, race, religion or nationality.

Causes

Man made & rapid onset

An influx of refugees can be caused by:

- War;
- Insurgence from the radical or political groups;
- Civil unrest.

General characteristics

- Civil war or political instability in neighboring country;
- Economic imbalance in neighboring countries.

Impact

The impact of an influx of refugees on a community is:

- Loss of means of livelihood;
- Communities becoming separated from any services previously provided;
- Loss of normal sources of food;
- Lack of shelter and household necessities;
- Lack of fuel for cooking;
- Lack of potable water;
- Communicable diseases and over-crowding;
- Additional burdens particularly for women heads of households;
- Possibly large numbers of unaccompanied children;
- Loss of land tenure;
- Environmental degradation;
- Possible communication and logistics problems;
- Insecurity due to tensions and military activities.

Exercises – Grade 1

Fill in all the Do's and Don'ts of personal hygiene for children living in a refugee camp.

DO'S	DON'TS

Exercises – Grade 2

You have to teach the children who are living in a refugee camp about clean and unclean water.

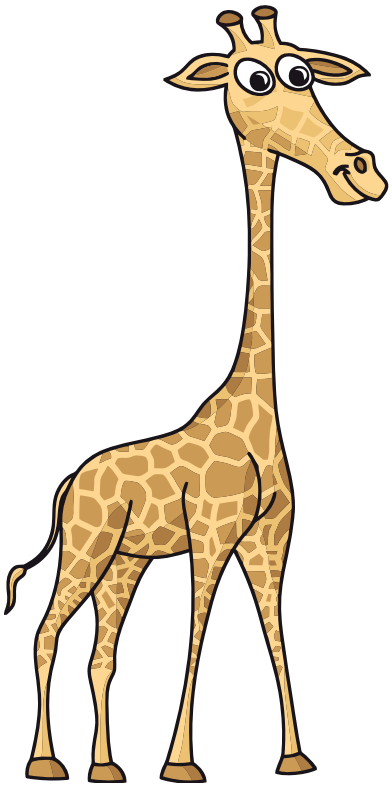
Remember to explain the following to them:

- How to find clean water
- The dangers of unclean water
- Simple water purification methods they can use easily in the refugee camp
- Leave them with tips on how to make the refugee camp environment healthier.

Exercises – Grade 3

Have a discussion with your teacher about the myths surrounding communicable diseases and then complete the table.

DISEASE	MYTH	FACT



13. Tsunami

A tsunami is series of waves generated when a body of water such as an ocean is rapidly shifted on a massive scale. A tsunami can be generated when earthquakes, mass movement and volcanic eruptions occur below water.

Causes

A tsunami can be caused by:

- Fault movement on the sea floor, accompanied by an earthquake;
- A landslide occurring underwater or above the sea, then plunging into the water;
- Volcanic activity either underwater or near the shore.

General characteristics

- Tsunami waves are barely perceptible in deep water and may measure 160 km between wave crests;
- May consist of ten or more wave crests;
- Move up to 800 km per hour deep in the ocean, diminishing in speed as they head towards land;
- Large quantities of gas may bubble to the water surface and make the sea look as if it is boiling;
- The water in the waves may be unusually hot;
- The water may smell of rotten eggs (hydrogen sulphide) or of petrol or oil;
- The water may sting the skin;
- A thunderous boom may be heard followed by a roaring noise as of jet plane it may sound like a helicopter approaching;
- Sometimes a whistling sound is heard coming from the sea;
- The sea may draw back to a considerable distance;
- A flash of red light may be seen near the horizon.

13. Tsunami

Impact

The impact of a tsunami on a community is:

- Physical damage can occur where the force of water can destroy everything in its path but the majority of damage to structure and infrastructure results from flooding;
- Withdrawal of the wave from the shore rubs out sediment and can collapse ports and buildings and also damage boats;
- Deaths can occur by drowning and injuries from battering by debris;
- Contamination by salt water and debris or sewage may make clean drinking water unavailable;
- Harvests, food stocks, livestock farm implements and fishing boats may be lost;
- Land may be rendered barren due to salt water incursion.

Exercises – Grade 1

Think of all the words you can that are associated with weather.

Ask your teacher to write on the board as you call them out to her.

Choose 5 of the words from the list and draw a picture of each one.

Exercises – Grade 2

Keep a weekly weather calendar.

Draw a weather calendar in your workbook.

Fill it in everyday by drawing a picture to represent the weather for the day.

Week 1		Date _____				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Exercises – Grade 3

An earthquake has just occurred off the Tanzanian coast and the chance of a Tsunami occurring is high.

Write the weather broadcast for your local radio station in which you issue a Tsunami alert and give the people safety instructions.

14. Terrorism

Man made & rapid onset

Terrorism occurs when violence and fear are used to achieve certain goals.

Causes

- Political insecurity;
- Economic insecurity;
- Mob attention;
- Personal interest.

General characteristics

- Calculated use of unlawful violence or a threat
- Produce widespread fear
- Effective tactic for the weaker side in conflict
- Terrorists obtain worldwide, national, or local recognition for their cause by attracting the attention of the media
- Harass, weaken, or embarrass government security forces so that the the government overreacts and appears repressive
- Steal or extort money and equipment, especially weapons and ammunition vital to the operation of their group
- Destroy facilities or disrupt lines of communication in order to create doubt that the government can provide for and protect its citizens
- Discourage foreign investments, tourism, or assistance programs that can affect the target country's economy and support of the government in power
- Influence government decisions, legislation, or other critical decisions
- Prisoners often have to be freed
- Goals are generally political, religious of ideological
- Influences audiences beyond the intended victims
- Targets are used that symbolizes which the terrorists oppose most

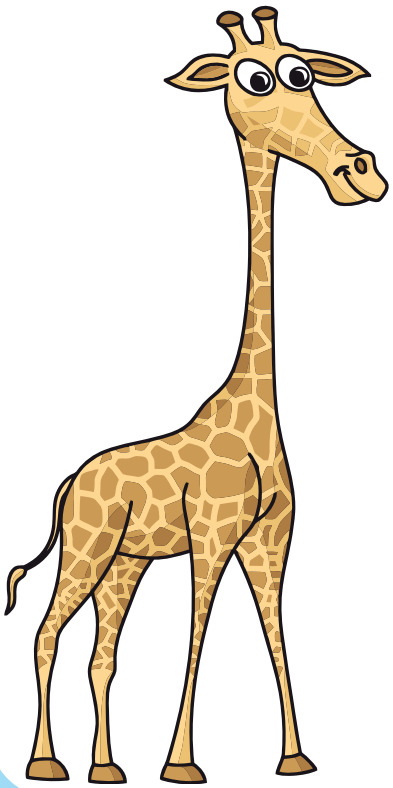
Impact

The impact of terrorism on a community is:

- Political unrest
- Psychological factors, such as fear being created
- Media exploitation
- Illegal methods being used
- Injuries and fatalities
- Economic impact, including direct losses, unstable financial markets and increased spending in security and defense
- Travel and hospitality industry losses due to people being scared to fly and travel to other countries
- Negative impact on economic growth in the long term

Exercises – Grade 3

Write a letter to the president of the country suggesting ways to stop terrorism in Tanzania.



15. HIV/AIDS

HIV- stands for Human Immuno- deficiency Virus.

AIDS stands for- Acquired Immuno-Deficiency Syndrome.

HIV is actually the virus that causes the disease AIDS.

People who are HIV positive have been tested and found to have signs of the human immuno-deficiency virus in their blood. HIV destroys part of the immune system. Specifically it affects a type of white blood cell called the T lymphocyte or T cell. T cells are one type of "fighter" cell in the blood that helps the body fight off all kinds of germs and diseases.

Causes

- Sexual contact with a person who has HIV;
- Sharing needles or syringes (used to inject illegal drugs) with a person who has HIV;
- An infected pregnant woman passes it to her unborn child;
- A person has a blood transfusion from fairly large volume of blood (in Tanzania today, all donated blood is tested for HIV).

General characteristics

- An HIV-positive person will eventually begin to feel sick;
- The person might begin to have swollen lymph nodes;
- Weight loss;
- Fever that comes and go;
- Infections in the mouth;
- Diarrhea or he or she might feel tired for no reason all of the time;
- Eventually the virus can infect all the body's organs, including the brain, making it hard for the person to think and remember things.

Impact

- Death;
- Loss of manpower/labour force;
- Increase number of orphans;
- Increase cost burden to family and nation;
- Decrease in efficiency for sick person;
- Isolation of infected person (stigma).

Exercises – Grade 1

Ask you teacher to explain sexual abuse to you.

Think about the different situations that may lead to sexual abuse.

Have a class discussion on how to avoid those situations and name a person who you can report to should somebody do something to you which makes you feel uncomfortable.

Discuss the dangers that may exist when you go to school and how you can avoid them.

Exercises – Grade 2

Draw two columns in your workbook. Label one HOME and the other one SCHOOL.

List all the actions that can be taken to make the home and school environment healthier.

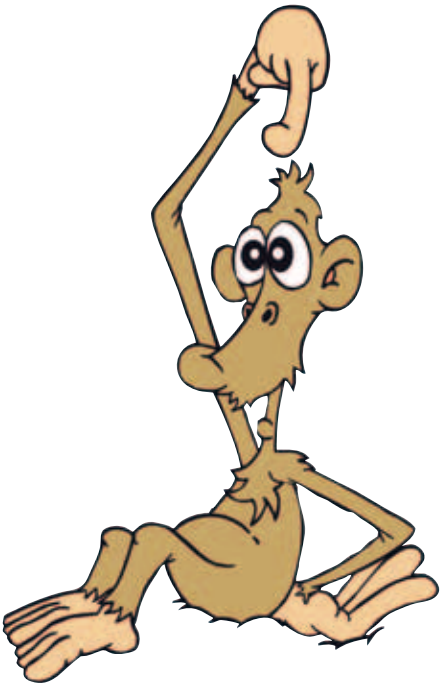
Don't forget to include actions that can reduce the spread of HIV.

HOME	SCHOOL

Exercises – Grade 3

Do you know someone who has AIDS or another life threatening disease?

In your workbook write about how you felt when you first discovered that somebody you know has an illness or disease and at the moment there is no cure for the disease. Also write about what you can do to guard yourself from becoming HIV positive?



About the United Nations International Strategy for Disaster Reduction

Adopted by United Nations Member States in 2000, the International Strategy for Disaster Reduction (ISDR) is a global strategy aimed at coordinating the efforts of different actors to reduce disaster risks and build a "culture of prevention", as part of sustainable development.

The secretariat to the Strategy, UNISDR, serves as the focal point in the United Nations system for the coordination of disaster reduction and works towards integrating disaster risk reduction into sound and equitable development, environmental protection and humanitarian action. The motto for UNISDR is "to connect and convince". UNISDR has its headquarters in Geneva, with a liaison office in New York, and regional offices in Africa (Nairobi and Addis Ababa), Arab region (Cairo), Americas (Panama), Asia/Pacific (Bangkok, Fiji, Kobe), Europe and Central Asia (Brussels, Bonn and Dushanbe) and a Training Centre in Incheon, Republic of Korea.

The ISDR system comprises partnerships through which governments, intergovernmental and non-governmental organisations, international financial institutions, technical institutions and networks, civil society organisations and the private sector interact and share information on risk reduction programmes and activities.

The Global Platform for Disaster Risk Reduction is the main global forum for parties involved in disaster risk reduction and it convenes every two years. In addition, regional organizations in coordination with UNISDR and other ISDR system partners convene Regional Platforms for Disaster Risk Reduction and Ministerial meetings. National Platforms for Disaster Risk Reduction are a generic denomination of national multi-stakeholder committees or mechanisms that promote the implementation of the Hyogo Framework, advocate and coordinate risk reduction issues nationally. Local platforms or alliances for risk reduction are being formed in some communities and cities.

UNISDR coordinates campaigns to raise the awareness to increase commitment and action to reduce disaster losses. The 2010-11 campaign focuses on Making Cities Resilient.

The Hyogo Framework for Action 20O5-2015: Building the Resilience of Nations and Communities to Disasters

Adopted by 162 Member States of the United Nations, The Hyogo Framework for Action (HFA) is the key instrument and global blueprint for implementing disaster risk reduction. Its overarching goal is to build the resilience of nations and communities to disasters, by achieving substantive reduction of disaster losses by 2015.

The HFA offers five areas of priorities for actions to achieve disaster resilience for vulnerable communities in the context of sustainable development. The Priority Areas are:

1. Make disaster risk reduction a priority: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

2. Know the risks and take action: Identify, assess, and monitor disaster risks and enhance early warning.

3. Build understanding and awareness: Use knowledge, innovation, and education to build a culture of safety and resilience at all levels.

4. Reduce risk: Reduce the underlying risk factors.

5. Be prepared and ready to act: Strengthen disaster preparedness for effective response at all levels.