Facing the unexpected, be prepared.

Facing the unexpected, be prepared.

Section of the Emergency Preparedness Program for students aged 10-11

Facilitator's Guide

Expect THE UNEXPECTED™

Canadian Red Cross

The Canadian Red Cross Society is registered as a Canadian charity organization under number 0017780-11.
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ISBN 1-55104-254-1

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Ce programme est aussi disponible en français.

Acknowledgements

The Canadian Red Cross wishes to express its gratitude to the volunteers and staff who participated closely or otherwise in developing this preparedness program.

The Canadian Red Cross wishes to thank more specifically the members of the teaching committee whose wise comments on the content and approach of the activity sheets contributed to developing a preparedness program that is adapted and original.

From the Notre-Dame-Du-Rosaire primary school in Jonquière (Quebec):

- Mr. Maurice Dufour, Principal
- Mrs. Doris Brassard, Grade 5 teacher
- Mrs. Monique S. Spencer, Grade 5 teacher

The Canadian Red Cross also wishes to thank all who participated in the evaluation and revision - focus group, questionnaires, opinion polls - enabling us to produce this Canadian version of the preparedness program. Thanks to the City of Brandon (Manitoba) who allowed the use of the " Shelter-In-Place " concept.

Many thanks to the American Red Cross who authorized the adaptation of concepts and activities pertaining to its " Masters of Disaster™ " program.

This program is made possible through the generous support of :

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Table of contents

Introduction

The Canadian Red Cross plays an essential part in emergencies. It provides numerous services to people affected by disasters to fulfill part of their essential needs in shelter, clothing and food. It also provides personal services for moral support and first aid. During evacuations, it registers evacuees, reunites families and provides essential information services.

To teach people how to act safely in case of unexpected events, the Canadian Red Cross has developed a preparedness program called " Expect the Unexpected. ". It is intended for 7-8, 10-11 and 12-13 year old students, for parents as well as for teachers and Red Cross facilitators. The objective is to convey the knowledge and develop the attitudes and skills that will allow them to react efficiently in emergencies.

This preparedness program consists of three sections, each intended for a specific group of students. Thus, the section " It can happen, be ready. " is intended for 7-8 year old students. The section " Facing the unexpected, be prepared. " is intended for 10-11 year old students. The section " Be ready, be safe." is intended for 12-13 year old students.

This facilitator's guide is intended for teachers and Red Cross facilitators who are called upon to give the course to 10-11 year old students. It is part of a set of teaching and communication tools produced for the preparedness program.

This guide is divided into four parts. The first part describes the overall preparedness program. The second part describes the content and preferred teaching approach. The third part presents the activities corresponding to the sheets from the student activity booklet, whereas the fourth part provides additional information that will be useful in implementing this program.

Facing the unexpected, be prepared.

Program objectives

This section of the preparedness program intended for 10-11 year old students, is designed to provide them with what is required to face unexpected situations that could occur in their daily life.

More specifically, the students will:

- Learn about natural disasters and hazardous materials releases that could occur in their community;
- Become familiar with daily safety rules;
- Learn about actions to take to be better prepared for an emergency;
- Know what attitudes and behaviours to adopt during unexpected situations;
- Learn the school evacuation plan;
- Learn what emotions could be experienced in certain emergencies.

Links to the study programs

Teachers must teach several programs from the Ministry of Education and must take into consideration a great number of teaching objectives. This preparedness program is linked to the contents and objectives of some of these programs. It complements class teaching and learning activities. For instance, this second section of the preparedness program achieves some of the objectives of the Social Studies, Science and Technology and Health and Physical Education curriculums.

The table on pages 11 and 12 presents objectives that can be reached through the activities of the preparedness program. Teachers and Red Cross facilitators will be able to read it using the following codes :

- Health and Physical Education (H.P.S.)
- Social Studies (S.S.)
- For Québec : Cross - Curricular Competencies (C.C.C.), Areas of Lifelong Learning (A.L.L.), History, Geography and Citizenship Education (H.G.C.E.) and Moral Education (M.E.)
- Science and technology (S.T.)

Tools

This section of the preparedness program includes six types of teaching and communication tools:

• Activity booklet

This booklet is intended for students to facilitate learning and the development of attitudes and skills by reading information, recording observations from research results, answering questions, playing games, etc. It is a reference tool for the students and allows parents to accompany their child in his or her learning experience.

It was designed as a set of activities from which the teacher or Red Cross facilitator can choose those that are best suited to their group of students. These activities can be carried out on theme days or half days or can also be integrated in the daily planning. They can be linked to other activities or be done independently.

• Complementary brochure

This brochure is intended for parents as a reference tool, or reminder. It helps the students to consolidate what they have learned in class. It includes suggested activities for home.

• Facilitator's Guide

This guide is intended for teachers and Red Cross facilitators. It provides information to help students learn and properly use the various teaching and communication tools used in the preparedness program.

The guide includes activity sheet answers that allows the teacher or Red Cross facilitator to correct the students' answers. They can make transparencies from the activity sheets in the students booklet and review the answers with the class.

The Facilitator's Guide includes four transparencies that can be used as teaching tools for situations during certain activities presented in the activity booklet. They stimulate curiosity and interest, facilitate questions and group discussions.

• Poster

The poster can be placed on school walls. It will make the students aware of the need to get prepared for emergency situations. It can also be used as the attention grabber to introduce activities of the preparedness program.

• Videotape

The videotape is used as the attention grabber to introduce activities of the preparedness program. It will arouse curiosity, stir up interest and will stimulate group questions, discussions and exchanges.

• Certificate of participation

Teachers and Red Cross facilitators fill out this certificate and give one to each student when all activities of this section of the preparedness program are carried through.

Program evaluation

An evaluation form will be provided by the Red Cross in order to collect teachers' and facilitators' comments on the program. The students opinions could also be obtained by inviting them to write a group letter to the Red Cross.

General orientations

Content

Throughout the entire preparedness program, the content is studied progressively so as to suit the levels of the various student groups. Thus, the 7-8 and 10-11 year old students are faced with unexpected situations that are simple and of a local nature. The 12-13 year old students must deal with more complex and international situations..

For the 10-11 year old students, the activities cover the following topics:

Red Cross - natural disaster - hazardous materials release - safety rules - preparation - emergency situation - evacuation - evacuation plan - smoke detectors - emergency call - attitude - behaviour - needs - feelings.

Thus, on becoming more familiar with the natural disasters and hazardous materials releases that can occur in Canada and in their environment, the students are made aware of the planning that must be done to be able to react efficiently in case of an emergency. They identify the attitudes and behaviours to adopt during a disaster as well as the feelings and needs which could arise. Finally, they become aware of the role they may assume during an emergency.

Teaching approach

For each activity

Each activity linked to the second section of the preparedness program is designed according to the three steps of the teaching approach: situations, research and objectivation.

- **Situations**

In this first step, the students will become familiar with the content and teaching objectives linked to the activity. The teacher will make the content meaningful by linking it to their experience and prior knowledge.

- **Research**

In the second step, the students will learn the contents of the activity using diversified and adapted teaching strategies. They collect data, organize and record information.

- **Objectivation**

In this last step, students recap the activity. They summarize what they have learned, compare it to their initial understanding and evaluate their degree of success

In each section

Each section of the preparedness program features three types of activities that correspond to the three steps of the teaching approach, focusing on situations identified by a question mark, research identified by a magnifying glass and a summary identified by a puzzle.

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Activities

Activity summary

Sheet	Type of activity	Objective	Means	Method	Intellectual and technical skills	Duration
1		Know Red Cross fundamental principles.	Discussion.	By teams of three or four.	Identify and establish relationships.	45 min.
2	?	Distinguish natural disasters which occurred in Canada.	Analyzing newspaper articles.	In pairs.	Identify and establish relationships.	45 min.
3		Recognize the definition of the various disasters.	Association activity.	Individual.	Identify and establish relationships.	15 min.
4		Locate disasters on a map of Canada.	Activity to locate the areas on a map.	Individual.	Identify and locate.	20 min.
5		Locate disasters on a time frame.	Activity to locate on a time frame.	Individual.	Identify and locate.	20 min.
6		Know disasters that have occurred.	Investigation.	In pairs or individual.	Identify and establish relationships.	30 min.
7		Identify the disaster hazards in one's environment.	Association activity.	By teams of four.	Identify, establish relationships and summarize.	25 min.
8	?	Summarize the steps to properly prepare for a possible emergency.	Viewing a videotape to initiate questions / questions on the videotape.	Individual.	Identify and establish relationships.	25 min.
9		Prepare a list of essential objects for an emergency.	Reminder to fill in.	Individual.	Nil.	25 min.

Sheet	Type of activity	Objective	Means	Method	Intellectual and technical skills	Dura-tion
10		Develop skills for an emergency call.	Simulation.	In pairs.	Identify, establish relationships and summarize.	
11		Know the school evacuation plan.	Locating on a plan.	In pairs.	Identify, establish relationships and summarize.	
12		Learn about shelter in place.	Blanks to fill in.	In pairs.	Identify, establish relationships and summarize.	
13		Show the attitudes and behaviours to adopt during a flood, a lightning storm, a tornado and a landslide.	Role-play.	By teams of four to five.	Identify, establish relationships and summarize.	
14		Describe the feelings and needs felt after a disaster.	Crossword puzzle.	In pairs.	Identify and establish relationships.	
15		Describe one's contribution and role during an emergency.	Case studies.	Individual.	Identify, establish relationships and summarize.	
16		Review the content on disasters.	Blanks to fill in.	Individual.	Identify, establish relationships and summarize.	
17		Review the attitudes and behaviours to adopt if a disaster would occur.	Blanks to fill in.	Individual.	Identify, establish relationships	

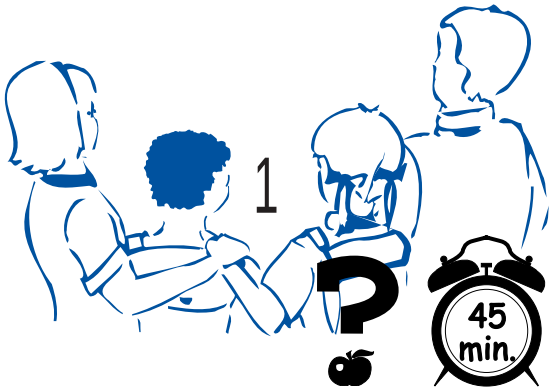
Objectives of the Provincial Ministry of Education study programs

	Prince Edward Island, Nova Scotia, New Brunswick, Newfoundland, Labrador	*Quebec*	*Ontario*	*Manitoba*	*Saskatchewan*	*Alberta*	*British Colombia*	*NWT*
Activity 1 The Red Cross : anywhere, anytime.	S.S., Grade 6, Interdependance, People, Place, and Environment H.P.E. Grades 4, 5 and 6, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Interdependance, responsability, cooperation	HH.P.E, Grade 5, É.P.S., Healthy Living	H.P.E., Safety, Grades 4 and 5		H.P.E., Grades 4 and 5- Risks and safety practices	H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention	H.P.S., Safety and First Aid, Grade 5
Activity 2 What are the possible disasters?	S.S., Grade 6, Interdependance, People, Place, and Environment	C.C.C.. : Communication-Related A.L.L. : Environmental Awareness G.H.C.E. : Change, transformations, key events S.T. Transformations	S.S., Canada and World Connections, Grade 5 G., Grade 7, The Themes of Geographic Inquiry S.T., Grade 5, Earth and Space Systems	S.S., Grade 6-Life in Canada's Past S.T., Grade 5-Weather	S.S., Grades 4 and 5, Unit 1-Identity S.T., Grade 4, Predicting Weather	S.S., Grade 4 – Topic A: Alberta : Its Geography and People S.S., Grade 5 – Topic A: Canada : Its Geography and People	S.S., Grade 4, Environment S.T., Grade 5, Earth and Space Science (Atmosphere and Meteo)	S.S., Strand 4, Our People Now and Then S.S., Strand 5, Our Land and our People
Activity 3 Who am I?		C.C.C.. : Communication-Related A.L.L. : Environmental Awareness S.T. Transformations	G., Grade 7, The Themes of Geographic Inquiry S.T., Grade 5, Earth and Space Systems		E S.S., Grades 4 and 5, Unit 1-Identity S.T., Grade 4, Predicting Weather	S.S., Grade 5 – Topic A : Canada : Its Geography and People	S.T., Grade 5, Earth and Space Science (Atmosphere and Meteo) S.T., Grade 7, Earth and Space Science (Earth's Crust)	S.S., Strand 4, Our People Now and Then S.S., Strand 5, Our Land and our People
Activity 4 Where did I occur?	S.S., Grade 6, People, Place, and Environment	C.C.C.. : Communication-Related A.L.L. : Environmental Awareness G.H.C.E. : Change, transformations, key events	G., Grade 7, The Themes of Geographic Inquiry S.T., Grade 5, Earth and Space Systems	S.S., Grade 6-Life in Canada's Past	S.S., Grades 4 and 5, Unit 1-Identity S.T., Grade 4, Predicting Weather		S.S., Grades 4 and 5, Environment	
Activity 5 When did I occur?	S.S., Grade 6, People, Place, and Environment	C.C.C.. : Communication-Related A.L.L. : Environmental Awareness G.H.C.E. : Change, transformations, key events	G., Grade 7, The Themes of Geographic Inquiry	S.S., Grade 6-Life in Canada's Past	S.T., Grade 4, Predicting Weather	S.S., Grade 4 – Topic A: Alberta : Its Geography and People	S.S., Grade 4, Environment	S.S., Strand 5, Our Land and our People
Activity 6 What happened in the past?	S.S., Grade 6, People, Place, and Environment	C.C.C.. : Communication-Related A.L.L. : Environmental Awareness G.H.C.E. : Change, transformations, key events	G., Grade 7, The Themes of Geographic Inquiry S.T., Grade 5, Earth and Space Systems	S.S., Grade 6-Life in Canada's Past	S.S., Grade 4, Unit 1-Identity S.T., Grade 4, Predicting Weather	S.S., Grade 4 – Topic A: Alberta : Its Geography and People	S.S., Grade 4, Environment S.T., Grade 5, Earth and Space Science (Atmosphere and Meteo) S.T., Grade 7, Earth and Space Science (Earth's Crust)	S.S., Strand 5, Our Land and our People
Activity 7 What can happen in my environment?	S.S., Grade 6, People, Place, and Environment H.P.E. Grades 4, 5 and 6, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being S.T. Transformations	G., Grade 7, The Themes of Geographic Inquiry S.T., Grade 5, Earth and Space Systems H.P.E, Grade 5, E.P.S., Healthy Living	S.S., Grade 6-Life in Canada today	S.S., Grade 4, Unit 1-Identity S.T., Grade 4, Predicting Weather	H.P.E., Grade 7- Risks and safety practices	S.S., Grade 4, Environment H.P.E., Grade 5, Personal Development, Safety and Injury Prevention	S.S., Strand 4, Our People Now and Then S.S., Strand 5, Our Land and our People
Activity 8 How can I get prepared at home?	H.P.E. Grade 4, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Responsability	S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry H.P.E, Grade 5, É.P.S., Healthy Living	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6			H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention	H.P.S., Safety and First Aid, Grade 5

Objectives of the Provincial Ministry of Education study programs

	Prince Edward Island, Nova Scotia, New Brunswick, Newfoundland, Labrador	*Quebec*	*Ontario*	*Manitoba*	*Saskatchewan*	*Alberta*	*British Colombia*	*NWT*
Activity 9 What could be useful for me?	H.P.E. Grade 4, Injury Prevention and Safety	C.T. : Communication D.E.V. : Health and Well-Being M.E. : Responsability	S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry H.P.E, Grade 5, E.P.S., Healthy Living	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6			H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention	H.P.S., Safety and First Aid, Grade 5
Activity 10 What must I say on the telephone?	H.P.E. Grade 4, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Responsability	H.P.E, Grade 5, E.P.S., Healthy Living S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6			H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention	
Activity 11 How to exit the school.	H.P.E. Grade 5, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Responsability	H.P.E, Grade 5, E.P.S., Healthy Living S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6		H.P.E., Grades 4 and 5- Risks and safety practices	H.P.E., Grade 4, 5 and 6, Personal Development, Safety and Injury Prevention	H.P.S., Safety and First Aid, Grade 5
Activity 12 What are hazardous materials releases?	H.P.E. Grade 4 and 5, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Responsability	H.P.E, Grade 5, E.P.S., Healthy Living	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6			H.P.E., Grade 4 and 5, Personal Development, Safety and Injury Prevention	
Activity 13 What are the proper behaviours to adopt?	H.P.E. Grades 4 and 5, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Responsability	S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry H.P.E, Grade 5, E.P.S., Healthy Living	H.P.E., Safety, Grade 5 H.P.E. Personal and Social Management, Grades 5 and 6		S.T., Topic D-Weather Watch	H.P.E., Grade 5, Personal Development, Mental Well-Being	H.P.S., Safety and First Aid, Grade 5
Activity 14 How do I feel after an emergency?		C.C.C.. : Personal and Social M.E. : Person		H.P.E. Personal and Social Management, Grades 4 and 6	H.P.E., Grades 4 and 5, The Me I want to be	H.P.E., Grade 4, Effective Interpersonal Skills H.P.E., Grades 4 and 5 - Risks and safety practices	H.P.E., Grades 4 and 5, Personal Development, Mental Well-Being	
Activity 15 How to react in case of an emergency?	S.S., Grade 6, Citizenship, Power, and Governance H.P.E. Grades 5 and 6, Injury Prevention and Safety	C.C.C.. : Communication-Related A.L.L. : Health and Well-Being M.E. : Person	S.S., Grade 5, Heritage and Citizenship H.P.E, Grade 5, E.P.S., Healthy Living	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6	H.P.E., Grades 4 and 5, The Me I want to be	H.P.E., Grade 4, Effective Interpersonal Skills H.P.E., Grades 4 and 5 - Risks and safety practices	H.P.E., Grades 4 and 6, Personal Development, Safety and Injury Prevention	
Activity 16 Do you remember?	S.S., Grade 6, Interdependance, People, Place, and Environment H.P.E. Grades 4, 5 and 6, Injury Prevention and Safety	C.C.C.. : Communication-Related, Personal and Social A.L.L. : Health and Well-Being, Environment Awareness G.H.C.E. : Change, transformations, key events S.T. Transformations	S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry H.P.E, Grade 5, E.P.S., Healthy Living S.T., Grade 5, Earth and Space Systems	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6 S.T., Grade 5-Weather	S.S., Grades 4 and 5, Unit 1-Identity S.T., Grade 4, Predicting Weather H.P.E., Grades 4 and 5, The Me I want to be	H.P.E., Grade 4, Effective Interpersonal Skills H.P.E., Grades 4 and 5 - Risks and safety practices	S.S., Grades 4 and 5, Environment S.T., Grade 5, Earth and Space Science (Atmosphere and Meteo) S.T., Grade 7, Earth and Space Science (Earth's Crust) H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention H.P.E., Grades 4 and 5, Personal Development, Mental Well-Being	H.P.S., Safety and First Aid, Grade 5
Activity 17 Let's review.	S.S., Grade 6, Interdependance, People, Place, and Environment, Citizenship, Power, and Governance H.P.E. Grades 4, 5 and 6, Injury Prevention and Safety	C.C.C.. : Communication-Related, Personal and Social A.L.L. : Health and Well-Being, Environment Awareness G.H.C.E. : Change, transformations, key events S.T. Transformations	S.S., Grade 5, Heritage and Citizenship G., Grade 7, The Themes of Geographic Inquiry H.P.E, Grade 5, E.P.S., Healthy Living S.T., Grade 5, Earth and Space Systems	H.P.E., Safety, Grades 4 and 5 H.P.E. Personal and Social Management, Grades 4, 5 and 6 S.T., Grade 5-Weather	S.S., Grades 4 and 5, Unit 1-Identity S.T., Grade 4, Predicting Weather H.P.E., Grades 4 and 5, The Me I want to be	S.S., Grade 4 – Topic A: Alberta : Its Geography and People S.S., Grade 5 – Topic A : Canada : Its Geography and People H.P.E., Grade 4, Effective Interpersonal Skills H.P.E., Grades 4 and 7 - Risks and safety practices S.T., Topic D-Weather Watch	S.S., Grades 4 and 5, Environment S.T., Grade 5, Earth and Space Science (Atmosphere and Meteo) S.T., Grade 7, Earth and Space Science (Earth's Crust) H.P.E., Grades 4, 5 and 6, Personal Development, Safety and Injury Prevention H.P.E., Grades 4 and 5, Personal Development, Mental Well-Being	

The Red Cross: anywhere, anytime.



Task description

By looking up key terms in a dictionary, students learn about the fundamental principles of the Red Cross.

Method suggested

1. Ask students if they're familiar with the Red Cross. Ask them where they have come into contact with the organization (baby-sitting course, first aid course, water safety course, etc.).

2. Ask them if they know about the origins of the Red Cross emblem and the history of the organization. Invite them to talk about what they know. Round out their comments with information from Annex 1 of the Facilitator's Guide.

3. Tell students that the Red Cross is an international movement that helps people worldwide. This assistance is not offered in an arbitrary manner. It is guided by seven basic rules or principles.

4. Ask students to pair up. As a class, read the instructions on Activity Sheet 1. Ask the teams to look up the definition of the seven fundamental principles of the Red Cross in the dictionary and complete the activity sheet.

5. As a class, review the students' answers. Ask them to define, in their own words, the seven fundamental principles of the Red Cross and discuss how these principles are integrated in the activities of the Red Cross.

6. Mention to the students that this prevention program was prepared by the Red Cross as part of its prevention activities.

7. Answer any questions the students may have.

Links to the study programs

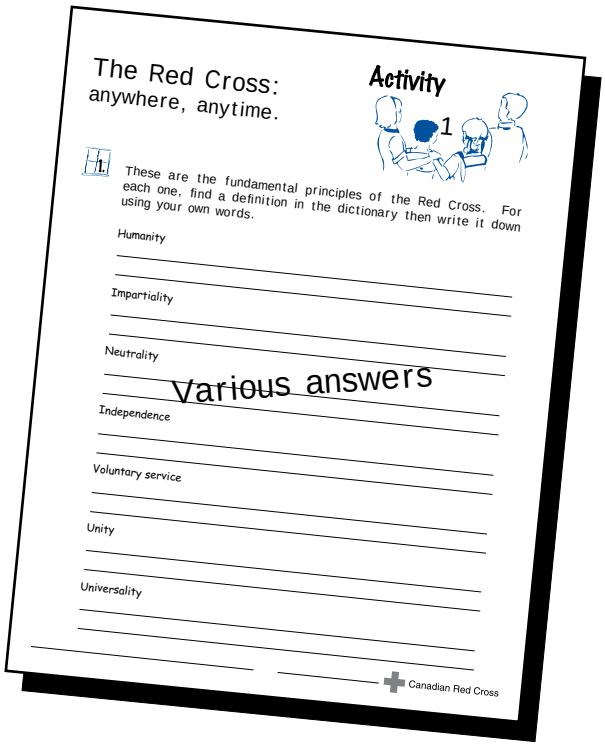
(see pages 11 and 12)

Social Studies / M.E.
Health and Physical Education

Material required

- Sheet 1 of the activity booklet.
- Annex 1, History of the Red Cross.

Answer key


The Red Cross: anywhere, anytime.

Activity 1

1. These are the fundamental principles of the Red Cross. For each one, find a definition in the dictionary then write it down using your own words.

Humanity

Impartiality

Neutrality

Various answers

Independence

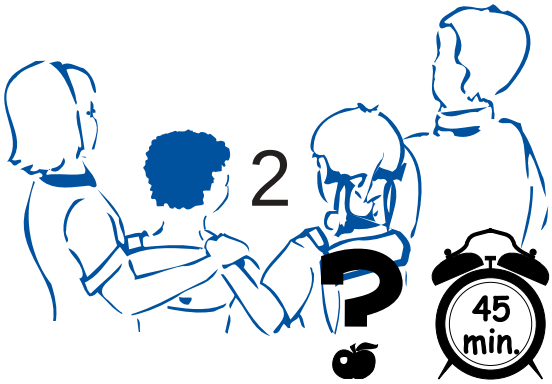
Voluntary service

Unity

Universality

Canadian Red Cross

What are the possible disasters?



Task description

After having read and analyzed various newspaper articles, the students learn about natural disasters that have occurred in Canada.

Method suggested

1. Ask students to pair up. Give each team a copy of one newspaper article among the four you photocopy.

2. Read the instructions and questions on sheet 2 with them. Ask them to answer the questions on the newspaper article.

3. Once the questionnaire is filled out, suggest that the teams who studied the same type of disaster get together to validate their information. Ask each group to name a speaker who will summarize the information gathered during the meeting.

4. After a few minutes of discussion, review the subject together. Ask each speaker to present the information validated. Summarize the information provided by the students.

5. Answer any questions the students may have.

Links to the study programs

(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and Technology
Geography

Material required

- Sheet 2 of the activity booklet.
- Four photocopies of four newspaper articles from Annex 2.

Answers key

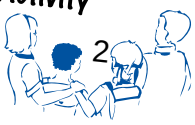
Following page.

What are the possible disasters?

Continued

What are the possible disasters?

Activity 2



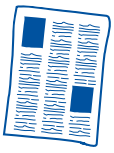
1. After having read the newspaper article, answer the following questions:

a) What disaster are we talking about in this newspaper article?
An earthquake.

b) When did this disaster occur?
November 25, 1988.

c) What city or region was struck?
The city of Chicoutimi and part of the province of Quebec.

d) How did the disaster occur?
An earthquake with a magnitude of 6.4 was felt.



e) What damage did the disaster cause?
A power failure and minor damage : cracks in walls and chimneys and a lot of fallen objects on the ground.

f) How many disaster victims were there? How did the Red Cross help them?
No information is given on the number of disaster victims because there was only minor damage; thus, no action was taken by the Red Cross.

Canadian Red Cross

What are the possible disasters?

Activity 2

1. After having read the newspaper article, answer the following questions:

a) What disaster are we talking about in this newspaper article?
A crash.

b) When did this disaster occur?
September 3, 1998.

c) What city or region was struck?
Peggy's Cove (Nova Scotia)

d) How did the disaster occur?
Swissair flight 111 crashed at sea.

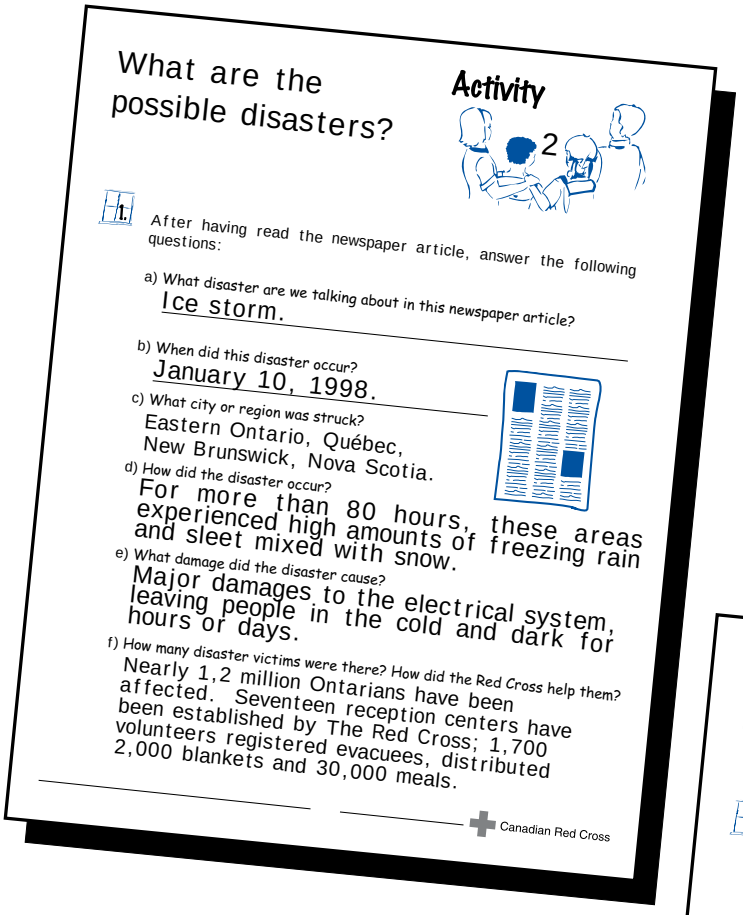
e) What damage did the disaster cause?
The plane was literally pulverized into millions of pieces by the impact.

f) How many disaster victims were there? How did the Red Cross help them?
This aerial disaster cost the lives of 229 passengers and crew. The Red Cross provided shelter and food for the search and rescue teams near the crash site and helped offer shelter and comfort to the families of the victims.

Canadian Red Cross

What are the possible disasters?

Continued



What are the possible disasters?

Activity 2

1. After having read the newspaper article, answer the following questions:

a) What disaster are we talking about in this newspaper article?
Ice storm.

b) When did this disaster occur?
January 10, 1998.

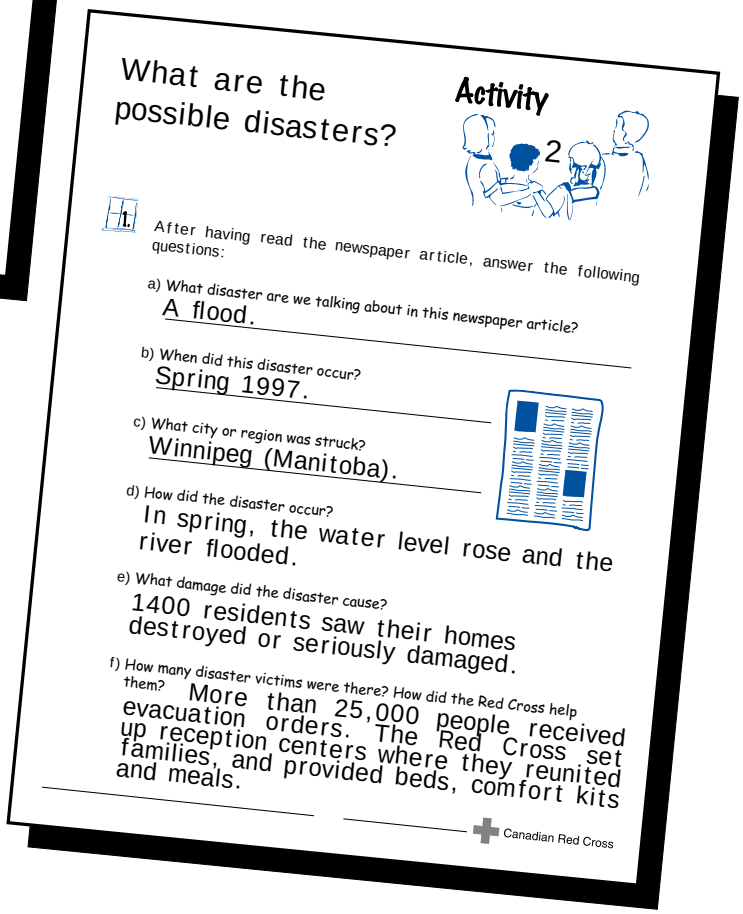
c) What city or region was struck?
Eastern Ontario, Québec, New Brunswick, Nova Scotia.

d) How did the disaster occur?
For more than 80 hours, these areas experienced high amounts of freezing rain and sleet mixed with snow.

e) What damage did the disaster cause?
Major damages to the electrical system, leaving people in the cold and dark for hours or days.

f) How many disaster victims were there? How did the Red Cross help them?
Nearly 1,2 million Ontarians have been affected. Seventeen reception centers have been established by The Red Cross; 1,700 volunteers registered evacuees, distributed 2,000 blankets and 30,000 meals.

Canadian Red Cross



What are the possible disasters?

Activity 2

1. After having read the newspaper article, answer the following questions:

a) What disaster are we talking about in this newspaper article?
A flood.

b) When did this disaster occur?
Spring 1997.

c) What city or region was struck?
Winnipeg (Manitoba).

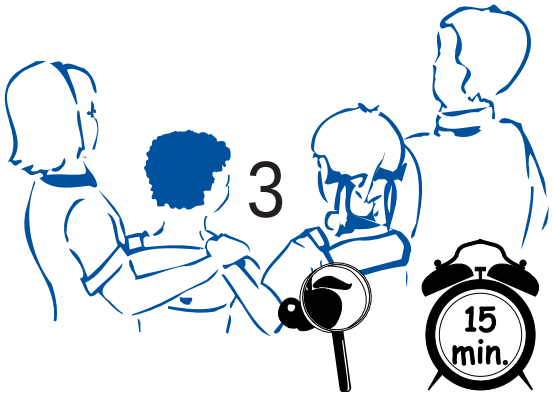
d) How did the disaster occur?
In spring, the water level rose and the river flooded.

e) What damage did the disaster cause?
1400 residents saw their homes destroyed or seriously damaged.

f) How many disaster victims were there? How did the Red Cross help them?
More than 25,000 people received evacuation orders. The Red Cross set up reception centers where they reunited families, and provided beds, comfort kits and meals.

Canadian Red Cross

Who am I?



Task description

Using statements, the students associate various natural disasters with their definitions.

Method suggested

1. Ask students to discuss some natural disasters (earthquake, flood, landslide, tornado, forest fire, lightning storm, snowstorm, other) and to prepare a short definition for each.

2. Read the instructions on sheet 3 with them and ask them to fill it out individually by associating the natural disasters shown with their definition.

3. Once the sheets are filled out, review them together to check the students' answers.

4. Answer any questions the students may have.

Links to the study programs

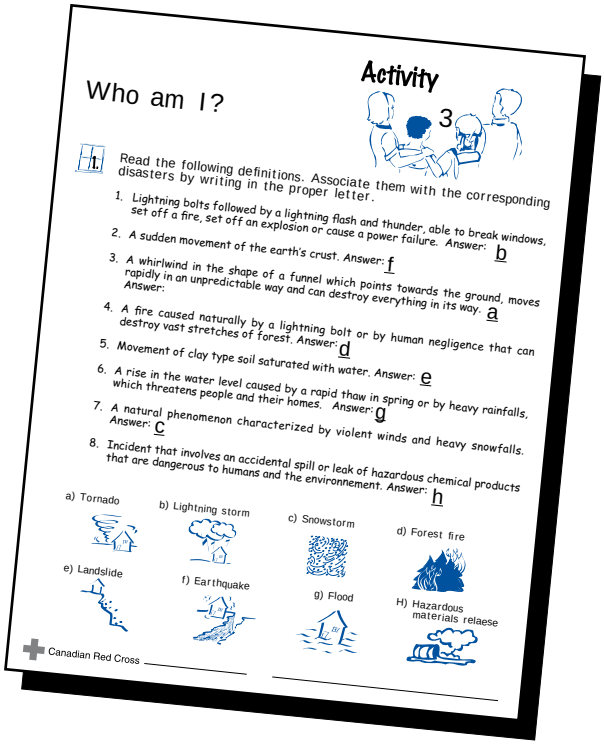
(see pages 11 and 12)

Social Studies
Science and Technology
Geography

Material required

- Sheet 3 of the activity booklet.

Answer key



Activity 3

Who am I?

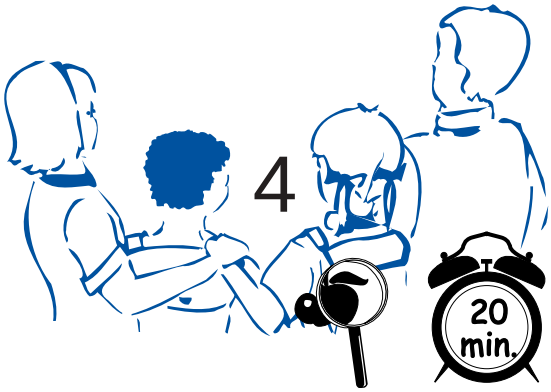
Read the following definitions. Associate them with the corresponding disasters by writing in the proper letter.

1. Lightning bolts followed by a lightning flash and thunder, able to break windows, set off a fire, set off an explosion or cause a power failure. Answer: b
2. A sudden movement of the earth's crust. Answer: f
3. A whirlwind in the shape of a funnel which points towards the ground, moves rapidly in an unpredictable way and can destroy everything in its way. Answer: a
4. A fire caused naturally by a lightning bolt or by human negligence that can destroy vast stretches of forest. Answer: d
5. Movement of clay type soil saturated with water. Answer: e
6. A rise in the water level caused by a rapid thaw in spring or by heavy rainfalls, which threatens people and their homes. Answer: g
7. A natural phenomenon characterized by violent winds and heavy snowfalls. Answer: c
8. Incident that involves an accidental spill or leak of hazardous chemical products that are dangerous to humans and the environnement. Answer: h

a) Tornado
b) Lightning storm
c) Snowstorm
d) Forest fire
e) Landslide
f) Earthquake
g) Flood
H) Hazardous materials relaese

Canadian Red Cross

Where did I occur?



Task description

The students locate various natural disasters on a map of Canada.

Method suggested

1. Ask students to name a few disasters that have occurred in Canada, including the city or region that was struck. Write their answers on the board.

2. Read the instructions on sheet 4 with them and ask them to fill it out individually by writing the number corresponding to the area struck inside the symbol.

3. Once the sheets are filled out, review them together to check the students' answers. Highlight the fact that certain regions of Canada are more subject to some types of disasters than others. Ask them to explain why some regions have a higher risk than others do and analyze the physical characteristics of these regions with them.

4. Answer any questions the students may have.

Links to the study programs

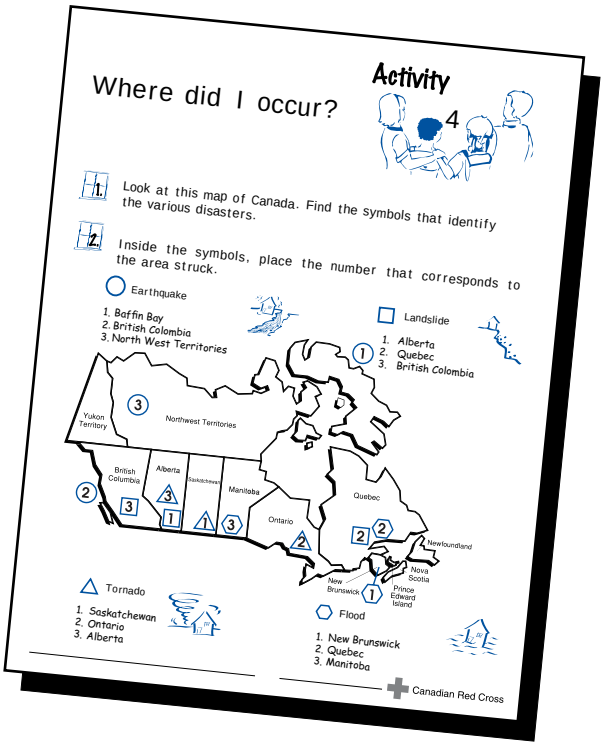
(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and Technology
Geography

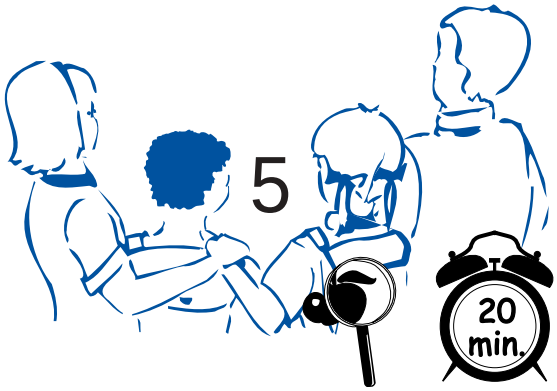
Material required

- Sheet 4 of the activity booklet.
- Annex 3, complementary information.

Answer key



When did I occur?



Task description

The students locate the various natural disasters that occurred in Canada on a time frame.

Method suggested

1. Ask students to state when the disasters mentioned in the previous activity occurred. Write their answers on the board.

2. Read the instructions on sheet 5 with them and ask them to fill it out individually by locating the disasters mentioned on the time frame.

3. Once the sheets are filled out, review them together to check the students' answers. Highlight the fact that some disasters have always struck certain regions in Canada. Make them aware that others could also occur.

4. Answer any questions the students may have.

Links to the study programs

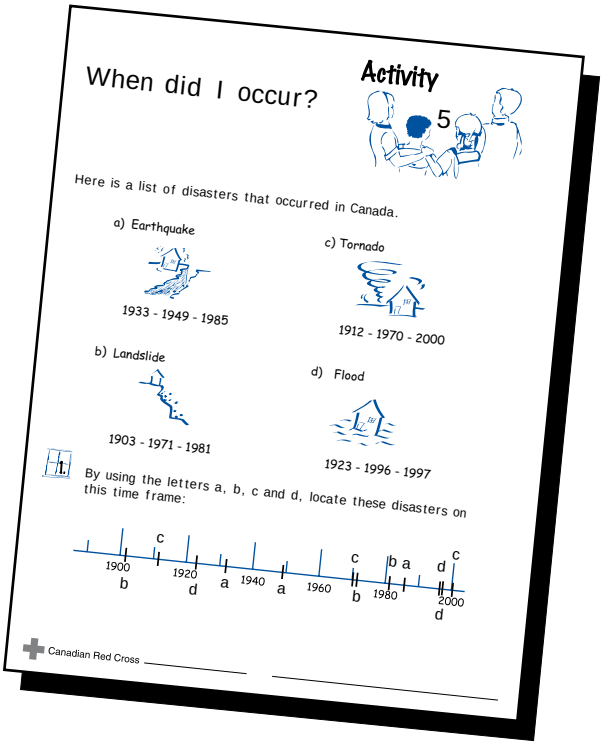
(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and Technology
Geography

Material required

- Sheet 5 of the activity booklet.
- Annex 3, complementary information.

Answer key


When did I occur?

Activity 5

Here is a list of disasters that occurred in Canada.

a) Earthquake
1933 - 1949 - 1985

b) Landslide
1903 - 1971 - 1981

c) Tornado
1912 - 1970 - 2000

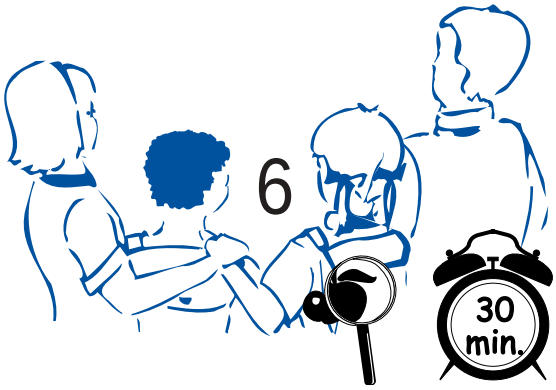
d) Flood
1923 - 1996 - 1997

By using the letters a, b, c and d, locate these disasters on this time frame:

1900 b c 1920 d a 1940 a 1960 c b 1980 b a d 2000 c d

Canadian Red Cross

What happened in the past?



Task description

Using a questionnaire, the students ask their grandparents or an older person for information on a natural disaster that happened in the past.

Method suggested

1. Ask students if they know about one or more disasters that occurred in the past. Suggest that they ask their grandparents or an older person to find out how and where it occurred, how the people reacted, how they were prepared and what they would do if such a natural disaster was to occur again.

2. Ask students to pair up and to prepare a questionnaire with four questions. Give them a few days to carry out their investigation with their grandparents or other older persons that they know. Suggest that they use the natural disasters listed in Activity 6.

3. Once their investigation is completed, get together in a meeting to let them recount their grandparents' or other older persons' stories. Compare the natural disasters given. Discuss how these people lived through these events and how they were prepared for them. Highlight the importance of being well prepared to avoid panic and to react safely.

4. Answer any questions the students may have.

Links to the study programs

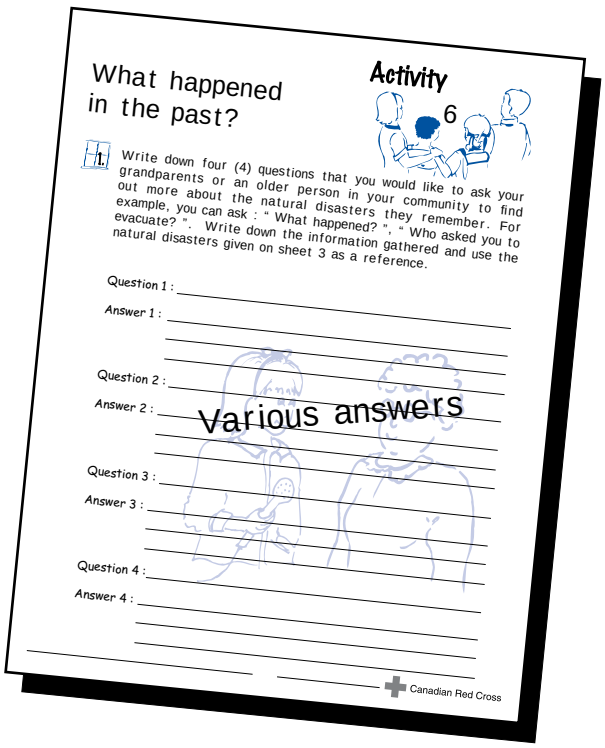
(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and Technology
Geography

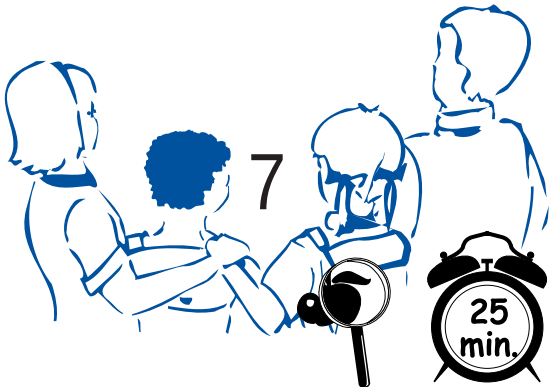
Material required

- Sheet 6 of the activity booklet.

Answer key



What can happen in my environment?



Task description

Following an association activity pertaining to the natural disasters and natural elements in question, the students identify the possible natural disaster risks in their environment.

Method suggested

1. Ask students to name the natural disasters studied in activity 3. Write them on the board.

2. Ask students to get together in teams of four. Read the instructions on sheet 7 with them. Suggest they fill it out by selecting four natural disasters found on sheet 3. Ask them to identify one natural element related to these disasters and to justify their answers briefly.

3. Once the sheets are filled out, review them together to check the students' answers. Ask them to explain their associations. Then, ask them if these natural elements and disaster risks are part of their environment.

4. Answer any questions the students may have.

Links to the study programs

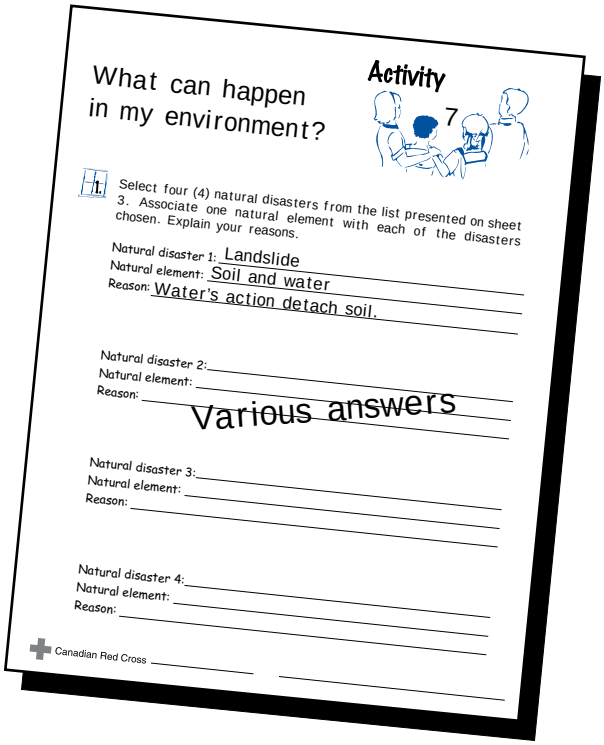
(see pages 11 and 12)

Social Studies
Science and Technology
Health and Physical Education
Geography

Material required

- Sheet 7 of the activity booklet.

Answer key


What can happen in my environment?

Activity 7

1. Select four (4) natural disasters from the list presented on sheet 3. Associate one natural element with each of the disasters chosen. Explain your reasons.

Natural disaster 1: Landslide
Natural element: Soil and water
Reason: Water's action detach soil.

Natural disaster 2:
Natural element:
Reason:

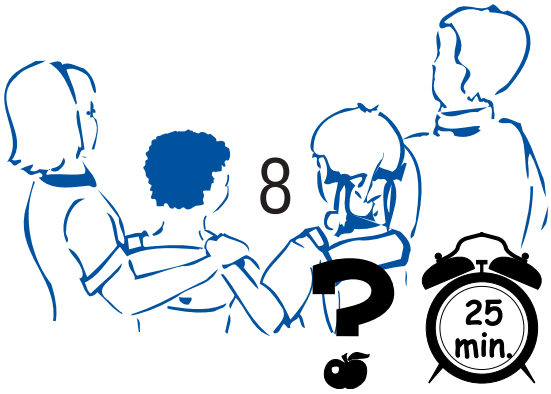
Various answers

Natural disaster 3:
Natural element:
Reason:

Natural disaster 4:
Natural element:
Reason:

Canadian Red Cross

How can I get prepared at home?



Task description

After having viewed the videotape, the students know the steps to properly get prepared for these emergencies.

Method suggested

1. Let the students view the videotape. After viewing it, ask them if they have any questions or comments. Then, ask them to summarize the content and to relate it to what they have learned.

2. Read the instructions on sheet 8 with them and ask them to fill it out individually.

3. Once the sheets are filled out, review them together to check the students' answers.

4. Answer any questions the students may have.

Links to the study programs

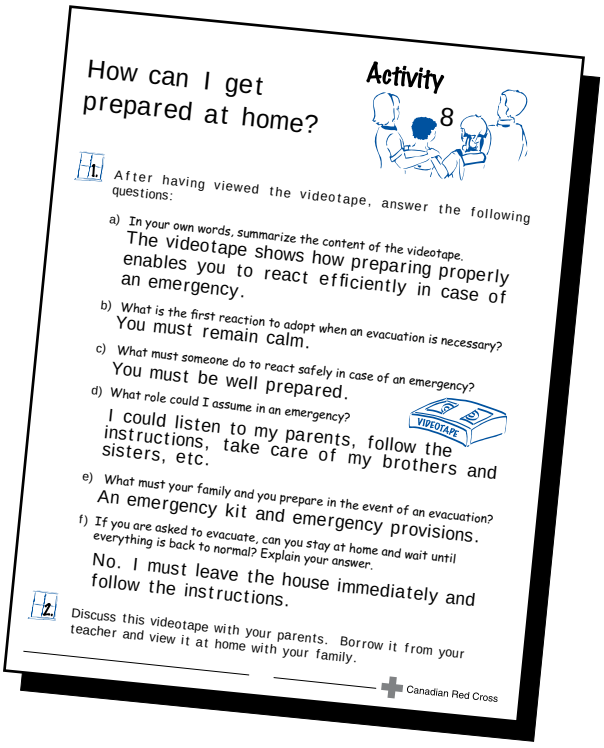
(see pages 11 and 12)

Social Studies / M.E.
Science and Technology
Health and Physical Education
Geography

Material required

- Sheet 8 of the activity booklet.
- Videotape.

Answer key



How can I get prepared at home?

Activity 8

1. After having viewed the videotape, answer the following questions:

a) In your own words, summarize the content of the videotape.
The videotape shows how preparing properly enables you to react efficiently in case of an emergency.

b) What is the first reaction to adopt when an evacuation is necessary?
You must remain calm.

c) What must someone do to react safely in case of an emergency?
You must be well prepared.

d) What role could I assume in an emergency?
I could listen to my parents, follow the instructions, take care of my brothers and sisters, etc.

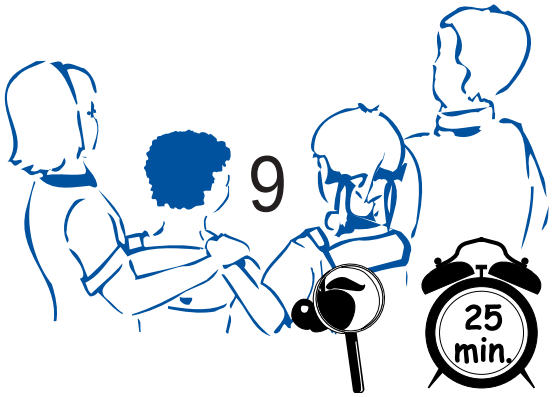
e) What must your family and you prepare in the event of an evacuation?
An emergency kit and emergency provisions.

f) If you are asked to evacuate, can you stay at home and wait until everything is back to normal? Explain your answer.
No. I must leave the house immediately and follow the instructions.

2. Discuss this videotape with your parents. Borrow it from your teacher and view it at home with your family.

Canadian Red Cross

What could be useful for me?



Task description

The students prepare a list of essential objects for an emergency.

Method suggested

1. Ask students to name a few objects that they have in their luggage when they travel. Write their answers on the board. Among these objects, ask them to circle which ones would be useful in case of an emergency.

2. Read the instructions on sheet 9 with them. Ask them to fill it out individually by grouping the items written on the board according to essential needs as clothing, food, personal care and safety equipment.

3. Once the sheets are filled out, review their answers. Ask them to bring the sheet to their parents to check if they have these objects at home.

4. Answer any questions the students may have.

Links to the study programs

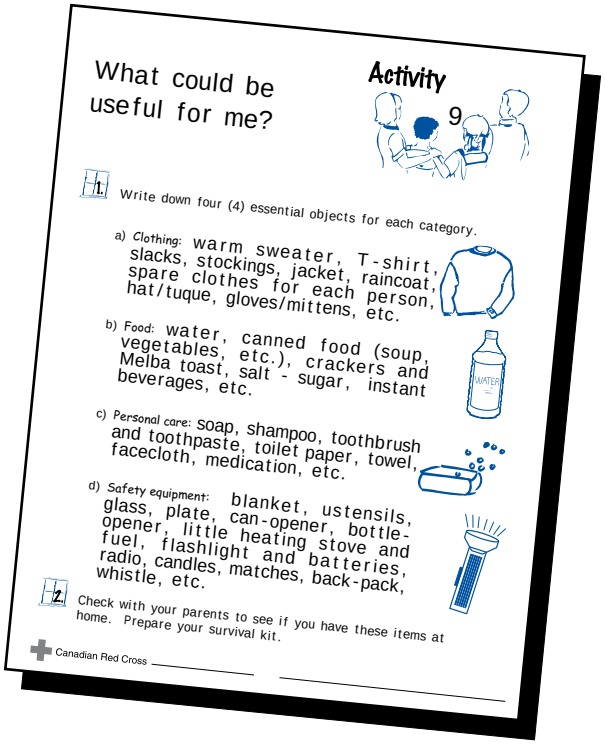
(see pages 11 and 12)

Social Studies / M.E.
Health and Physical Education

Material required

- Sheet 9 of the activity booklet.

Answer key


What could be useful for me?

Activity 9

1. Write down four (4) essential objects for each category.

a) Clothing: warm sweater, T-shirt, slacks, stockings, jacket, raincoat, spare clothes for each person, hat/tuque, gloves/mittens, etc.

b) Food: water, canned food (soup, vegetables, etc.), crackers and Melba toast, salt - sugar, instant beverages, etc.

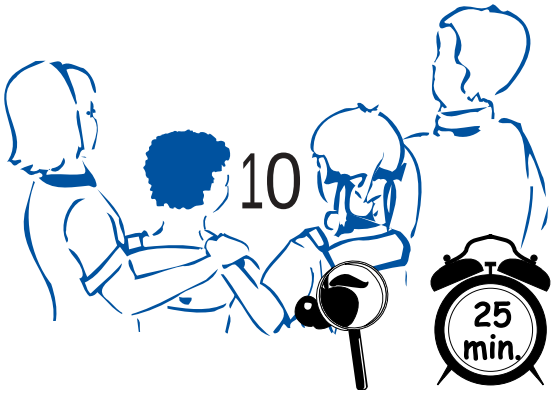
c) Personal care: soap, shampoo, toothbrush and toothpaste, toilet paper, towel, facecloth, medication, etc.

d) Safety equipment: blanket, ustensils, glass, plate, can-opener, bottle-opener, little heating stove and fuel, flashlight and batteries, radio, candles, matches, back-pack, whistle, etc.

2. Check with your parents to see if you have these items at home. Prepare your survival kit.

Canadian Red Cross

What must I say on the telephone?



Task description

The students must simulate an emergency call.

Links to the study programs

(see pages 11 and 12)

Social Studies / M.E.
Health and Physical Education

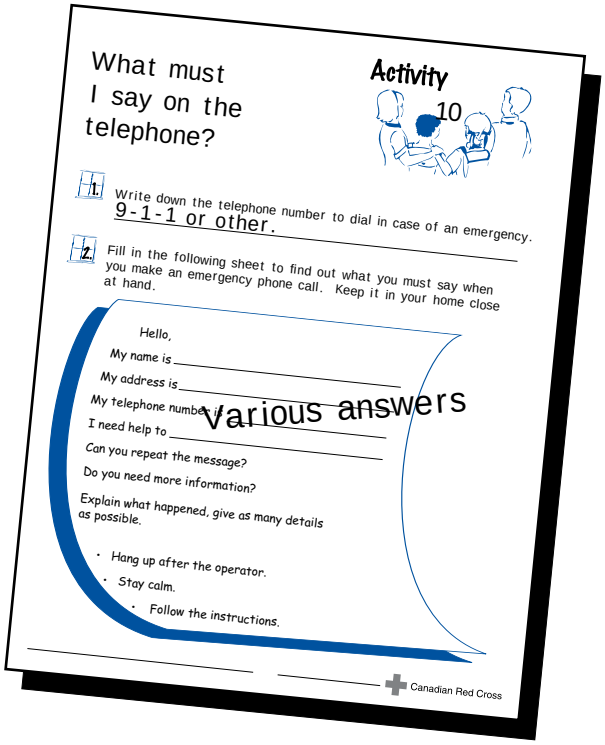
Method suggested

1. Ask students to name the places where they can call for help in case of an emergency.
2. Ask them what they should say when they make an emergency call. Note their answers on the board.
3. Ask students to get pair up and to fill out sheet 10.
4. Once the sheet is filled out, suggest that they simulate an emergency call. To do this, ask them to get together in pairs back to back. One student will be the telephone operator and the other, the caller. Then, reverse the roles.
5. Suggest that they bring this reminder home and post it near the telephone.
6. Answer any questions the students may have.

Material required

- Sheet 10 of the activity booklet.

Answer key


What must I say on the telephone?

Activity 10

1. Write down the telephone number to dial in case of an emergency.
9-1-1 or other.

2. Fill in the following sheet to find out what you must say when you make an emergency phone call. Keep it in your home close at hand.

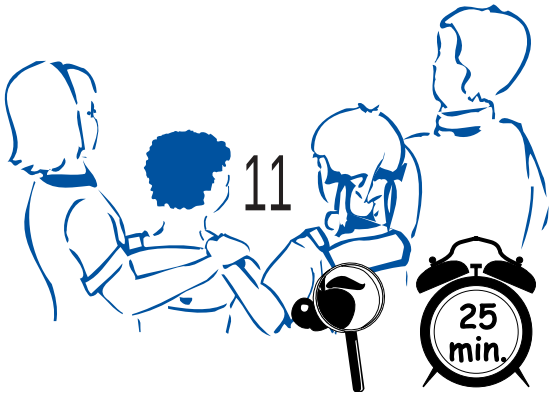
Hello,
My name is _____
My address is _____
My telephone number is _____
I need help to _____
Can you repeat the message?
Do you need more information?
Explain what happened, give as many details as possible.

Various answers

- Hang up after the operator.
- Stay calm.
- Follow the instructions.

Canadian Red Cross

How to exit the school.



Task description

Using the school plan, the students learn the routes to take and the instructions to follow in case of an emergency.

Method suggested

1. Ask students to state a few reasons why they should exit the classroom and the school quickly. Write their answers on the board.

2. Ask students to pair up. Give a photocopy of the school plan to each of them.

3. Ask them to show on the exit plan which exits they could use in case of an emergency: main school entrance, schoolyard door, side door, etc. Using various starting points, ask them to determine which routes should be taken to exit the school. Suggest that they trace with colored crayons the different exit routes using the classroom, the gymnasium and the library as starting points.

4. Read the instructions on sheet 11 with them. Ask them to fill it out by writing down certain instructions to follow in case of an emergency, as well as the meeting place for the class outside the school.

5. Once the sheets are filled out, review the students' answers. Suggest that they practice evacuating the school and meeting at the designated place. Comment on the activity and give feedback to the students.

6. Answer any questions the students may have.

Links to the study programs

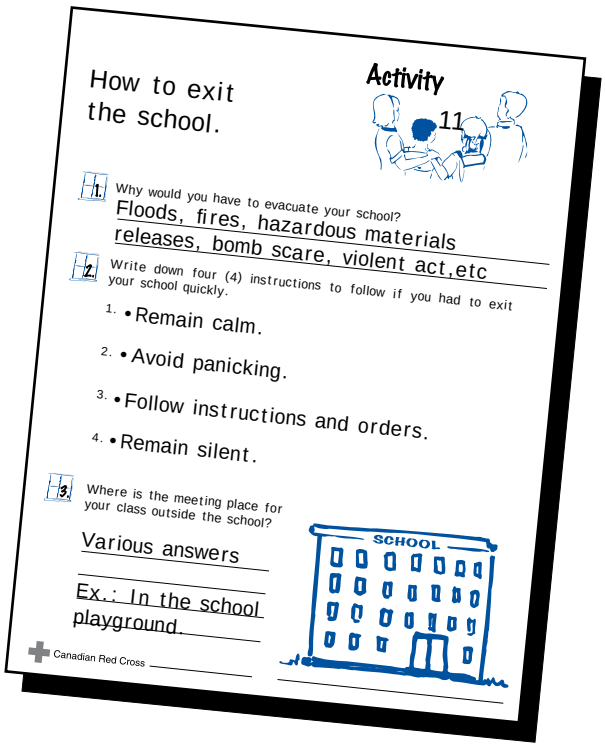
(see pages 11 and 12)

Social Studies / M.E.
Science and Technology
Health and Physical Education
Geography

Material required

- Sheet 11 of the student brochure.
- Photocopy of a school plan for each student.
- Annex 4, complementary information.

Answer key


How to exit the school.

Activity 11

1. Why would you have to evacuate your school?
Floods, fires, hazardous materials releases, bomb scare, violent act,etc

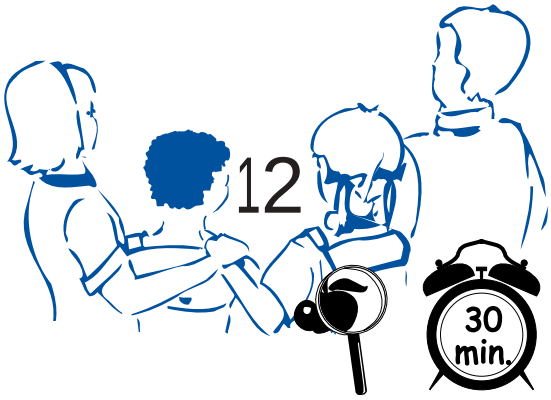
2. Write down four (4) instructions to follow if you had to exit your school quickly.
1. • Remain calm.
2. • Avoid panicking.
3. • Follow instructions and orders.
4. • Remain silent.

3. Where is the meeting place for your class outside the school?
Various answers
Ex.: In the school playground.

SCHOOL

Canadian Red Cross

What are hazardous materials releases?



Task description

After completing activity sheet 12, the students learn about accidents involving hazardous materials.

Method suggested

1. Ask the class to name products they think may be hazardous. When they provide an answer, ask what that material is used for. Explain that, if not handled properly, some products are hazardous. Example :
   - Chlorine is used for water purification but can cause serious burns if not handled properly.
   - Anhydrous ammonia is used for fertilizer and for refrigeration systems but can cause serious burns if not handled properly.
   - Natural gas is used to heat homes and businesses but can cause large fires if not handled properly.
   - Propane is also used to heat buildings, fire barbeques and operate some automobiles but can cause large fires if not handled properly.
   - Gasoline is used to power our cars and trucks but can cause water and land pollution or large fires if not handled properly.
   - Pesticides are used to control insects and weeds but if not handled properly can pollute land and water.

   Many substances, if involved in a fire, can create smoke that is very harmful.

2. Ask them to complete sheet 12. Review the answers with the entire class.

3. Answer any questions the students may have.

Links to the study programs

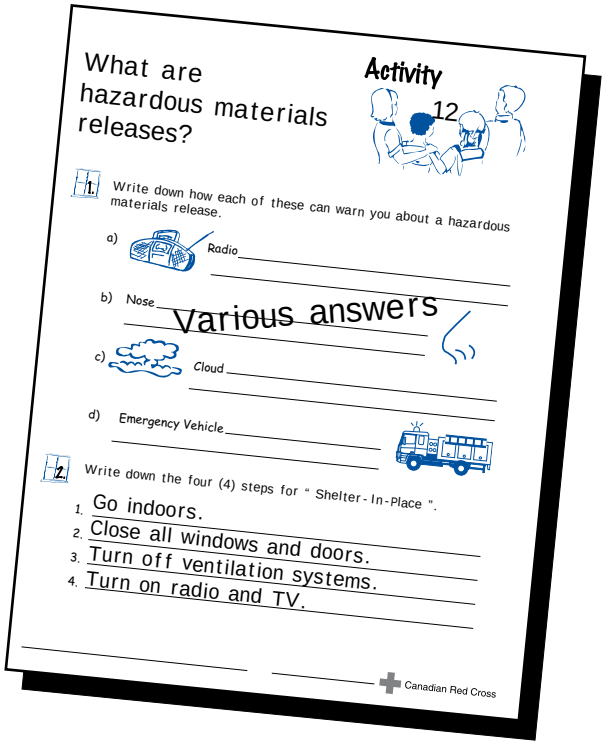
(see pages 11 and 12)

Social Studies / M.E.
Health and Physical Education
Geography

Material required

- Sheet 12 of the activity booklet.

Answer key


What are hazardous materials releases?

Activity 12

1. Write down how each of these can warn you about a hazardous materials release.

a) Radio _____

b) Nose _____

Various answers

c) Cloud _____

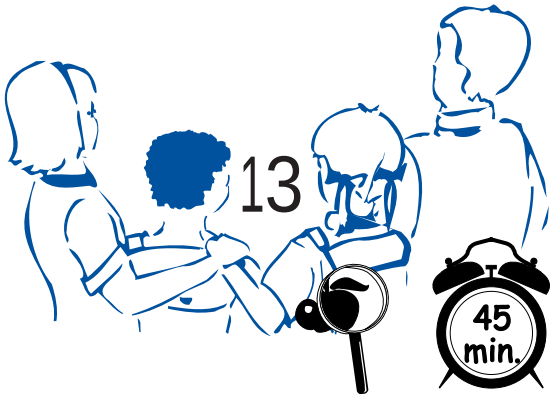
d) Emergency Vehicle _____

2. Write down the four (4) steps for " Shelter-In-Place ".

1. Go indoors.
2. Close all windows and doors.
3. Turn off ventilation systems.
4. Turn on radio and TV.

Canadian Red Cross

What are the proper behaviours to adopt?



Task description

Through role playing, the students demonstrate the attitudes and behaviors to adopt during a natural disaster.

Method suggested

1. Ask students to get together in teams of four to five. Give each team a type of disaster: flood, lightning storm, tornado or hazardous material accident.
2. Ask each team to prepare a scenario on the various attitudes and behaviours to adopt during a natural disaster.
3. After a few minutes of preparation, ask each team to present their role play in front of the class. After each presentation, review each of the situations together to analyze and highlight the proper attitudes and behaviors to adopt.
4. Suggest that they write down the proper attitudes and behaviours to adopt on sheet 13 and then to use this sheet as a reminder.
5. Continue presenting the situations.
6. Once the activity is completed, make a summary of the overall proper attitudes and behaviours to adopt during a natural disaster.
7. Answer any questions the students may have.

Links to the study programs

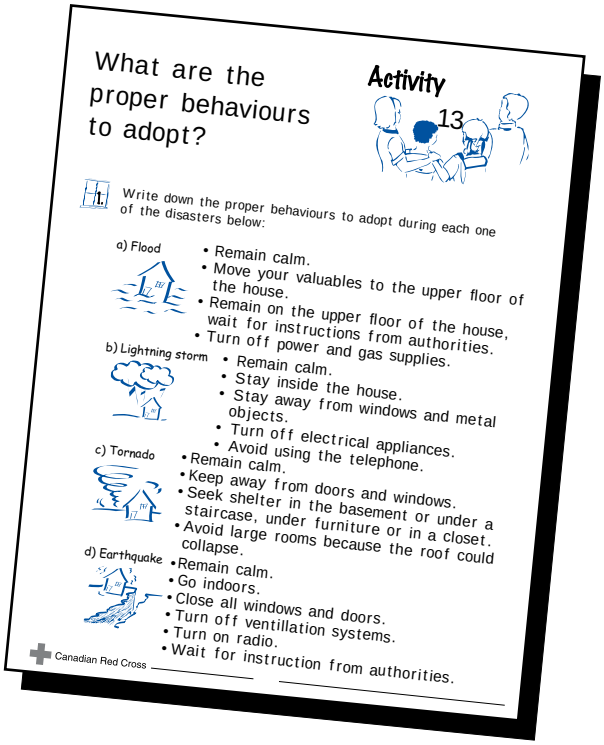
(see pages 11 and 12)

Social Studies / M.E.
Science and Technology
Health and Physical Education
Geography

Material required

- Sheet 13 of the activity booklet.

Answer key


What are the proper behaviours to adopt?

Activity 13

1. Write down the proper behaviours to adopt during each one of the disasters below:

a) Flood
- Remain calm.
- Move your valuables to the upper floor of the house.
- Remain on the upper floor of the house, wait for instructions from authorities.
- Turn off power and gas supplies.

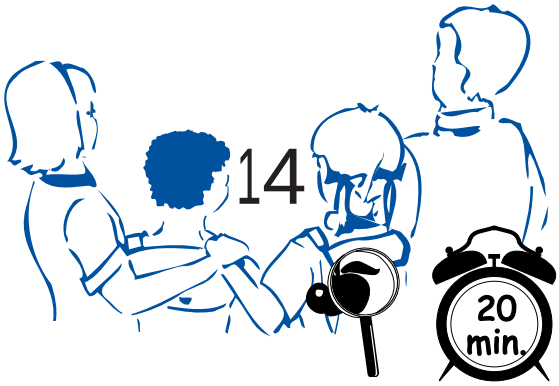
b) Lightning storm
- Remain calm.
- Stay inside the house.
- Stay away from windows and metal objects.
- Turn off electrical appliances.
- Avoid using the telephone.

c) Tornado
- Remain calm.
- Keep away from doors and windows.
- Seek shelter in the basement or under a staircase, under furniture or in a closet.
- Avoid large rooms because the roof could collapse.

d) Earthquake
- Remain calm.
- Go indoors.
- Close all windows and doors.
- Turn off ventillation systems.
- Turn on radio.
- Wait for instruction from authorities.

Canadian Red Cross

How do I feel after an emergency?



Task description

The students fill out a crossword puzzle using words to express the needs and feelings experienced after a disaster.

Method suggested

1. Ask students the needs and feelings that could be experienced after a disaster. Write their answers on the board.

2. Ask students to pair up. Read the instructions on sheet 14 with them. Ask them to fill in the blanks which express the needs and feelings experienced after a disaster.

3. Once the sheets are filled out, review them together. Check the students' answers by asking them to read their answers out loud. Ask them if they have ever experienced these needs and feelings in the past.

4. Answer any questions the students may have.

Links to the study programs

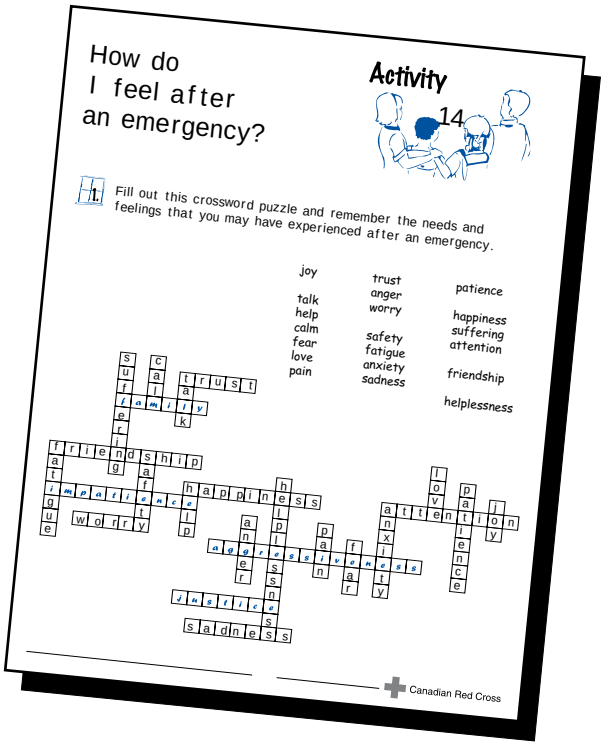
(see pages 11 and 12)

Health and Physical Education / M.E.

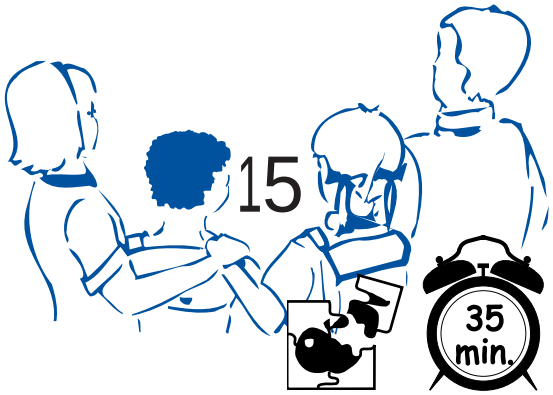
Material required

- Sheet 14 of the activity booklet.

Answer key



How to react in case of an emergency?



Task description

In a class discussion, the students describe how they should react and intervene in case of an emergency.

Method suggested

1. Ask students to describe their role in case of an emergency. To stimulate the discussion, ask them the following questions:
   - What can you do to help your parents in case of an emergency?
   - Can you prepare your luggage?
   - Can you take care of your little brother or sister?
   - What would you do if you were alone?
   - What would you do if you were baby-sitting your little brother or sister?
   - Other.

2. Read the instructions on sheet 15 with them. Ask them to fill it out individually by writing down how they would react in case of an emergency.

3. Once the sheets are filled out, review them together. Ask the students to explain what their reactions and involvement would be in various emergencies. Compare their answers.

4. Answer any questions the students may have.

Links to the study programs

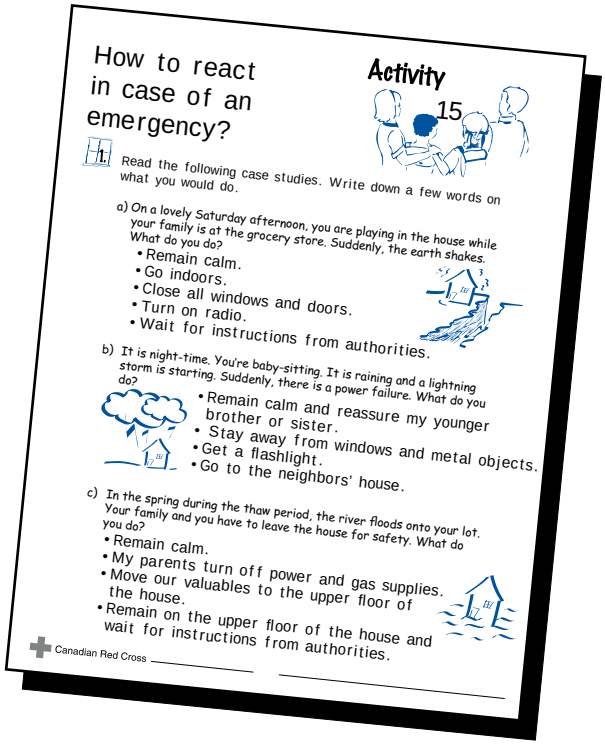
(see pages 11 and 12)

Social Studies / M.E.
Health and Physical Education

Material required

- Sheet 15 of the activity booklet.

Answer key



How to react in case of an emergency?

Activity 15

1. Read the following case studies. Write down a few words on what you would do.

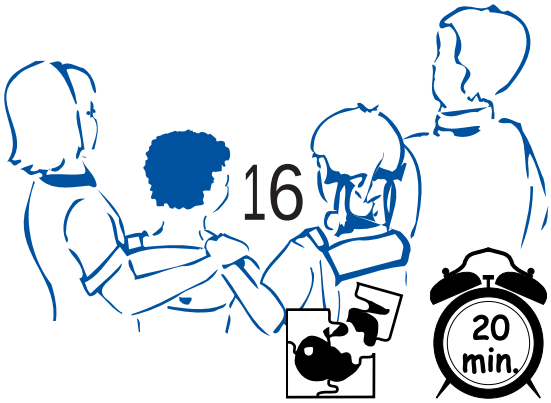
a) On a lovely Saturday afternoon, you are playing in the house while your family is at the grocery store. Suddenly, the earth shakes. What do you do?
- Remain calm.
- Go indoors.
- Close all windows and doors.
- Turn on radio.
- Wait for instructions from authorities.

b) It is night-time. You're baby-sitting. It is raining and a lightning storm is starting. Suddenly, there is a power failure. What do you do?
- Remain calm and reassure my younger brother or sister.
- Stay away from windows and metal objects.
- Get a flashlight.
- Go to the neighbors' house.

c) In the spring during the thaw period, the river floods onto your lot. Your family and you have to leave the house for safety. What do you do?
- Remain calm.
- My parents turn off power and gas supplies.
- Move our valuables to the upper floor of the house.
- Remain on the upper floor of the house and wait for instructions from authorities.

Canadian Red Cross

Do you remember?



Task description

Using sentences with blanks to fill in, the students review the content on disasters.

Method suggested

1. Review the notions discussed in the various activities by asking the students to summarize what they have learned in the preparedness program. Stimulate the discussion by asking them the following questions:
   - What is a natural disaster?
   - Name and describe a few natural disasters studied.
   - Where and when did these disasters occur?
   - What disaster risks have you identified in your environment?
   - What are the essential objects to have in case of an emergency?
   - Other.

2. Read the instructions on sheet 16 with them. Ask them to fill in the blanks individually.

3. Once the sheets are filled out, review them together. Ask the students to read their sentences out loud.

4. Answer any questions the students may have.

Links to the study programs

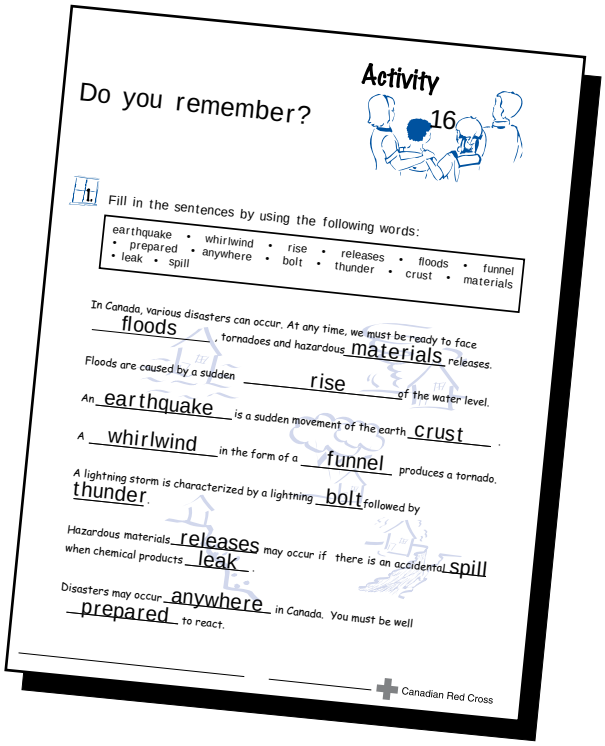
(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and Technology
Health and Physical Education
Geography

Material required

- Sheet 16 of the activity booklet.

Answer key



Do you remember? Activity 16

1. Fill in the sentences by using the following words:

earthquake • whirlwind • rise • releases • floods • funnel • prepared • anywhere • bolt • thunder • crust • materials • leak • spill

In Canada, various disasters can occur. At any time, we must be ready to face floods, tornadoes and hazardous materials releases.

Floods are caused by a sudden rise of the water level.

An earthquake is a sudden movement of the earth crust.

A whirlwind in the form of a funnel produces a tornado.

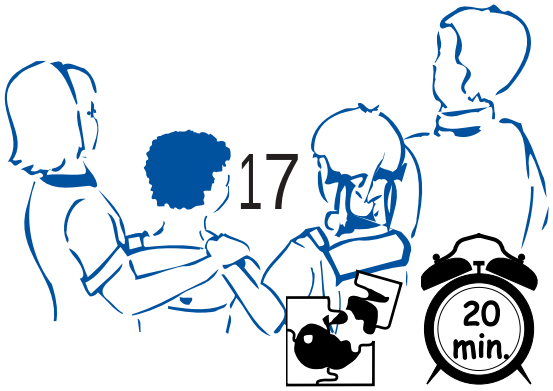
A lightning storm is characterized by a lightning bolt followed by thunder.

Hazardous materials releases may occur if there is an accidental spill when chemical products leak.

Disasters may occur anywhere in Canada. You must be well prepared to react.

Canadian Red Cross

Let's review.



Task description

Using sentences with blanks to fill in, the students review the attitudes and behaviours to adopt if a disaster would occur.

Method suggested

1. Ask students if they remember which attitudes and behaviours to adopt during certain natural disasters. Stimulate the discussion by asking them the following questions:
   - What are the attitudes to develop?
   - What are the behaviours to adopt during an earthquake, a tornado, a lightning storm or a flood?

2. Read the instructions on sheet 17 with them and ask them to fill in the blanks individually.

3. Once the sheets are filled out, review their answers together. Ask them to read their text out loud.

4. Answer any questions the students may have.

Links to the study programs

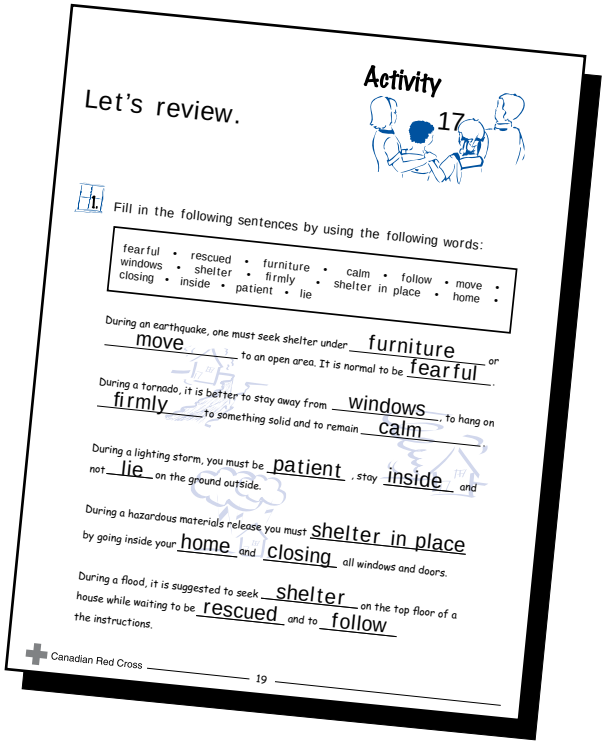
(see pages 11 and 12)

Social Studies / G.H.C.E.
Science and technology
Health and Physical Education
Geography

Material required

- Sheet 17 of the activity booklet.

Answer key



Let's review. Activity 17

Fill in the following sentences by using the following words:

fearful • rescued • furniture • calm • follow • move • windows • shelter • firmly • shelter in place • home • closing • inside • patient • lie

During an earthquake, one must seek shelter under furniture or move to an open area. It is normal to be fearful.

During a tornado, it is better to stay away from windows, to hang on firmly to something solid and to remain calm.

During a lighting storm, you must be patient, stay inside and not lie on the ground outside.

During a hazardous materials release you must shelter in place by going inside your home and closing all windows and doors.

During a flood, it is suggested to seek shelter on the top floor of a house while waiting to be rescued and to follow the instructions.

Canadian Red Cross 19

More activities

- **Create a miniature water cycle**
  - Materials: an electric kettle filled with water, an aluminum pie plate, ice cubes
  - Procedure:
    - Heat the water in the kettle until it begins to evaporate.
    - Place the ice cubes in the aluminum plate.
    - Place the plate with the ice cubes over the jet of steam.
    - Observe the formation of water drops under the plate.
    - Compare this miniature water cycle with the natural water cycle.
    - Discuss the path water takes to fall to the ground.

- **Create a tornado**
  - Materials: a 2 litre plastic soda bottle with cap, water, dishwashing liquid, marbles or other small objects
  - Procedure:
    - Fill the plastic soda bottle with water.
    - Put three drops of dishwashing liquid into the bottle along with a few marbles or other small objects.
    - Cap the bottle tightly. Hold the bottle on its side by each end. Move the bottle using a circular motion to swirl the liquid. Keep the liquid swirling as you turn the bottle upside down. Be sure to keep the cap end of the bottle steady while you continue to swirl the liquid in the large end.
    - A swirl will form representing the funnel.

- **Create wind**
  - Materials: a round piece of paper cut in a spiral, string, a heat source (electric light bulb)
  - Procedure:
    - Attach the string to the center of the paper spiral.
    - Hold the spiral by the string and place it over the electric light bulb.
    - Move the spiral next to the source of heat.
    - Discuss observations. When air is heated, warm air rises and cold air descends, creating movement in the air. This movement of air is the wind.

- **Make a mountain**
  - Materials: a large pan, sand, water
  - Procedure:
    - Place the sand in the pan and shape it into a mountain.
    - Pour water on top of the mountain and let it run along the sides.
    - Observe the various formations.
    - Compare this phenomenon with the effects of rain on the ground and discuss the link between floods and landslides.

- **Identify potential earthquake hazards in the classroom based on the following questions:**
  - Are tables and desks placed in such a way that they cannot slide and block exits?
  - Are all filing cabinets and cupboard doors securely latched?
  - Are all computers securely fastened to their workstations?
  - Are all shelves, filing cabinets and cupboards bolted to the wall?
  - Are all overhead lamps securely fastened to the ceiling?
  - Are potentially hazardous chemical products safely stored?
  - Are chemical products stored in ventilated areas located far from exits?
  - Are books and materials stored on shelves in such a way that they cannot fall from them?
  - Are all decorations on the wall securely fastened?

- **Study the myths and facts about natural disasters such as tornadoes, hurricanes and electrical storms.**

- **Ask students to find newspaper articles describing natural disasters that have occurred in the world and organize them according to the criteria of their choice (severity, location, natural elements involved, time of year).**

- **Organize a campaign in your school or community to raise awareness and provide information about natural disasters.**

- **Invite a guest speaker to talk about local or overseas disaster intervention.**

- **Game: prepare an emergency survival kit using coloured stickers on which students write what they think should be included.**

- **Association game with various coloured cards: disasters, definitions and appropriate behaviours.**

- **Timed simulation of an earthquake: two minutes to prepare, group simulation and discussion.**

- **Observe and learn to distinguish the different types of clouds.**

For more information

In this fourth section of the facilitator's guide, there is information on the main natural disasters that could occur in your province or in other parts of Canada, the measures to take to be well prepared for emergencies and the observable reactions students have in case of an emergency.

A disaster is an accident that seriously disrupts the community's everyday activities by causing deaths, injuries and material damage. An event becomes a disaster when:

- It involves an extreme phenomenon.
- This phenomenon occurs in a location where many people live. As a result of the disaster, people find themselves helpless and in dire need. They have no food, clothes or shelter and no access to medical or nursing assistance, are deprived of all basic necessities and are without protection against the adverse factors and conditions of their environment.
- This phenomenon takes people by surprise because it happens suddenly and unexpectedly.

Types of disasters

There are two types of disasters: those caused accidentally by human beings and natural disasters.

The type of disasters caused by human beings are:

- industrial accidents: construction faults (dams, tunnels, buildings, mines, etc.), explosions, fires, collisions, shipwrecks, railway catastrophes, toxic substance leaks into drinking water systems, etc.
- socio-economic catastrophes: massive unemployment, pollution, overuse of ressources, limited access to healthcare and education.
- socio-political catastrophes: failure to respect human rights.

A natural disaster is caused by natural elements, like wind, rain, extreme temperatures or seismic activity which become catastrophic by causing deaths, injuries and material damage.

Types of natural disasters

There are three types of natural disasters:

- Weather related disasters: storms (hurricanes, tornadoes, cyclones, snowstorms), heat or cold waves, droughts, etc.
- Topographical disasters: floods, avalanches, landslides, etc.
- Geophysical disasters : earthquakes, volcanic eruptions, tidal waves, etc.

A few natural disasters

Many natural disasters can lead to major damage when they occur close to residential areas. This section of the teaching guide provides a short list of these disasters.

Lightning storms and lightning bolts

Lightning storms consist of lightning flashes (light) and thunder (bang). Thunder can smash windows, start a fire, cause power failures or explosions if it comes into contact with fuel. It can be dangerous to humans by inducing serious burns or electrocution. This natural phenomenon occurs mostly in the summer, late in the afternoon.

Vertical air currents that carry humidity, water and ice in the clouds create electrical charges. Clouds then develop positive and negative charges. When these charges are too high, there is an electrical discharge. Discharges occur either between clouds to produce heat lightning or on touching the ground to produce a lightning bolt that may strike the same place several times. Astonishingly, lightning can also occur during a snowstorm.

A lightning bolt produces a tremendous amount of energy. It can reach temperatures up to five times that at the surface of the sun. If it strikes a tree, the electrical current reaches the water in the wood and changes it into steam which shatters the tree. This discharge usually occurs at only one point in the lightning bolt.

During a storm, you first see the flash of lightning and then hear the thunder. This can be explained by the fact that light travels one million times faster than sound.

You can measure the distance of a storm by counting the number of seconds between the time you see the flash of lightning and the time you hear the thunder. You then divide the time by 3 and you get the distance of the storm in kilometers.

Power failures

Here are possible causes of power failures:

Natural: Lightning bolts, freezing rain, frozen electrical wires, storms and trees that fall on power lines.
Technical: Electrical power failure or breakdown.
Human: Overloads, short-circuits, power cut-offs, person who brings an aluminum ladder or a metal antenna close to electrical wires, excavation work.

What must we do in case of a power failure?

In case of a power failure, you should first determine how extensive it is (a few houses, one entire street, a neighbourhood) and notify your electricity company to help them locate the failure. With their computers, they usually can quickly find the failures in a network because of the sudden lowered electricity demand.

If the power failure lasts, you should:

1. Listen to the radio station to know more about the failure;
2. Lower the thermostat so as not to overload the network when the power comes back on;
3. Disconnect electrical appliances which were in operation before the power failure, except for the refrigerator and freezer;
4. Leave a few lights on to know when the power comes back on;
5. Avoid opening the refrigerator and freezer: food can be kept for 24 to 48 hours. In winter, some food can be kept outside or along the windows;
6. Close water valves and open water faucets when you leave your home.

When the power comes back on, you must gradually reconnect your electrical appliances and turn on the heating progressively to avoid overloading the circuit and causing other failures.

Changing your habits temporarily

It is important to remember that people's habits completely change during a power failure. Everyday life changes altogether. It becomes more difficult to cook, heat the house, provide lighting and carry out activities.

Rain

Clouds are a collection of very small water droplets. Carried by the wind, they stick together and form larger droplets. When their size is greater than 0.1 mm, they fall as rain. Remember that nothing large remains suspended in the air. Water droplets may reach up to 5 mm in size when they fall on the ground. They become larger by merging together when they fall.

There are a diffrent types of rain. Here are a few :
- Drizzle: precipitation consisting of many droplets falling lightly (less than 0,5 mm).
- Shower: strong and sudden precipitation of a short length.

Earthquakes

Earthquakes are sudden movements of the earth's crust. The tremors usually occur suddenly and leave very little time to react. Major earthquakes are often preceded by other weaker tremors.

Floods

Floods are the overflow of rivers and lakes caused by an excessive rise of the water level. This rise can be caused by heavy precipitation, sudden thawing of snow, ice jams or ice break-ups.

Snowstorms
This natural phenomenon is characterized by abundant snowfall and strong winds. Visibility is thereby reduced and it becomes hard to walk or travel outside. Thus, it is better to stay at home. Schools are usually closed and traffic on the highways is limited. During a snowstorm, the air temperature is usually higher because snowfalls are more abundant when the temperature is slightly below 0 °C.

Snowstorms are most common in December, January, February and March. It does not snow everywhere in the world. In some countries, the snow falls only at the top of high mountains. In other countries, there is never any snow. At the North Pole and the South Pole, the snow never melts.

Snow

Snow consists of water that crystallizes into ice when the atmosphere gets cold.

The clouds filled with water droplets form a mass of ice when the air is cooler. The ice expands and forms crystals which merge together to form snowflakes. It takes millions of ice crystals to make a single snowflake. When they are large and heavy, they fall out from the clouds. Snowflakes are rarely identical. Their shape varies according to the temperature and how they move to join together. The larger ones branch out and form stars. Their size varies from the size of a coat button to that of a pencil tip.

Temperature	Snowflakes shapes
0 °C to -8 °C	Needles
-8 °C to -15 °C	Goblets or saucers
-15 °C to -20 °C	Stars
-20 °C and colder	Columns

Wind

The wind carries the snow in the air and makes a snowstorm more violent. It reduces visibility and hinders walking or travelling. The wind also moves snow along the ground to form burrows or patterns which can be seen in the fields. When snow is carried by the wind, its structure is modified and it becomes more compact..

Hail
Hail is precipitation consisting of ice particles that are formed during a storm.

Tornadoes
Tornadoes are whirlwinds shaped like a funnel that points towards the ground. They can destroy everything on their path. This type of phenomenon can uproot trees, turn cars over and tear the roofs off houses.

Forest fires
Most fires that destroy our forests are caused by human negligence such as campfires that are not properly put out or lit during dry periods. However, fires that occur naturally such as those caused by lightning bolts, are more devastating and burn over larger areas.

Landslides
Landslides are movements of clay type soil saturated with water. These ground movements occur very rapidly and leave the population very little time to react.

Volcanoes
Volcanoes are mountains which expel molten material (volcanic eruption).

Tidal waves
Tidal waves or tsunamis are huge sea waves that are caused by earthquakes, earth movements or underwater volcanic eruptions. These waves can reach up to 30 meters high and cause major damage to houses along the shores.

Fire

It is important to be aware that a fire can start anywhere in the house. However, bedrooms, kitchens or living rooms are more subject to fire. It can also start in the basement.

The causes for fires are varied. They can be caused by human errors or mechanical failures. Most fires start in the kitchen, usually when cooking oil is overheated. Other causes are : heating devices, negligent smokers, children playing with matches, fires lit voluntarily, electrical fires and clothes dryer fires.

Firefighters are constantly carrying out prevention work and suggest being careful to avoid fires. Over the last few years, it has been highly recommended and in some cases compulsory to have smoke detectors in each home. This prevention device is essential to warn the occupants that there is smoke in the house.

To make sure the smoke detector is in good working condition:

- Check it each month to make sure it works properly;
- Replace the batteries (with new ones) twice a year, at fall and spring time changes;
- Be more careful when the smoke detector is connected to the home power supply, especially when there is a power failure;
- Install the smoke detector close to the bedrooms;
- Install one smoke detector on each floor.

It is essential to know how to react in case of a fire or simply when you evacuate your home. You must:

- Remain calm;
- Avoid panicking ;
- Yell out to alert your neighbours;
- Leave your home quickly;
- Not get dressed or take your toys along;
- Not try to put out the fire;
- Crawl on the hands and knees to escape if there is smoke;
- Avoid touching any doors;
- Close the doors to avoid any drafts;
- Call emergency services;
- Get help from your neighbours;
- Go to the designated meeting place;
- Avoid returning into the house.

Remind children they must not hide (under the bed or the covers, in the closet, in the clothes dryer, in the bathtub) when they detect a fire at home, because they will not be safe there. The best reaction is to alert other people in the home then go outside to be visible, breathe fresh air and yell for help.

A few words about hazardous materials releases

Hazardous materials releases are incidents that involve an accidental spill or leak of hazardous chemical products that are dangerous to humans and the environment.

These hazardous products can contaminate the soil or water or can spread in the air. If they become airborne, they may or may not be visible as a toxic cloud. Sometimes, you can be able to smell or taste the hazardous product. Inhaling toxic fumes or drinking contaminated water can be hazardous to your health. The risk depends on the toxicity of the substance in question, its concentration and how long you're exposed to it.

In case of a hazardous materials release, the authorities may ask that you remain inside your home and use Shelter-In-Place techniques :

- Go inside your home and remain there;
- Close all windows and doors;
- Turn off all ventilation systems;
- Listen to the radio or watch television to be aware of the authorities' instructions.

To get prepared for emergencies

Nature's sudden mood swings can strike at any moment without warning. Prevention and preparation for such events can help us to better react and to limit the damage. The following steps are required to plan for the unexpected.

- Analyze and study the risks of disasters in your area and learn what to do should they surcome.
- Prepare your home for disasters.
- Make an action plan:
  - Plan for safety measures in case of power failures or other emergency;
  - Keep your list of emergency phone numbers at hand;
  - Plan on two meeting places ahead of time in case an evacuation is necessary : one, close by, outside your home and easy to get to in case of a sudden emergency like a fire; another outside your neighbourhood in case you cannot go back home;
  - Have each member of your family know the phone number of someone who lives out of town in case you get separated;
  - Let the children find out what a smoke detector sounds like; replace the batteries (with new ones) twice a year (when you set the time changes);
  - Practice the evacuation plan at home and the techniques to remain sheltered in your home in case of a hazardous materials release;
  - Turn off water and power if all family members know how to, have time to do it and it is recommended by the authorities;
  - Never use the elevator in case of an emergency;
  - Teach the children to recognize emergency exits and smoke detectors at home, in school and in public places;
  - Plan alternative living quarters.
- Prepare a survival kit, a first aid kit and a car emergency kit.
- Prepare food supplies to last 72 hours in case of an emergency.

After the disaster

Even after the disaster, there is still an emergency. You must:

- Give first aid to injured people;
- Be sure to have your survival kit with you;
- Listen to the local radio station in case you are asked to evacuate.

If asked to evacuate, I am ready!

If the authorities give orders to evacuate, do not insist on staying in the house, but instead leave immediately while taking care to:

- Bring along an emergency kit and a first aid kit;
- Wear proper clothing;
- Make sure your pets are safe;
- Leave a note on the table indicating the time of departure and the destination;
- Lock all the doors while leaving.

Cooperate

- Listen carefully to the instructions given by the authorities and rescuers;
- Always follow the route which has been laid out for you;
- Go to the meeting place designated by the authorities;
- Observe what is around you and notify the authorities and people about anything that may seem abnormal or dangerous.

Returning home

When you return home, you must:

- Check the condition of the house to evaluate the damage;
- Use a flashlight to inspect the site : it may be hazardous to turn on the lights;
- Check the condition of your electrical appliances;
- Get in touch with specialists for any electrical, heating or gas problems;
- Drink bottled water until the authorities confirm that the tap water is safe to drink;
- Check the food in your refrigerator and freezer, throw out all spoiled food or other;
- Use the phone only for emergencies: the work teams may still need the telephone circuits for a while.

Children and emergencies

Experiencing an emergency can affect someone for quite a long time. Kids are especially vulnerable. After an emergency, their reactions can be different according to their age. To help them better cope, make them feel confident and secure, help them to understand and perceive what is happening.

Their reactions are normal
After an emergency, kids may have certain reactions: they may cry, worry, be confused, withdraw or be aggressive. This expression of their anguish is only normal and temporary. It is better not to punish them because their reaction may persist. You should try rather to understand them and help them to get rid of their fears.

You can help them
After an emergency, you can help the kids get back to normal life by explaining to them what happened, taking their fears seriously, listening to what they have to say, being patient with them and encouraging them to express their feelings.

Other sources of information

For more information on the subjects in this guide, here is a list of references:

- Canadian Red Cross;
- Local community health service;
- Local police and fire departments;
- Local, provincial and federal public security;
- Armed forces;
- Weather forecasting services;
- Community organizations;
- Etc.

Web sites :

- www.angelfire.com/on/predictions/
- www.colorado.edu/hazards
- www.disasterRelief.org/
- www.disasterwarning.com/
- www.ec.gc.ca/climate/index.html
- www.ec.gc.ca/water/
- www.eventbasedscience.com
- www.fema.gov/
- www.ifrc.org
- www.icic.org
- www.msp.gouv.qc.ca/jeunesse
- www.ncdc.noaa.gov/
- www.ns.ec.gc.ca/weather/hurricane/hurricanes_f.html
- www.nssl.noaa.gov/
- www.uwex.edu/ces/news/ /handbook.html
- www.prevention2000.org

Other :

Video « Shelter-In-Place », staying safe during a hazardous materials release, Town of Brandon (Manitoba)
Emaill : b.kayes@city.brandon.mb.ca

History of the Red Cross

The Movement

More than 130 years ago, Henry Dunant's dream resulted in the most impressive humanitarian organization we know: the international Red Cross movement. Able to intervene anywhere in the world to help out in any emergency situation, it has but one mission: to improve the condition of the most vulnerable in society.

History

You cannot discuss the Red Cross and its history without mentioning its founder Henry Dunant, a Swiss citizen born in Geneva in 1828.

In 1859, his business brought him to northern Italy. Dunant found himself at Solferino, on a battlefield where nearly 40,000 lay dead or wounded before him. He was disturbed to see this disaster and even more upset at how little relief was being given to the wounded. He immediately organized a first-aid team and, from that moment on, his career as a businessman was transformed.

Once back in Geneva, he wrote "A Memory of Solferino." This book explained his ideas and proposals on volunteer societies that would aid those injured in war. His book aroused much interest and in 1863, a committee of five supporting Dunant's ideas was formed.

This committee, on which Dunant played a role, organized an international conference in Geneva in which representatives of sixteen different countries participated. The International Committee of the Red Cross was born!

As a tribute to the home country of the founder and its neutrality, the organization adopted a red cross on a white background as its distinctive and common sign. The red cross became the universal symbol for aiding victims of armed conflicts and natural disasters. In 1876, the Committee adopted the name of International Committee of the Red Cross (ICRC) and approved a second emblem, the red crescent, for use in Moslem countries. The first milestones were passed. The Red Cross Movement now covered the globe. The dream of Henry Dunant was a reality.

Henry Dunant: a peacemaker

As his work with the Red Cross took up more and more of his time, Henry Dunant neglected his business and soon he was bankrupt. He was forced to resign from the ICRC. Over the next few years, Henry Dunant wandered about like a vagrant, devoting himself to humanitarian works. He spent the last eighteen years of his life in hospital.

In 1895, a journalist tracked him down and wrote an article that created a sensation. People thought that the man who had founded the Red Cross had died long ago. Overnight, he became a celebrity. The public was touched by his poverty, the Pope and kings wrote to him and a number of national Red Cross Societies made him a member or honorary president.

In 1901, the Norwegian Parliament awarded him and French pacifist Frédéric Passy the first Nobel Peace Prize.

On October 30, 1910, Henry Dunant died peacefully in his sleep. His thoughts and actions had inspired numerous humanitarian reforms. His story proves that a courageous and visionary man can change the world.

Over time, the Red Cross has been able to adapt to its environment and the international social and economic context. Today, it seeks not only to help the victims of armed conflicts but also to offer relief to those involved in natural disasters and other humanitarian tragedies, providing medical aid, material assistance and emergency social services.

Depending on the needs of the countries where it is established, its field of action includes combating famine, epidemics, childhood disease and environmental imbalances and organizing sanitary services, first aid, help to victims of road accidents and lifesaving services in forests, mountains and at sea. Throughout the world, the Red Cross prepares people to prevent and overcome crises by teaching them ways to save lives and protect health.

The movement

The International Committee of the Red Cross	The International Federation of Red Cross and Red Crescent Societies	National Societies
• Intervenes mainly in times of war. • Is a neutral intermediary during armed conflicts, internal problems or tensions on behalf of the injured, the ill and political and civil prisoners.	• Coordinates the humanitarian activities of the national Societies when a natural, technological or environmental disaster strikes a country. • Aids and comforts the victims of disasters.	• There are 176 national societies throughout the world. • Primary goal: improve the condition of the most vulnerable. • Provide emergency relief, social and public health services, water safety and first aid courses, training nursing personnel, services for senior citizens and youth programs. • The Canadian Red Cross Society is one of the 176 societies.

Newspaper articles

Tumultuous Spring Wake-Up

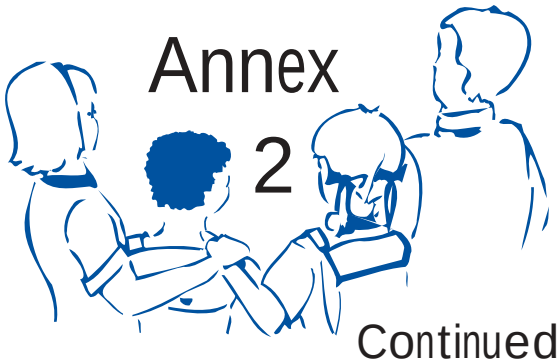
WINNIPEG 29 April 1997 - For Manitobans who live in the Red River Valley, spring floods are a part of life. This winding river, which flows north into Lake Winnipeg, has flooded more than once in the last one hundred years. The year however, the water levels are their highest recorded level ever.

Since the first warnings of the 26th of February 1997, the city of Winnipeg has been putting its flood prevention program in effect. In addition to the 47 kilometer flood diversion canal built to absorb the Red River's overflow, several emergency dykes have been erected. The Brunkild Dyke, built in 8 days south of Winnipeg, stretches almost 40 kilometres. 6.6 million sandbags were used to build these dykes.

The river started to rise on the 30th of March. On the 22nd of April, the government of Manitoba declared a state of emergency. Over the next few days, more than 20,000 people from 19 communities and another 7,000 from South of Winnipeg received evacuation orders. They took shelter in the reception centers set up by the Red Cross where more than 1,700 volunteers helped reunite families, and provided beds, comfort kits, and meals while they waited to return to their homes.

The flood diversion canal and the Brunkild Dyke kept the Winnipeg residents dry and safe. Unfortunately, many Manitobans were less lucky. 1,400 of them saw their homes destroyed or seriously damaged. To help them rebuild or repair and to render their homes inhabitable again, the Red Cross distributed the 20 million dollars raised during their fund raising campaign.

Newspaper articles



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The Swissair Flight 111 crash : 2 years later.

PEGGY'S COVE September 7, 2000 - Two years ago, on the night of September 3, 1998, Swissair flight 111, flying from New York to Geneva, crashed at sea near the small town of Peggy's Cove. A short time before the fatal crash, the pilot had attempted to return to the Halifax Airport to make an emergency landing, but it was in vain. This aerial disaster cost the lives of 229 passengers and crew.

According to witnesses, the only noise was a loud bang as the airplane hit the water. The plane was literally pulverized into millions of pieces by the impact. Ships, planes, helicopters, and submarines were rushed to the scene to search the waters and beaches for victims and debris from the plane. In 36 hours, some 1,500 people accompanied by the RCMP, Canadian soldiers, medical teams, Coast Guard employees and fire crews were dispatched to the scene.

Some 600 employees and volunteers of the Red Cross participated in rescue operations. They arranged shelter and food for the search and rescue teams near the crash site. They also provided support for sheltering, accompanying and comforting the families of the victims.

Two years later, the Canadian Transport Safety Office in charge of the inquiry is still having difficulty explaining the crash. The analysis of the last radio communication and the approximately 2 million pieces of the aircraft have revealed nothing. The inquiry could last months or even years.

Newspaper articles

Continued

Eastern Ontario: Buried under the Ice

OTTAWA January 10, 1998 - Since January 5, Eastern Ontario, Quebec, New Brunswick, and Nova Scotia have been touched by the most severe and expensive natural disaster in Canadian history. For more than 80 hours, these areas experienced high amounts of freezing rain and sleet mixed with snow: 85 mm in Ottawa, 73 mm in Kingston, and 108 mm in Cornwall.

The thick coat of ice has caused major damages to the electrical system, leaving nearly 1.2 million Ontarians in the cold and dark for hours or days. 64 municipalities have declared states of emergency. Fortunately, many among them have been able to turn to neighbouring communities for help while waiting for service to be restored.

Seventeen reception centers were set up by the Red Cross to help people in need. There, 1,700 volunteers registered evacuees, distributed 2,000 blankets and provided more than 30,000 meals. Thanks to $700,000 raised through its fund-raising campaign, the Red Cross has also been able to provide financial assistance to evacuees returning to their homes.

Newspaper articles

Continued

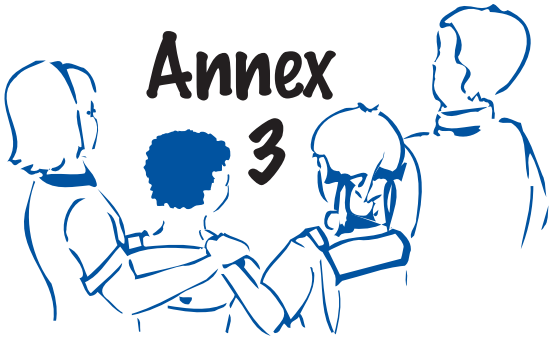
An earthquake in the Saguenay

Saguenay (Quebec) - On Friday November 25, 1988, the population was more frightened than harmed. An earthquake with a magnitude of 6.4 on the Richter scale was felt in the entire region around 6:45 pm. The epicentre was located 35 km South of Chicoutimi. Other parts of the province also felt the tremors.

The earthquake produced short tremors sufficiently strong enough to frighten the population. It was followed by power failures. Fortunately, there were no deaths nor any serious injuries, but the earthquake left many people in a state of shock. During the days that followed, the local community health services offered psychological help to the population. Volunteers from the Red Cross were not required during this natural disaster because there was no evacuation.

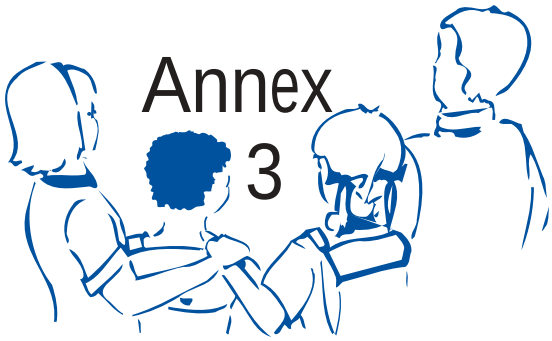
The residents and company managers then proceeded to have their buildings inspected for damage. Many of the houses were only slightly damaged with cracked walls, chimneys and various objects fallen on the floor. Some public buildings were closed down for repairs or to prevent further damage. This earthquake led to improved building construction standards and thereby resulted in better protection for people in their environment. Following this event, the people wanted to know what attitudes and behaviors to adopt for future earthquakes. The media therefore gave out safety advice and reiterated that they should remain calm because no other tremors were expected.

Disasters that have occurred in Canada



Disaster Natural disaster	Location	Date	Description
Earthquake	Québec (Saguenay–Lac-Saint-Jean)	November 25, 1988	• Magnitude 6.0. • Felt within an area of 1,000 km around the epicenter.
	Yukon (border to Alaska)	1899	• Magnitude: 7.9. • The strongest earthquake to occur in Canada.
	N.W.T. (Baffin BAY)	1933	• Magnitude: 7.3. • The strongest earthquake north of the Arctic Circle.
	British Columbia (Queen Charlotte's)	1949	• Magnitude: 8.1. • Caused an earthquake flood that killed 27 people.
Floods	New Brunswick	1923	• Ice melt, heavy rains and ice jams throughout the province • Damage estimated at $61 million.
	Québec (Saguenay)	July 20, 1996	• Rainstorm • Over 16 000 people evacuated. • 3 135 houses destroyed or damaged. • Damage estimated at $500 million.
	Manitoba	April 22, 1997	• Red River flooded its banks. • Over 24,000 people evacuated • Damage estimated at $750 million.
	Newfoundland	January 1983	• The spring melt, a rainstorm and rapid ice break-up caused flash floods in the Exploits and Gander river basins, destroying, among other things, part of the Bishop's Falls dam and power station. • Damage estimated at $42 million.
Ice storm	Ontario	January 5, 1998	• 1.2 million residents in Ontario without power and heating for hours and days • State of emergency in 64 towns.
Tornadoes	Saskatchewan (Regina)	1912	• 28 dead and hundreds injured.
	Ontario (Sudbury)	1970	• 6 dead and 200 injured.
	Alberta (Pine Lake)	July 2000	• 12 dead and 140 injured.

Disasters that have occurred in Canada



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Disaster Other causes	Location	Date	Description
Tire fire	Québec (St-Amable)	1990	• Duration: 79 hours. • Over 1,000 people called in to fight fire. • Eighteen families evacuated. • Over 300,000 litres of hydrocarbons pumped. • 8,300 tons of toxic gas and 7,700 tons of oil vapor released into atmosphere • 9,600 tons of blacking and burned rubber and 4,500 tons of steel and synthetic fibers left in the ground.
Water contamination	Ontario (Walkerton)	2000	• Water contaminated by e-coli bacteria. • 7 deaths, several dozen people in critical condition and several hundred ill
Plane crash	Nova Scotia (Peggy's Cove)	Sept. 3, 1998	• 229 deaths. • 1,500 people dispatched to the accident site. • Some 600 Red Cross employees and volunteers assisted in rescue efforts.
Chemical spill	Alberta (Red Deer) Manitoba (Brandon)	2001 1995	• Chemical spill caused by train derailment. • Evacuation of hundreds of residents. • Chemical spill caused by an accident with a tractor trailer resulting in train derailment. • Evacuation of hundreds of residents over several hours.
Oil spill	British Columbia	1988-1989	• The tanker Nestucca runs aground on the coast of British Colombia, spilling 875,000 litres of gasoline and causing the death of over 50,000 seabirds.

Reminder

General safety rules and instructions.

1. A few safety rules

- Remain calm.
- Avoid panicking.
- Follow instructions.
- Remain silent.
- Cooperate in maintaining order and discipline.

2. A few useful hints

- Know where the emergency exits and fire extinguishers are.
- Know how to set off a fire alarm.
- Use staircases instead of elevators.
- Follow the safety instructions.

3. Some safety measures

- Locate and check the condition of the fire extinguishers and smoke detectors.
- Check the alarm system.
- Make sure the lightning system works.
- Inform everyone of the instructions to follow in case of an emergency.
- Have flashlights available.
- Practice an evacuation each year.
- Make sure the fire exits are never locked or blocked or obstructed.
- The fire exits must be easy to open.
- Always keep the fireproof doors closed.
- Post the instructions and evacuation plan on each floor of the building.

4. What to do in case of a fire

It is always essential to act quickly to avoid being surrounded by flames, smoke or heat.

When you discover a fire:

- Set off the fire alarm.
- Get everyone out of the building.
- Remain calm.
- Notify the persons in charge and tell them where the fire is located.
- Evacuate the school.
- Call the fire department from a safe place.
- Do not open the doors if you believe there is a fire. Touch the doorknob before opening the door. If it is hot, use another route to escape. Always know the route to take for each room. If you are surrounded by flames, go to another room where there is a window, close the doors behind you and call for help.
- Close all doors and windows in each room.
- Do not waste time trying to put out the fire.
- Do not go back into a room on fire.
- Crawl on your hands and knees to escape if there is smoke.
- Avoid yelling out " Fire! "
- Know where the smoke detectors and fire extinguishers are located and how they work.
- Exit the school immediately when the fire alarm goes off.
- Evacuate using the closest emergency exit.
- Leave your personal belongings where they are.
- Avoid talking unnecessarily.
- Avoid running during the evacuation.
- Go to the designated meeting place.
- Make a roll call of the students by their first name.

Adapted from : Quebec Ministry of Education (N.D.). **Guide to Prepare Evacuation Plans and Rescue Plans.** Quebec Ministry of Education.

Glossary

Action plan:	Set of measures taken to plan something, an action or behaviour.
Alert:	Set of actions taken to inform the authorities, the assistance personnel and the population of an actual or possible danger.
Assistance:	Set of measures taken to protect persons (evacuation, shelter, material help, etc.) and safeguard their belongings and assets.
Authority:	Person or group of persons one can refer to for help.
Cataclysm:	Disruption on the earth.
Catastrophe:	Sudden event that can cause disruption and may lead to damage and death; a widespread disaster.
Crisis:	Emergency of a political nature, or an emergency disaster or catastrophe which was managed in such way as to lead to other problems of a greater nature.
Demobilization:	Assistance, persons or organizations returning in an orderly fashion to regular daily activities.
Disaster:	Catastrophic event that can lead to human and material losses.
Distress:	Critical and dangerous situation.
Emergency:	Event which may bring physical or psychological harm to one or more persons or which can cause material damage and may require rapid assistance that a first aid organization can provide.
Emergency kit:	Kit that contains essential objects.
Emergency situation:	Situation that requires immediate assistance.
Essential objects:	Objects that are necessary or absolutely needed.
Essential needs:	Need for food, clothing and shelter.
First aid worker:	Member of a first aid organization that will bring help to the victims of an accident or disaster.
Human element:	That which is made by human beings (e.g. a building).
Mobilization:	Set of actions taken to activate the assistance resources.
Natural element:	That which is made by nature (e.g. a tree).
Potential danger:	Threat, risk that could materialize if the conditions were present.
Prevention:	A set of measures taken to prevent danger, risk or harm from occurring.
Recovery:	Return to a normal situation by reintegrating people who were evacuated and implementing programs that will allow people to get back to normal activities (getting public services back into operation, rebuilding equipment, production, etc.).
Ring of fire:	Volcanoes on the edge of the Pacific Ocean.
Safety rules:	Conduct principles.
Survival kit:	Kit that contains objects essential for human beings.
Trauma:	Event which can cause emotional or physical problems.

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