

What's the Plan Stan?

CONTENTS

Section 1 - Introduction

- 1. Welcome to *What's the Plan Stan?* 3
- 2. The four Rs of emergency management 5

Section 2 - Unit plans and activities

- 3. Unit Plans, activities and related cross-curricular lessons 7
- 4. Disaster activities and homework sheets 33
- 5. Disaster fact sheets 40

Section 3 - Roles, simulation and practice activities

- 6. Roles 49
- 7. Simulation and practice activities 54

Section 4 - Templates and other resources

- 8. Templates 65
- 9. Other resources 99
- 10. Glossary 107



*"Visit our website
www.whatstheplanstan.govt.nz"*

Ana

Matt

Dan

Frankie

Beth

Stan



Welcome to *What's the Plan Stan?*

Introduction

In New Zealand, we are constantly exposed to the risk of disasters. Earthquakes, floods, storms, volcanic eruptions and non-natural hazards all have the potential to damage and destroy. Our country lies in the Pacific *Ring of Fire*, a zone that encircles the base of the Pacific Ocean, making us particularly vulnerable to natural disasters such as earthquakes and volcanic eruptions.

While we cannot prevent disasters, it is important that we understand them, what they can do, and the steps we can take to ensure we are able to cope. Experience around the world has shown that where people are aware of the risks around them and plan their response, the injuries, damage and subsequent trauma are significantly reduced.

Involving students in an educational programme that focuses on disasters and emergencies will help them to prepare and give them the skills to act in a safe manner, if such a situation arises. Their increased awareness and understanding of the risks may also prompt their parents and families to be better prepared.

What's the Plan Stan is a Ministry of Civil Defence & Emergency Management initiative for primary schools, featuring Stan the dog and five children - Dan, Ana, Frankie, Matt and Beth - who model what to do in an emergency.

What's the Plan Stan focuses on:

- earthquakes
- tsunami
- volcanoes
- storms
- floods
- non-natural disasters.

What's the Plan Stan has a website with information, interactive activities and templates that are regularly updated:

www.whatstheplanstan.govt.nz

What's in this resource?

This resource has three components, each of which can be used independently or in conjunction with each other:

- A guide for teachers, including unit plans and activities.
- A CD-Rom for teachers and students, including stories, interactive games, research material, tips for teachers and resources that can be cut and pasted into unit plans.
- A poster promoting *What's the Plan Stan?*

Using the resource

The resource can be used to incorporate civil defence emergency management contexts and activity-based learning across all areas of the curriculum. It focuses on four essential skills:

1. communication skills
2. information skills
3. problem-solving skills
4. social and co-operative skills.

"Disasters can strike at any time, and often without warning.

Will you and your students know what to do when disaster strikes?"

Opportunities exist within the resource for students to develop the new key competencies and use them for further learning. The draft National Curriculum outlines five key competencies:

1. relating to others
2. managing self
3. participating and contributing
4. thinking
5. using languages, symbols and text.

The guide

The guide includes:

- unit plans, activities and ideas to increase students' confidence in emergency planning and practice
- fact sheets about different types of disasters
- simulation and practice activities that involve the school and reinforce previous learning
- information about the roles of principals, Boards of Trustees and the community
- templates (including *What if* cards) for the activities
- a list of suggested resources including books and websites.

Teachers are encouraged to modify and adapt the unit plans and activities to suit the needs of their students. Ideally a school approach is recommended as this is an effective way to share planning and resources (while all focusing on the same topic), to involve the wider school community and outside agencies, and to learn from each other.

What's on the CD-Rom?

This CD-Rom has two sections:

1. Useful resources for teachers, including:
 - Word and PDF files of the *What's the Plan Stan* Teachers' Guide, unit plans and all the templates, for printing and adapting
 - links to websites and organisations
 - ideas for using this CD-Rom with students.

2. Fun activities, information and interactive stories for students, including:
 - facts on earthquakes, tsunamis, volcanoes, floods, storms and non-natural disasters
 - map of disasters and events in New Zealand
 - interactive stories and quiz games
 - information on selected historic disasters
 - photographs and video clips.

Getting started

If you've read the guide and you're keen to get started:

- Share *What's the Plan Stan* during a staff or syndicate meeting or display the resources in the staffroom.
- Load the CD-Rom onto your school computers or intranet, so teachers and students can access it straight away.
- Share the poster with students at assembly; then display it in a prominent place.
- Plan your own teaching and learning to suit the needs of your students using the unit plans and activities.
- Place the *What if* cards (these have been duplicated in Template 1, pages 65 - 71 so you can photocopy and make further cards if required) inside the plastic sleeves.
- Inform and involve parents, using the school newsletter or homework ideas.

Helpful symbols

The following symbols are used throughout this guide to indicate where the CD-Rom and /or website can be used.

 [What's the Plan Stan website](#)

 [Whats the Plan Stan CD-Rom](#)

The four Rs of emergency management

Most teachers know about the three Rs in schools, but when it comes to civil defence emergency management the four Rs approach is a widely used resilience model. The unit plans in this guide focus on all four Rs of emergency management¹ :

Reduction	Reducing the effects of hazards as far as practicable.	Reduction and readiness deal with how we manage the risk and the hazards.
Readiness	Ready to respond if an emergency or hazard event occurs.	
Response	Responding appropriately.	Response and recovery deal with how we manage the emergency and its ongoing effects.
Recovery	Recovering as quickly as possible after the event.	



Reduction

- Identifying and analysing long-term risks to human life and property from natural or non-natural hazards.
- Taking steps to eliminate these risks if practicable, and, if not, reducing the magnitude of their impact, and the likelihood of their occurring.

Readiness

Developing operational systems and capabilities before a civil defence emergency happens.

- Having the things ready that you will need to survive.
- Knowing what you should do in the event of an emergency.

There are several things you and your students can do to reduce the impact of disasters when they happen. A number of ideas are included in the unit plans and activities on pages 8 - 32, www.whatstheplanstan.govt.nz  and the CD-Rom .

Some things you and your students can do include:

- know how to **drop, cover** and **hold** to reduce the effects of earthquakes
- create an emergency plan
- know how to turn off water, electricity, and gas
- practise emergency drills
- how to prepare for hazards in your area.

Response

Actions taken immediately before, during or directly after an emergency, to save lives and property, and to help communities to recover.

There will be a co-ordinated response during large-scale emergencies, often with involvement from a lot of responding agencies with different roles and responsibilities.

'Response' relates to the Social Sciences curriculum Social Organisation strand, where the following achievement aims are explored:

From their study of Social Organisation, students will understand:

- *people's organisation in groups, and*
- *the rights, roles, and responsibilities of people as they interact within groups*².

Recovery

The co-ordinated efforts and processes used to bring about the immediate, medium and long term holistic regeneration of a community following a civil defence emergency.

- Who can help?
- What can they offer?
- How is recovery co-ordinated?

The first priority in the recovery phase includes the safety of individuals. Recovery will last well beyond the response phase and in large events can last years after the initial impact.


¹ Ministry of Civil Defence & Emergency Management.2006

² Ministry of Education 1997, Social Studies in the New Zealand Curriculum, Learning Media, Wellington,




Unit plans, activities and related cross-curricula lessons

This section has unit plans that can be adapted to suit the range of abilities in your class and particular interests of your students. Each unit has a selection of activities that can be mixed and matched to meet your own learning intentions or school focus. It also suggests ways to include civil defence emergency management as a context for learning across the other essential learning areas of the curriculum, either as one-off lessons or a series of lessons.

The activities in this section are linked to specific curriculum achievement objectives from the English, Social Studies and Health and Physical Education curricula. Some activities require the use of pictures or other resources, many of which are available on the **CD-Rom**. 

The unit plans are for a suggested two to three weeks, but can be adapted to meet the needs of your teaching and learning programme. A whole-school focus coinciding with Disaster Reduction Week (second week in October) and finishing with the simulation activity on pages 54 - 63 would be ideal. Alternatively, the unit plans could be used at the start of the school year when establishing emergency routines.

Other activities can be found on the disaster activity sheets on pages 33 - 39 or on www.whatstheplanstan.govt.nz 



"Disaster Reduction Week is observed during the second week of October each year . Visit www.civildefence.govt.nz for further information".

Unit Plan Junior

Years:	• Years 0-3	
Levels:	• Levels 1-2	
Approximate duration:	• 3-4 weeks	
Essential learning areas:	<ul style="list-style-type: none"> • Health and Physical Education • Social Studies 	<ul style="list-style-type: none"> - Personal Health and Physical Development - Healthy Communities and Environments - Social Organisation - Time, Continuity and Change
Resources provided:	<ul style="list-style-type: none"> • Template 1: <i>What If</i> cards • Template 2: Letter to parents - introduction to unit • Template 3: Home emergency plan • Template 4: Survival items 'cut and stick' sheet • Template 5: Emergency survival items at home • Template 6: Letter to parents - emergency evacuation and response plans • Template 7: Feelings pictures 	
Other resources recommended for this unit:	<ul style="list-style-type: none"> • <i>Is that an Earthquake?</i> by Alan Bagnall. • <i>Isabel's Upside-Down Day</i> by Rosamond Rowe. • Hazard Pictures from ACC <i>Thinksafe Education Resource</i>. Available from ACC www.acc.co.nz (click on <i>Injury Prevention</i>, then <i>Schools</i>). • Pictures or photos of disasters. Picture cards can be used from the Earthquake Commission's resource <i>As Safe as Houses?</i> A copy was sent to all primary and intermediate schools in 2000. Further copies can be obtained by emailing barton@niupacific.co.nz or fax: (04) 473 3414. • Journal stories <i>Flood</i>, Part 2, Number 2, 2004, and <i>Earthquake</i>, Junior Journal, Number 8, 1992 	

Health and Physical Education

Achievement objectives	Learning intentions Students will be able to:	Activities
Identify and use safe practices and basic risk management strategies. (Level 2: Strand A3)	<i>Explain that disasters are natural or non-natural.</i>	Identifying disasters Section A: Activity 1 Earthquakes Section A: Activity 5
Identify and discuss obvious hazards in the home, school, and local environment and adopt simple safety practices. (Level 1: Strand D4)	<i>Demonstrate simple practices to keep themselves safe at school and home.</i>	Hazard identification Section A: Activity 6 Emergency response procedures Section B: Activity 1 Emergency survival items Section B: Activity 2 Drill practice Section C: Activity 1 Scenarios Section C: Activity 2


Social Studies

The different roles people fulfil within groups. (Level 1: Social Organisation)	<i>Identify different groups who will respond to a disaster.</i> <i>Explore their roles.</i>	Finding out who can help Section A: Activity 4 Survival stories Section D: Activity 1
How past events changed aspects of the lives of communities. (Level 2: Time Continuity and Change)	<i>Explain how disasters affect people and communities now and in the past.</i>	What If cards Section D: Activity 2 Identifying regional disasters Section A: Activity 2 Historical disaster story Section A: Activity 3 Feelings and emotions Section C: Activity 3

Section A:

Reducing the risk – making ourselves aware


Activity 1: Identifying disasters

- Collect a range of pictures of disasters. The students could help collate these by looking through books, printing images from the **CD-Rom**  or using photo cards from resources already in your school.
- Discuss these images as a class. Use a piece of blank paper to cover parts of the pictures and disclose small pieces at a time. Ask questions such as:
 - What do you think might be happening?
 - Why do you think this happened?
 - How do you think they are feeling?
 - What could they have done to prepare for this disaster?
 - What do you think they might do next?
 - Is this an example of a natural or non-natural disaster?
- Students write about and draw these images, describing how the people might feel and what caused these effects. Publish the writing in different ways so that students can read what others have written.
- Use the disaster fact sheets on pages 41 - 47 to provide information about what to do before, during and after each disaster. Use the disaster activities on pages 33 - 39 to choose learning activities that best suit the needs of your class. Homework tasks for each disaster will also help parents and families to prepare for each disaster.

Activity 2: Identifying regional disasters

- List the different types of disasters. Ask the students: Could it happen here? Make a graph or chart to show their responses: yes, no or maybe.
- Discuss the graph or chart and make comparisons or use De Bono's thinking hats:

White hat	Neutral: What are the facts?
Yellow hat	Positive impacts: What are the good points?
Black hat	Negative impacts: What is wrong with this?
Green hat	Creative: What ideas do we have?
Red hat	Emotions and feelings: How was the character feeling?
Blue hat	Planning and reflection: What is the next step?

- Students work in pairs and use the **CD-Rom**  to find out about the various types of disasters that have happened or are likely to happen in their region.

Activity 3: Historic disaster story

- Read a story about a historic disaster such as *Isabel's Upside-down Day* by Rosamond Rowe.
 - How did the disaster affect the people in the story or community?
 - When did this disaster take place?
 - What do you think we would do differently or the same if it happened today?
 - What preparation lessened, or could have lessened, the impact of the disaster?
- Ask the students to write a story as if they were there, and to illustrate it. How would they have felt and what would they have done?

Activity 4: Find out who can help

- Make a collage of people who might help during an emergency. Students could cut pictures from magazines or draw pictures of people; group them; then glue them to a large piece of paper. Groups could include parents, students, teachers, ambulance service, police, fire service, doctors, first-aiders, civil defence, media and veterinarians.
- In small groups, students select one of the groups of people who might help during an emergency and discuss what they can do to help. Students role play how they help people and share their actions with others. Encourage the use of props such as a telephone or first-aid kit.
- Invite visitors from your community who help others (for example, the fire service or the

police) to talk to the students, or organise a class visit to their workplace. Students prepare questions. Record these talks on tape or video for other classes in the school to use.

Activity 5: Earthquakes

- a) Read *Is that an Earthquake?* by Alan Bagnall.
- b) Make posters about earthquakes to:
 - show what to do in an earthquake
 - remind teachers and parents to regularly practice earthquake drills
 - summarise what earthquakes are and how they happen
- c) display the posters at school or send them home as reminders to family.

Activity 6: Hazard identification

- a) Use the hazard pictures in the *ACC Thinksafe resource*³ to discuss various hazards at different locations such as the beach, the park, at home or at school. Students could complete the hazard map in the resource to show hazards on their way to school.
- b) Alternatively, draw a map of the classroom and ask the students to draw pictures of potential hazards, glue them to the map, and write sentences describing the hazards and how to deal with them. For example, we push the chairs in to stay safe in the classroom.

Homework: Identify the hazards!

Ask students to observe hazards at home and discuss these with their families; then draw a picture to bring back to school that shows the hazards they identified.



“Check out your own school’s emergency procedure. You might find that there are different plans for different emergencies, and for inside and outside the classroom”

Section B: Let’s get ready – be prepared

Activity 1: Emergency response procedures

- a) As a class, review the school’s emergency evacuation plans and response procedures. Discuss the plans and ensure that everyone knows what to do in an emergency.
- b) As a whole class, or in small groups with an adult’s help, go through exactly what to do in response to each emergency.

Here is an example:

Volcanic eruption and ash-fall

- Close windows and doors.
 - Stay inside as much as possible.
 - Students listen to the teacher and prepare to evacuate if required.
 - Discuss what to use for a facemask if they need to go outside.
- c) Draw, paint or make a collage or map showing where to assemble during or after an emergency at school.

³ The *ACC Thinksafe Resource 2005* is available from www.acc.co.nz or by calling (04) 918 7700

Homework: Home emergency plan

Students are to create a home emergency plan with their families. Together they brainstorm situations when they may need to leave their house and when it may be safer to stay indoors. For example, it might be safer to stay indoors during a big storm but what about during a flood? Send a letter to parents or caregivers with suggestions for discussion and a template for the plan.

Useful templates

Template 2: Letter to parents – Introduction to unit, page 72

Template 3: Home emergency plan, page 73

Activity 2: Emergency survival items

- a) Discuss the possibility of having to stay at home without help for up to three days in an emergency. Brainstorm a list of the emergency items you might need. Show the students these items (from your class or school emergency survival kit) and give them the opportunity to explore and discuss them. Ask questions like:
 - What is this?
 - What's it for?
 - How do you use it?
 - Why is it there?
- b) Students complete the Survival Items "Cut and Stick" sheet. (Template 4, page 74) to show items that would be useful in an emergency.

Homework: Survival items

Students take the survival items 'cut and stick' sheet home and tick the items they have and can easily find at home. Send a letter to their parents or caregivers with discussion points and a survival item checklist.

Useful template

Template 4: Survival items 'cut and stick' sheet, page 74

Template 5: Emergency survival items at home, page 75

Section C:

Time to practise – responding the right way

Activity 1: Drill practice

- a) Practise a range of emergency drills as a class or school. Discuss scenarios such as what to do:
 - at lunchtime or during breaks
 - if travelling to and from school
 - if the teacher isn't at school and there is a reliever.
- b) As a class, make a book about different emergencies and what to do for each situation. Students could work individually to write parts of the book or you could write it as a whole class. Alternatively the students could design emergency procedure cards and display these in the classroom.

Homework: Evacuation and emergency practice

Students practise their emergency evacuation and emergency response procedures at home. Send an activity sheet with discussion guidelines to their parents or caregivers.

Useful template

Template 6: Letter to parents – emergency evacuation and response plans, page 76

Activity 2: Scenarios

- a) Read some of the *What If* scenarios (Template 1, pages 65 - 71) and discuss what students could do in the different situations. Students could act out scenarios in groups.
- b) Other classes may want to come and share their scenarios and vice versa.

Activity 3: Feelings and emotions

- a) Read a story such as *Flood in School Journal* Part 2, Number 2, 2004 or *Earthquake* in Junior Journal Number 48 1992.
- b) Discuss how the characters were feeling. Ask questions like:
 - How was the girl in the story feeling? How do you know?
 - What did she do to express her feelings?
 - If a flood happened around your house how do you think you would feel?
 - What might you do to help yourself feel better?
- c) Explore some of the things students could do to help themselves cope with their feelings if a disaster happened, for example:
 - Go to their parents or other adults for help.
 - Ask questions such as: What is happening? When will I go back home or back to school?
 - Help others. For example, clean the house, feed the pets, or look after other children.
 - Write about or draw their experiences. Describe what happened and how they feel.
 - Remind them that crying is a way to express feelings and that it's okay to cry.
- d) Play Corner Feelings to encourage the students to think of times when they might have been feeling scared, sad, disappointed, frightened or lonely.

Corner feelings

Enlarge the pictures of the feelings provided on Template 7, page 78. Put a different feelings picture in each corner of the room. One student spins a drink bottle in the middle of circle and when it stops, is asked to describe the feeling that it points to:

- What is the feeling?
- When have you felt like that?
- How would you express this feeling?

Useful template

Template 7: Feelings pictures, page 78

- e) Students choose a feeling, then paint a picture of themselves with that feeling, and write a caption describing the feeling. For example:

- If...happened I would feel....
- I felt...when...happened.
- Crying helps me when I feel sad.
- Talking to someone helps me when I feel scared.

These paintings could be made into a book, taken home or displayed in the classroom.

An ideal opportunity to discuss feelings could be directly after fire or earthquake drills as some students, particularly younger ones, can feel uncertain or scared about what has happened.

The Curriculum in Action series, particularly *Change, Loss, and Grief* Years 1-8 and *Kotahitanga Getting on Together* Years 1-3, also provide useful activities for exploring feelings.

"Did you know that talking about disasters with students can reduce the trauma they experience during a disaster? It reduces their feelings of uncertainty. Discussing feelings and including mental health in the school's disaster plan are also good ways to help lessen potential trauma."



Section D: Be a survivor – recovery from disaster

Activity 1: Survival stories

- Share a story or article about what might happen after a disaster.
- The students use the co-operative learning technique 'think, pair, share' to discuss what might happen after a disaster. Questions to ask could be:
 - Who might look after you?
 - What might be some of the problems? For example, water and food, injuries or problems getting home.
 - What could you do to help?
- Alternatively, invite a family or community member to come and share their story. Students could prepare questions.

Activity 2: What If cards

- Repeat the Scenarios activity (Section C, Activity 2) on page 12. Work in groups and use the *What If* cards (Template 1, pages 65 - 71) to role play emergency situations from start to response and then afterwards.
- Write shared stories with the class about situations that could be based on the role plays.
 - Students write independent stories.
 - Focus on the correct response and successful outcome.
 - Publish the stories on the computer, and make them into a book.

Assessment

Students' success criteria can be used as a form of assessment. Students could self or peer assess against the set criteria. This could be done verbally or on a simple chart like below (or in Template 8: Self or peer assessment chart on page 79).

Learning intention – Health and Physical Education: Level 2 Strand A3

Explain that disasters are natural or non-natural and that there are simple things they can do to keep themselves safe at school and home.

Success criteria	Smiley face
I can list or talk about some types of disasters.	
I can name some disasters that are natural and non-natural.	
I can say what I should do first and then next if there is an emergency: <ul style="list-style-type: none"> at school at home. 	
I have discussed an evacuation plan with my family.	

Learning intention – Social Studies: Level 1 Social Organisation

Identify how different groups will respond to a disaster. Explore their roles.

Fill in a summary chart like below. Students write or draw pictures to show the different groups and how they might respond to a disaster.

People who can help	What can they do?
e.g. Fire service	<ul style="list-style-type: none"> Put out fires Rescue people with ropes and ladders Supply water Pump out flooded areas Cover leaking roofs

Learning intention – English: Level 2 Speaking

Discuss emergency preparedness at home with their family, and share their plans with others at school.

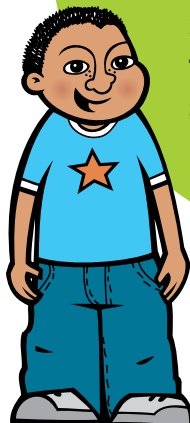
Observe the students in group discussion. Make notes on oral language skills such as:

- contribution
- content
- listening
- questioning.

Ideas for follow up

- Regularly practise emergency procedures so that students are familiar with what to do in an emergency.
- Arrange for a representative from your local civil defence office to visit your school and talk about emergency management. Contact your local council for details.
- Invite parents and families to class so that students can share what they have learned.

“This unit focuses on Social Studies, Health and Physical Education and English. You could also focus on other areas of the curriculum such as Technology, Science or Art by using the disaster activity sheets on pages 33 - 39.”



Unit Plan Middle

Years:	• Years 4-6	
Levels:	• Levels 2-3	
Approximate duration:	• 3-4 weeks	
Essential learning areas:	<ul style="list-style-type: none"> • Health and Physical Education • Social Studies • English 	<ul style="list-style-type: none"> - Personal Health and Physical Development - Healthy Communities and Environments - Social Organisation - Time, Continuity and Change - Reading
Resources provided:	<ul style="list-style-type: none"> • Template 1: <i>What If</i> cards • Template 5: Emergency survival items at home • Template 6: Letter to parents - emergency evacuation and response plans • Template 9: What might happen? • Template 10: Disaster similarities and differences • Template 11: Report checklist • Template 12: Historic disasters • Template 13: Writing about hazards • Template 14: Health rules after disasters 	
Other resources recommended for this unit:	<ul style="list-style-type: none"> • Kevin Boon series <i>Events in NZ History</i> Nelson Price Milburn, 1990 (may be in your school library). • Novel <i>The Sleeper Awakes</i> by David Hill. • Story <i>Isabel's Upside-Down Day</i> by Rosamond Rowe. • Pictures or photos of disasters. Picture cards can be used from the Earthquake Commission's resource <i>As Safe as Houses?</i> A copy was sent to all primary and intermediate schools in 2000. Further copies can be obtained by emailing barton@niupacific.co.nz or fax: (04) 473 3414. • Journal stories <i>The Big One</i> by Keith Tonkin, Part 3, Number 2, 1999 and <i>Flood</i> by Sonny Mulheron, Part 2, Number 2, 2004. 	

Health and Physical Education

Achievement objectives	Learning intentions Students will be able to:	Activities
Identify and use safe practices and basic risk-management strategies. (Level 2: Strand A3)	<i>Identify and prepare for a range of disasters in the classroom, home and community.</i>	What might happen? Section A: Activity 3 Identifying hazards Section A: Activity 6
Research and describe the current health and safety guidelines and practices in their school and take action to enhance their effectiveness. (Level 3: Strand D3)	<i>Review the school's emergency response procedures and take action to enhance their effectiveness.</i>	Emergency survival items Section B: Activity 1 Emergency response procedures Section B: Activity 2 Identifying special needs Section B: Activity 3 Home visit Section B: Activity 4 Scenario practice Section C: Activity 1 What else can we do? Section C: Activity 2 After an emergency Section D: Activity 2

Social Studies

How and why groups are organised within communities and societies. (Level 2: Social Organisation)	<i>Describe a range of groups.</i> <i>Describe the functions of those groups.</i>	Disasters in your area Section A: Activity 2 People who help us Section A: Activity 4
How past events changed aspects of the lives of communities. (Level 2: Time, Continuity and Change)	<i>Explain the ways in which people respond to a disaster and learn from past experiences</i>	Historical disasters Section A: Activity 5 Emergency management office visit Section D: Activity 1


English

Respond to language, meanings, and ideas in different texts, relating them to personal experiences. (Level 2: Reading)	<i>Read and gather information on disasters from a range of texts.</i>	What is a disaster? Section A: Activity 1 Feelings and emotions Section D: Activity 3
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Section A: Reducing the risk – making ourselves aware

Activity 1: What is a disaster?

a) Read the novel *The Sleeper Awakes* by David Hill or journal story *The Big One* by Keith Tonkin Part 3 Number 2 1999 as an introductory activity.

b) Explore books, photo cards, the **CD-Rom**  and internet. Useful books to explore are the Kevin Boon Series *Events in New Zealand History*. See the book lists on pages 99 - 101 for others.

- *The Wellington Flood*
- *The White Island Eruption*
- *The Napier Earthquake*
- *The Influenza Epidemic*
- *The Tangiwai Rail Disaster*
- www.civildefence.govt.nz

c) Work in small groups to come up with a definition for disaster. Share these definitions with others. Explore the following terms and record their definitions in a variety of ways, such as in a book, on a poster, list or cassette tape:

- Natural disaster vs. non-natural disaster
- Emergency
- Hazard

Refer to the glossary on page 107.


d) As a class, discuss pictures of various disasters. Ask questions such as:

- What has happened here?
- Why do you think this happened?
- Where could they go?
- What could they have done to prepare for this disaster?
- What do you think they might do next?
- How could they be better prepared if this disaster happened again?

e) Use the disaster fact sheets on pages 41 - 47 to help students understand the different types

of disasters and what to do before, during and after. For each of the six disaster types on pages 41 - 47, you can choose the learning activities that best suit the needs of your class. You could use a workstation approach to these activities or assign individual disasters to groups that report their findings back to the class. Homework for each disaster is included so parents and families can also prepare for different types of disasters.

Activity 2: Disasters in your area

a) Find out about disasters that have happened in your own area, school, home or local community. Students can explore the **CD-Rom**, , books and other resources.

b) Make a mind map exploring the question 'What could affect you and your local environment?'

Activity 3: What might happen?

a) Students work in groups to identify the effects of an emergency. Each group chooses an emergency and researches what might happen. Groups could complete Template 9: What might happen? on page 80.

b) Groups present their findings to the class or other groups in different ways.

c) List the possible dangers and damage identified by each group. For example, blocked roads, people trapped in buildings, power lines coming down, or burst water pipes.

Display this list so that the class can refer to it for the activity, People who help us (Section A, Activity 4).

Homework: Different disasters

Compare various disasters noting the similarities and differences.

Useful templates

Template 10: Disaster similarities and differences, page 81.

Activity 4: People who help us

- a) Invite visitors from the community to come and talk about their roles, or visit them as a class outing. Students prepare questions. Tape or video these talks for other classes to use.

Possible groups include the police, ambulance service, fire service, civil defence, Earthquake Commission, first-aiders, telecommunication companies, veterinarians, armed services and local councils.

- b) Students write a report about the group they focused on and their possible functions in a disaster. Template 11, Report checklist on page 82 has some useful teaching points to model and assess.

Students share their reports and discuss in pairs:

- Who could you go to for help in an emergency?
- Who could you help at school and at home?

Activity 5: Historic disasters

- a) Explore an historic event such as the Napier earthquake or the influenza epidemic. Use the Kevin Boon resource books or other suggested resources on page 99.
- b) Explore personal accounts focusing on thoughts and feelings. Create a flowchart or timeline of events to show the ways in which people respond to a disaster.

Homework: A look at history

Students discuss historic disasters with their families, and complete a summary sheet that explores questions such as:

- What can you learn from these historic disasters and experiences?
- What would you do differently or the same?

Useful template

Template 12, Historic disasters, page 83

Activity 6: Identifying hazards

- a) Identify hazards that may affect us personally – at school, on the way home, at home. Examples of hazards may include:

At school	On the way home	At home
Glass that may shatter	Transport hazards such as speeding cars	Objects that restrict movement to a safe place
Bags left in hallways	Glass on the footpath	Boiling water
Objects on wheels	Chemical fumes	Hot elements
Heater too close to bean bag		

- b) Take photos of the hazards and use these as a starting point for writing about how we can become more aware of these hazards, or deal with them.
- c) Each student writes about a different hazard. Collate these to make a book. Use Template 13: Writing about hazards, page 84 to help students to structure their writing.

Section B: Let's get ready – be prepared

Activity 1: Emergency survival items

- a) As a class, discuss the possibility of having to stay at home without help for up to three days in the event of an emergency. In pairs, students brainstorm all the emergency items they might need.

Ask questions like:

- What do you think you need?
- What's it for?
- How do you use it?
- Why is it there? What's its use?
- How much do you think you need?
- What needs to be replenished, replaced or updated?

- b) Students draw and label a picture to show all the items or list them.

Homework: Survival items

Students take home the Survival item 'cut and stick' sheet, and tick the items they have and can easily find at home. Send a letter to their parents or caregivers with discussion points and a checklist of survival items.

Useful template

Template 4: Survival items 'cut and stick' sheet, page 74

Template 5: Emergency survival items at home, page 75

Activity 2: Emergency response procedures

- a) In small groups of four to six, review the school's emergency evacuation plans and emergency response procedures.

If the school has various plans, give different plans to each group. Discuss the plans within each group to ensure that everyone knows what to do in the event of an emergency. If the school only has one or two plans then give these to all the groups.

- b) Divide the groups in half – each group teaches another group what to do. Keep swapping groups until everyone has been through all the emergency response procedures. If the school has only one or two plans, go through these as a class.
- c) Make a poster to display the emergency plan or procedure that your group was working on. The poster may include a map or other illustrations that clearly demonstrate what to do in an emergency. Put these posters on display to refer to later in the unit.

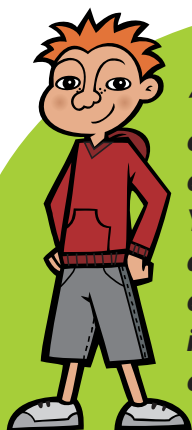
Homework: Home emergency plan

Students are to create a home emergency plan with their families. Together they brainstorm situations when they may need to leave their house and others when it would be safer to stay indoors. For example, it might be safer to stay indoors during a big storm but what about during a flood? Send a letter to their parents or caregivers with suggestions for discussion and a template for the plan.

Useful template

Template 2: Letter to parents – Introduction to unit, page 72

Template 3: Home emergency plan, page 73



"Make sure you check out your own school's emergency procedures. You might find there are different plans for different emergencies, and if you're inside or outside the classroom."


Activity 3: Identifying special needs

- a) Discuss as a group or class how they could help in the community in a disaster. For example:
 - pets
 - people with special needs
 - farm animals
 - the elderly.
- b) Use the *What If* cards to discuss various scenarios. Include examples of people with special needs or animals.
- c) Make a plan or flowchart to show how you could help someone in your neighbourhood before disaster strikes or during a disaster.

Homework: Design a family disaster plan fridge magnet

Brainstorm, as a class, information to include on the magnet, such as:

- nearest Civil Defence Centre/Sector Post
- family meeting place
- out-of-area contact
- emergency contacts
- space to write the date when emergency response procedures have been practised.

Students may like to see other emergency plans as a guideline – refer to the Emergency Plan template on www.whatstheplanstan.govt.nz. 

Students design their magnet and complete it with their families, then bring it to school and stick magnetic strips to it. Have a competition to see who has designed the most effective and practical magnet. Someone from the community could be invited to be the judge.

Section C: Time to practise – responding the right way

Activity 1: Scenario practice

- a) Practise a range of emergency drills as a class or a school. Discuss scenarios such as what to do:
 - at lunchtime or during breaks
 - if travelling to and from school
 - if the teacher isn't at school and there is a reliever.
- b) Using the *What If* cards, students work in small groups to act out what they could do in different situations. Give different groups different scenarios and ask them to discuss and share these with their peers, other students or their families.

Homework: How quickly can you exit?

Students are to time themselves as they make their way out of their family home using the exit route discussed. Time the whole family. Then try it blindfolded.

Useful template

Template 6: Letter to parents – emergency evacuation and response plans, page 76

Activity 2: What else can we do?

- a) Refer to the posters made during the Emergency Response Procedures activity (Section B, Activity 2). As a class or in groups, discuss your school's emergency response procedures or plans. Ask questions like:
 - Are these school procedures and plans effective and clear?
 - What other plans might we need?
 - How do we make students and families aware of these plans and procedures?
 - How often do we practise these plans? Is it often enough or too often?
 - How can we improve their effectiveness?

- How can we improve the effectiveness of our home emergency response procedures?
- b) Brainstorm a list of ways to improve the effectiveness of school plans and procedures. Ideas might include:
- Sharing information with other classes, families or at assembly.
 - Drafting other emergency plans to present to the principal or Board of Trustees.
 - Writing emergency preparedness messages for the school newsletter.
 - Making a suggested timetable or checklist for the school or teacher to practise emergency procedures.
 - Make a book to explain emergency procedures to:
 - ESOL students
 - students with special needs
 - junior children.
- c) Design emergency procedure cards for each type of hazard to display throughout the school. For example, in the library, corridors or office areas.
- d) Show younger children what to do in different emergency situations by demonstration or role play.
- e) Each student or pair of students chooses a focus for how to improve emergency procedure effectiveness and is given time to work on their chosen project. See the assessment activities on page 23 for assessing this work.

Homework: Improving our plans

Students brainstorm a list of ways to improve the effectiveness of their own home plans and emergency procedures, with their families. They choose one idea to follow up at home and report back to the class, group or teacher on the action taken.

Section D: Be a survivor – recovery from disaster

Activity 1: Visit from civil defence emergency management office

- a) You can contact your local council to arrange a visit to your area's civil defence emergency management office. Or, alternatively, invite them to visit you.

Discuss:

- What do we already know about civil defence emergency management?
 - What might we expect to see?
 - What jobs do people do there?
 - How do we obtain information? How is information distributed?
 - What kinds of equipment do they use?
 - How can they help us in the event of a disaster?
 - What can we do to help them?
- b) Ask students to prepare questions and to find out more about civil defence emergency management, by using the internet, books and other resources, before their visit. They could make a quiz to ask other students.

Activity 2: After an emergency

- a) Provide students with Template 14, Health rules after disasters on page 85. Students work in pairs to read and discuss safe practices such as food and water, chemicals and fuels.
- b) Students work in pairs to prepare a chart or poster that summarises the 'do's and don'ts' immediately after an emergency.

Activity 3: Feelings and emotions

- a) Read the story *Isabel's Upside-Down Day* by Rosamond Rowe or journal story *Flood* by Sonny Mulheron Part 2, Number 2, 2004. Focus on the feelings and emotions of characters in the story. Ask questions like:
- How was the girl in the story feeling?

- What did she do to express her feelings?
 - If an earthquake or flood happened in your house or at school how do you think you would act or feel?
 - What could you do to help yourself feel better?
- b) Ask the students to use puppets to demonstrate some of the things they could do to help themselves cope with their feelings if a disaster happened. For example:
- Look to their parents or other adults for help.
 - Ask questions such as: What is happening? When will I go back home or back to school?
 - Help others. For example, clean the house, feed the pets, or look after other children.
 - Write about or draw their experiences. Describe what happened and how they feel.
 - Remind them that crying is a way to express feelings and that it's okay to cry.

Assessment

Students' success criteria can be used as a form of assessment. Students could self or peer assess against the set criteria. This could be done verbally or with a chart like the one below:

Learning intention – Health and Physical Education: Level 2 Strand A3

Identify and prepare for a range of disasters in the classroom, home and community.

Success criteria	Continuum	Comment
I can talk about a range of disasters	1 2 3 4 5	
I can say what I would do if there was a disaster		
• at school	1 2 3 4 5	
• at home	1 2 3 4 5	

I have discussed an evacuation plan with my family	1 2 3 4 5	
I have taken action to practise the school's emergency procedures and inform others of these plans	1 2 3 4 5	

Learning intention – Health and Physical Education: Level 3 Strand D 3

Review the school's emergency response procedures and take action to enhance their effectiveness.

Each student, or pair of students, reports back to the class or to smaller groups on their chosen focus and how they enhanced emergency procedure effectiveness.

Learning intention – Social Studies: Level 1 Social Organisation

Describe a range of groups and describe the functions of these groups.

Refer to the list from the *What might happen* activity (Section A: Activity 3) and see if the students can match the possible dangers and damage with the appropriate person or group to help.

Learning intention – English: Level 2 Reading

Read and gather information on disasters from a range of texts.

The *What might happen* activity (Section C, Activity 2) that students completed in groups, or the mind maps students completed (Section A: Activity 2) after gathering information from a range of texts, could be assessed in terms of how well the students read and gathered information from various sources. Observe the students carefully while they complete this work, and record your observations.

Unit Plan Senior

Years:	• Years 7-8	
Levels:	• Levels 3-4	
Approximate duration:	• 3-4 weeks	
Essential learning areas:	<ul style="list-style-type: none"> • Health and Physical Education • Social Studies • English 	<ul style="list-style-type: none"> - Personal Health and Physical Development - Healthy Communities and Environments - Social Organisation - Reading
Resources provided:	<ul style="list-style-type: none"> • Template 1: <i>What if</i> cards • Template 4: Survival items 'cut and stick' sheet • Template 5: Emergency survival items at home • Template 14: Health rules after disasters • Template 15: Map of New Zealand • Template 16: Plus, minus and interesting (PMI) chart • Template 17: Identifying the effects of an emergency • Template 18: Hazard hunt 	
Other resources recommended for this unit:	<ul style="list-style-type: none"> • Kevin Boon series <i>Events in NZ History</i> Nelson Price Milburn, 1990 (may be in your school library). • Novel <i>The Sleeper Awakes</i> by David Hill. • Journal Story <i>Flood</i> By Sonny Mulheron, Part 2, Number 2, 2000. • Hazard pictures from ACC <i>Thinksafe Education Resource</i>. Available from ACC www.acc.co.nz (click on <i>Injury Prevention</i>, then <i>Schools</i>). • Picture cards can be used from the Earthquake Commission's resource <i>As Safe as Houses?</i> A copy was sent to all primary and intermediate schools in 2000. Further copies can be obtained by emailing barton@niupacific.co.nz or fax: (04) 473 3414. 	

Health and Physical Education

Achievement objectives	Learning intentions Students will be able to:	Activities
Identify and use safe practices and basic risk-management strategies. (Level 3: Strand A3)	<i>Identify and prepare for a range of disasters in the classroom, home and community.</i>	Identifying hazards Section A: Activity 6 Emergency survival items Section B: Activity 1
Access and use information to make and action safe choices in a range of contexts. (Level 4: Strand A3)	<i>Describe their local community's needs in the event of a disaster and take action for the care and safety of people in their family and community.</i>	Emergency plans Section B: Activity 2 Identifying special needs Section B: Activity 3

Health and Physical Education continued

Achievement objectives	Learning intentions Students will be able to:	Activities
<p>Research and describe the current health and safety guidelines and practices in their school and take action to enhance their effectiveness.</p> <p>(Level 3: Strand D3)</p>	<p><i>Review the school's emergency response procedures and take action to enhance their effectiveness.</i></p>	<p>School safety preparation Section B: Activity 4</p> <p>Scenario practice Section C: Activity 1</p> <p>Encouraging others to practise Section C: Activity 2</p> <p>Class visit Section D: Activity 1</p> <p>After an emergency Section D: Activity 2</p>

Social Studies

<p>How people organise themselves in response to challenge and crisis.</p> <p>(Level 4: Social Organisation)</p>	<p><i>Explain the ways in which people have responded to disasters and explore the consequences of decisions made.</i></p> <p><i>Identify groups trained to help in different types of crises.</i></p>	<p>What happens where? Section A: Activity 2</p> <p>Identifying the effects of an emergency Section A: Activity 4</p> <p>Historical events Section A: Activity 4</p> <p>Helping Section A: Activity 5</p>
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English

<p>Discuss language, meanings, and ideas in a range of texts, relating their understanding to experiences, purposes, audience and other texts.</p> <p>(Level 4: Close Reading)</p>	<p><i>Read, discuss and gather information on disasters from a range of texts.</i></p>	<p>What is a disaster? Section A: Activity 1</p> <p>What happens where? Section A: Activity 2</p> <p>Identifying the effects of an emergency Section A: Activity 4</p> <p>Historical events Section A: Activity 4</p> <p>Feelings and emotions Section D: Activity 3</p>
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Section A:

Reducing the risk – making ourselves aware



Activity 1: What is a disaster?

- Read the novel *The Sleeper Awakes* or a story with a disaster or survivor theme such as *Flood* By Sonny Mulheron Part 2, Number 2, 2004. Disaster stories can also be found on the CD-Rom. 
- Brainstorm a list of disasters. Try classifying these in different ways such as impact, cause, natural or non-natural.
- Explore books, photo cards, the CD-Rom  and Internet to gather information to define disasters. Useful books to explore are the Kevin Boon Series *Events in New Zealand History*. See the list on pages 99-101 for others.
 - The Wellington Flood*
 - The White Island Eruption*
 - The Napier Earthquake*
 - The Influenza Epidemic*
 - The Tangiwai Rail Disaster*
- Write definitions for the words: hazard, disaster and non-natural disaster such as:
 - Disaster – an occurrence causing widespread destruction and distress.
 - Hazard – a possible source of danger, a chance of being injured or harmed.
- Use the disaster fact sheets on pages 41 - 47 to help students understand the different types of disaster and what to do before, during and after. For each of the six disaster types, you can choose the learning activities that best suit the needs of your class. You could use a workstation approach to these activities, or assign individual disasters to groups that report their findings back to the class. Homework for each disaster is included so parents and families can also prepare for different types of disasters.

Activity 2: What happens where?

- Using the map of New Zealand (Template 15, page 86), ask the students to indicate where they think the following have occurred:
 - serious floods where homes have had to be evacuated
 - earthquakes (show the fault lines)
 - volcanic activity.
 - tsunami.
- Students use books, the CD-Rom  or www.whatstheplanstan.govt.nz  to find out what disasters have happened in New Zealand, and where. They could note what has happened in their local community and what is more likely to affect the area in the future.
- Students complete a 'plus, minus and interesting' (PMI) chart (Template 16, page 87) or a T-chart comparing their first map with the information they have found. These could be taken home to share with families.

Activity 3: Identify the effects of an emergency

- Students work in groups to identify the effects of an emergency and understand some of the complexities involved in responding to an emergency. Each group chooses a disaster and imagines they are responsible for younger family members or pets. Ask questions like:
 - How can this emergency happen?
 - What dangerous things or damage might happen?
 - What could we do to help our families or siblings?
- Groups could use resources such as books, the CD-Rom  or www.whatstheplanstan.govt.nz  to complete Template 17: Identifying the effects of an emergency on page 88.
- Groups could present their findings to the class or other groups.

Activity 4: Historic events

- Explore an historic event, such as the Spanish Flu in 1918-19 to focus on the impact on individual lives. *The Influenza Epidemic* by Kevin Boon is a useful resource for this, and the NZ History website www.nzhistory.net.nz/Gallery/flu/index has recordings of people talking about their experiences.
- Students could use these resources, and interview someone about their experiences living through disasters or dealing with emergencies. The students could prepare their questions in advance and tape these interviews for future reference.
- After interviewing or researching historic events students could write a report that identifies the short-term consequences of the disaster they focused upon, then the medium and long-term consequences.
- Write a feelings poem that explores the thoughts and feelings of people who have experienced a historic disaster. Share these poems with the elderly or others.

Activity 5: Helping

- Make a list of groups of people who can help in an emergency. Your local council's civil defence staff may be able to help you with this information.
- Invite a guest from an organisation such as the Red Cross, Search and Rescue, St Johns or helicopter rescue services, or visit them. They could work with the students to demonstrate what they might do in an emergency or teach the students procedures for helping others such as first-aid.
- Discuss the ways that students could help others in the case of an emergency. For example, they could help younger students, the elderly, people with special needs, people who are hurt, and pets.
- Arrange for students to spend time in a kindergarten, with younger students, or with the elderly to get a better understanding of their needs and how they could help them.

Activity 6: Identify hazards

- Students identify potential hazards at school, on the way home, and at home. List the hazards and draw a plan or picture showing the hazards and their location.

Useful template

Template 18: Hazard hunt. page 89

- The ACC Thinksafe Resource has some useful hazard pictures and a 'spot the hazard' map. This resource can be ordered online from ACC's www.acc.co.nz or by calling ACC on 04 918 7701. These pictures could be used as an example for students to produce or complete their own hazard map.
- Students write about how each hazard could affect them, how to make others aware of it, and how to diminish the likelihood of the hazard occurring.

Homework: Identify the hazards

Students draw a plan of their home or parts of their home that shows the hazards and how to deal with them. Alternatively, students design a cartoon or poster to display at school encouraging others to avoid a hazard.

Section B: Let's get ready – be prepared

Activity 1: Emergency survival items

- Discuss the possibility of having to stay at home without help for up to three days in the event of an emergency. Arrange a large number of items on a table, including necessary emergency items and things that may not be needed such as money, photos, mobile phone, watch, passport, keys or clothing.
- In pairs, ask the students to brainstorm all the items they might need. Get them to draw a picture and label the items. Ask questions like:
 - What items do you think you need and why?
 - Why do you think you need these items?
 - Where do you think you should keep them?

- c) Make an emergency kit for the classroom. Encourage the students to explore the kit, reviewing what and how things work. Practise tuning radios, using tin openers, putting batteries in a torch and become familiar with the civil defence siren 'sting' alert on the

CD-Rom. 

Homework: Survival items

Students take home the Survival item 'cut and stick' sheet, and tick the items they have and can easily find at home. Send a letter to their parents or caregivers with discussion points and a checklist of survival items.

Useful templates

Template 4: Survival items 'cut and stick' sheet, page 74.

Template 5: Emergency survival items at home, page 75.

Activity 2: Emergency plans

- a) In groups, students review the school's relevant emergency evacuation plans and emergency response procedures. They could note the positive, minus and interesting points related to the plans (see Template 16: Plus, minus and interesting (PMI) chart on page 87). Discuss these as a class to ensure that everyone knows what to do in the case of an emergency.



"Check out your own school's emergency procedures. You might find that there are different plans for different emergencies, and for inside and outside the classroom."

- b) Buddy up with a younger class in the school or a local primary school and show these students what they need to do in an emergency. Choose an emergency and make a book for junior school students, explaining what to do during a disaster.

Homework: Home emergency plan

Students are to create a home emergency plan with their families. Together they brainstorm situations when they may need to leave their

home and when it may be safer to stay indoors. For example, it might be safer to stay indoors during a big storm but what about during a flood? Encourage students to come up with their own plan, and to add any details they think are necessary while keeping it simple. Send a letter to their parents or caregivers with suggestions for discussion and a template for the plan.

Useful templates

Template 2: Letter to parents - Introduction to unit, page 72.

Template 3: Home emergency plan, page 73.

Activity 3: Identify special needs

- a) Students could prepare a questionnaire or checklist for people in their neighbourhood, or their extended family, to find out who is prepared for an emergency.

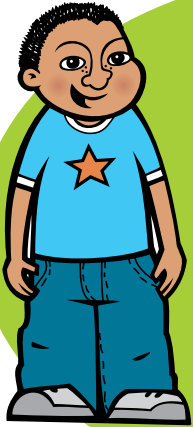
Homework: Questionnaire

Students survey at least three neighbours or extended family using their questionnaire or checklist to find out how others are prepared for an emergency.

- b) Analyse and graph these results at school. Students could suggest ways to help others become more prepared and have time to implement these suggestions.

Activity 4: School safety preparation

- a) Assign groups to certain school buildings and classrooms (such as the library, hallways, staffroom or assembly hall). Ask the students to:
- make sure all emergency exits in these areas are signposted
 - set up a regular checking process (if there isn't one already in place) to ensure that these exits are useable
 - make a map of the rooms showing where the emergency exits are, and display these in the rooms
 - locate points to turn off power, gas and water
 - encourage students to demonstrate these areas to teachers in the school – make maps to show these points for easy reference.



“Be careful when showing your students these points. Gas should only be turned off in a disaster if there’s a fire or you can smell gas. That’s because once it’s turned off, you’ll have to get the gas company in to turn it back on.”

- b) Discuss any pets the school has, where they live and their requirements in an emergency. Draw a flowchart to demonstrate these points.

Homework: Find it!

Students are to locate the power, gas and water at home with an older person. Draw a map to show these points and display it in a prominent area in their house.

Section C: Time to practise – responding the right way

Activity 1: Scenario practice

- a) Practise a range of emergency drills as a class or school. Discuss scenarios such as what to do:
- at lunchtime or during breaks
 - if travelling to and from school
 - if the teacher isn’t at school and there is a reliever.

Refer to the simulation activities for more suggestions.

- b) Using the *What If* cards, students work in small groups and act out what they could do in different situations. Give different groups different scenarios and ask them to discuss and share these with their peers, other students or their families.

Homework: What if?

Students make up their own *What If* cards or design a game involving the *What If* cards.

Useful template

Template 1: *What If* cards, page 65

Activity 2: Encouraging others to practise

- a) Brainstorm ways for students to encourage others to practise emergency drills and response procedures. For example:
- Designing posters for display around the school that show what to do in different emergencies, or create a webpage for the school website.
 - Making a play, rap, song or dance that demonstrates the importance of practising emergency drills.
 - Designing picture information cards for ESOL students and students with special needs.
 - Working with teachers to organise emergency drill practices. For example, students could suggest holding an earthquake practice with younger students, or while having school assembly.

Homework: Improving the plan

Students and their families brainstorm a list of ways to enhance the effectiveness of their own home plans and emergency procedures. They choose one idea to follow up on at home and report back to the class, group or teacher on the action taken.

Section D: Be a survivor – recovery from disaster

Activity 1: Class visit

- a) Arrange a visit to a variety of places or have someone come and visit your class or school. Some suggestions are:
 - Civil Defence Emergency Management office
 - police search and rescue team
 - mountain clubs
 - fire service
 - NZ Safety Council
 - army.
- b) The students may be able to come up with some suggestions for places they might like to visit, and then help to plan and set the aims for the visit. For example, to find out:
 - who takes over or helps during an emergency?
 - when do they take over?
 - who and what are their roles?
 - who and what is Civil Defence and what is their role?
- c) Practical activities could be explored, such as first-aid, making shelters, cooking on a primus, gas cooker or barbecue (with adult supervision).

Activity 2: After an emergency

- a) Students could research the 'do's and don'ts' for immediately after an emergency. Template 14: Health rules after disasters on page 85, is useful for this.
- b) Students could produce a pamphlet outlining safe practices such as:
 - preparing drinking water
 - sewage disposal
 - what do we eat first and how much
 - identifying ongoing hazards after the event.

Homework: Pamphlets

Students could finish these pamphlets for homework and share them with their families.

Activity 3: Feelings and emotions

- a) Read some of the *What If* scenarios or read a story such as *Flood* by Sonny Mulheron (School Journal Part 2, Number 2, 2004) that explores characters' feelings. Discuss the characters' feelings and responses that are part of grieving, loss or feeling scared. Brainstorm a list of feelings that people in the scenarios may have experienced.
- b) Students choose a character from a story or scenario and draw a picture, or create a model to express their feelings and responses.
- c) Students share these drawings or models with others, and explain how they would try to deal with these feelings if they were in the same situation.

Assessment

Students' success criteria can be used as a form of assessment. Students could self or peer assess against the set criteria. This could be done verbally or on a simple chart as on next page:

Learning intention – Health and Physical Education: Level 3/4 Strand A3

Identify and prepare for a range of disasters in the classroom, home and community.

"There are also more ideas in The Curriculum in Action Resource, Change Loss and Grief – available from Learning Media www.learningmedia.co.nz or by calling 0800 800 565."



Success criteria	Continuum	Comment
I can list a range of disasters	1 2 3 4 5	
I can explain what I would do if there was a disaster		
• at school	1 2 3 4 5	
• at home	1 2 3 4 5	
• when I'm on holiday	1 2 3 4 5	
• while going to or from school.	1 2 3 4 5	
I have discussed an evacuation plan with my family.	1 2 3 4 5	
I have taken action to practise the school's emergency procedures and inform others of these plans.	1 2 3 4 5	

Learning intention – Health and Physical Education: Level 3 Strand D3

Describe their local community's needs in the event of a disaster and take action for the care and safety of people in their family and community.

Students write a paragraph on the help that local community members might need in a disaster. Include a summary of the action they have taken to help others prepare for an emergency. A chart could be used, as above right.

What help do members of the local community need in the event of a disaster?

Examples	
What action have you taken to help others prepare for an emergency?	
Name/group	Action/s taken


Learning intention – Social Studies: Level 4 Social Organisation

Identify groups trained to help in different types of crises.

Students complete a mind map to identify groups of people that can help them in an emergency, and their roles.

Learning intention – English: Level 4 Close Reading

Read and gather information on disasters from a range of texts.

Work in small groups to conduct a guided reading activity at the students' appropriate reading level. Get the students to make a quiz for someone else in the reading group to answer. See the **CD-Rom**  for various quiz examples.

Related cross-curricula lessons years 0-8

Science:

- Use the *Building Science Concepts* books to focus on the Planet Earth and Beyond strand.
 - Book 12: *Volcanoes: Hot rock in a cool world.*
 - Book 40: *Earthquakes: Feeling the earth move.*
 - Book 50: *Extreme weather.*
- You can also use the civil defence publication: *Tephra* available from their website, www.civildefence.govt.nz
- Create a volcano in a sandpit using baking soda, vinegar and dye.

Technology:

- Make a container to hold items for a first-aid kit.
- Create plans or diagrams of a new product that will help to prevent disasters.
- Design a Family Disaster Plan fridge magnet to inform the family about preparing for an emergency.

The Arts:

- Write a song or jingle to remind people to prepare for disasters.
- Act out various disaster scenarios.
- Use musical instruments to explore the sounds of a storm.

Mathematics:

- Measure the water needed per person per day. Calculate how much your family will need for three days.
- Create surveys to see how well people in your class or school are prepared for disasters.
- Research the height of various tsunamis around the world and graph the results.

- Find out the speed of disasters such as tsunamis and floods, and compare these to the speeds of different types of transport.

Language and Languages:

- Discuss events and personal experiences related to earthquake drills - English (speaking).
- Read and gather information on disasters from a range of texts - English (reading).
- Explore the legend of Rūaumoko, Māori God of earthquakes - Māori.
- Explore the legend of Mafui'e, the Samoan God of Earthquakes - Pasifika.

What's the Plan Stan is also useful for LEOTC activities, for instance:

- Shelter-building, using materials such as blankets and ropes.
- Basic first-aid instruction from Red Cross or Order of St John.

Disaster Activities And Homework Ideas

This section provides activity sheets and homework ideas that you can use as part of the unit plans or as one-off lessons. They are also available on the CD-Rom for cutting-and-pasting into lesson plans as required.

The homework ideas may prompt parents and families to plan and prepare for disasters. They will also help to ensure that work in the classroom is discussed and continued at home.

Earthquake activities and homework ideas

Classroom activities		
Junior	Middle	Senior
<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is an earthquake? If there is an earthquake while we are at school, what are the hazards to life and property? Where are the safe places? Give students red stickers (dangerous) and green stickers (safe) to attach to appropriate places around the room. Ask students to draw a map of the class to show the location of the green and red stickers, and label why they have chosen those places. Discuss ways to fix some of the dangerous places so they are safer. Practise Drop, Cover and Hold. 	<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is an earthquake? If there is an earthquake while we are at school, what are the hazards to life and property? Where are the safe places? Instruct students to draw a map of the classroom and use a colour code on the map to identify dangerous (red) and safe (green) places. Ask them to label their maps to show why each place is safe or dangerous. Instruct students to write some suggestions for making the dangerous places safer. Practise Drop, Cover and Hold. 	<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is an earthquake? If there is an earthquake while we are at school, what are the hazards to life and property? What is a safe or dangerous place in an earthquake? Divide class into groups to survey various areas of the school (eg classrooms, library, hall) to identify safe and dangerous places. Tell groups to draw maps of their assigned areas, showing safe and dangerous places, and suggesting how dangerous places could be made safer. Ask them to produce earthquake response plans for their areas, and present these to the rest of the school. Practise Drop, Cover and Hold.
Homework ideas		
<ol style="list-style-type: none"> Walk with an adult around your house and decide on the areas that would be safe in an earthquake (green areas) and those that would be dangerous in an earthquake (red areas). Talk to an adult at home about the safe places you found in your house. Show an adult at home how to Drop, Cover and Hold. 	<ol style="list-style-type: none"> Draw a colour-coded map of your home, identifying the areas that would be safe in an earthquake (green areas) and those that would be dangerous in an earthquake (red areas). Interview an adult to see if they understand Drop, Cover and Hold. Draw a cartoon and use speech bubbles to show what they knew about Drop, Cover and Hold. Check if your house has an emergency plan and emergency items. Write a paragraph about the results of your checks, and what your family needs to do to be better prepared for an earthquake. 	<ol style="list-style-type: none"> Survey the different rooms in your house to identify safe and dangerous places in an earthquake. Draw a diagram of your home labelling those areas that would be safe in an earthquake (green areas), and those that would be dangerous in an earthquake (red areas). Label the diagram to suggest how the dangerous places could be made safer. Mark on your diagram where your family's emergency items are kept. Write an earthquake plan for your home as a bullet-pointed list, beside or under your diagram.


Tsunami activities and homework ideas

Classroom activities		
Junior	Middle	Senior
1. Discuss with class: <ul style="list-style-type: none"> • What is a tsunami? • Are tsunami likely where we live or go to school? 2. Help students to identify on a map the nearest high ground in the area (over 35m above sea level). If there is no high ground, identify the safest route inland (at least 1km inland). 3. Discuss what to do if they hear a tsunami warning. 4. Practise a tsunami warning, and walk as a class to the identified safe point.	1. Discuss with class: <ul style="list-style-type: none"> • What is a tsunami? • Are tsunami likely where we live or go to school? 2. Ask students to draw a map of the area around the school and to draw the nearest high ground (over 35m above sea level). If there is no high ground, draw the safest route inland (at least 1km inland). 3. Discuss what to do if they hear a tsunami warning. 4. Discuss what to do if they feel a strong earthquake and they are at the beach. 5. Practise a tsunami warning, and walk as a class to the identified safe point.	1. Discuss with class: <ul style="list-style-type: none"> • What is a tsunami? • Are tsunami likely where we live or go to school? 2. Give students the following choice of topics to research: <ul style="list-style-type: none"> • What is a safe place during a tsunami? • Where are our local safe places? • What heroic deed did British schoolgirl Tilly Smith do during the 2004 Indian Ocean tsunami? • What is the difference between <i>distant</i>, <i>regional</i> and <i>local source</i> tsunami, and how should we respond to each? • What is our school's tsunami plan?
Homework ideas		
1. Ask an adult at home if a tsunami could affect your house. 2. Identify with an adult the nearest high ground or the safest route inland from your house. 3. Go for a walk with your family to practise moving to your safe point. 4. Draw a picture of your family at the safe point.	1. Decide with an adult at home if a tsunami could affect your house. 2. Draw a map of the area around your house, showing the route to the nearest high ground or the safest route inland. 3. Share your map with an adult at home, and ask them to add any comments about your plan.	1. Decide if a tsunami could affect your house. 2. Does your house have an emergency plan for tsunami? <ul style="list-style-type: none"> • If yes, review the tsunami emergency plan for your house, and check that it covers everything suggested in the Yellow Pages®. • If not, work with an adult to write a tsunami emergency plan – the Yellow Pages® has ideas for this.

Volcano activities and homework ideas

Classroom activities		
Junior	Middle	Senior
<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is a volcano? Are there any volcanoes near where we live? What should we do in a volcanic eruption? What is a lahar? Ask students to draw a picture of a large bag and the emergency items inside, which they and their families should take with them if evacuated during a volcanic eruption. Present the students with different scenarios to check if they have drawn the appropriate items in their bag for different situations. For example, it is dark, have you got a torch; your radio has gone flat, have you got batteries? 	<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is a volcano? Are there any volcanoes near where we live? What should we do in a volcanic eruption? What does the word 'evacuation' mean? What is a lahar? Brainstorm with students how they and their families would prepare if they had to evacuate in an eruption. Ask students to write a play about a family evacuating because of a volcano. Include a list of what they took with them. They could perform this play to another class. 	<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What is a volcano? Are there any volcanoes near where we live? What should we do in a volcanic eruption? What are the dangers of volcanic eruptions? What is a lahar? Divide the class into groups. They imagine they are news teams covering an eruption. They produce a newspaper page, or radio or television broadcast about an imaginary evacuation from a volcanic eruption. They must include advice on what to do before, during and after an eruption. Allow students to present their articles or programmes.
Homework ideas		
<ol style="list-style-type: none"> Take home your picture of the bag containing the emergency items. Tick the items in your bag that you and an adult at home can find in your house. Draw or make a list (with help from an older person) about anything in your bag that you cannot find in your home. 	<ol style="list-style-type: none"> Take your play home and discuss it with an older person. Check if you can find all the emergency items in your house. List any that you cannot find, and describe what your family could do to get them. Discuss with an adult at home what happens to pets during an evacuation. Write an emergency plan for looking after your pet in an eruption, or for an imaginary pet if your family does not have an animal. 	<ol style="list-style-type: none"> Become an investigative reporter. Write a newspaper article about the readiness of your house for an eruption. For example, have you got emergency items and an emergency plan? Interview an adult at home as part of your article. You may want to tape or video it. Find out if they are prepared for a volcanic eruption or emergency evacuation.






Storm activities and homework ideas

Classroom activities		
Junior	Middle	Senior
<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Identify the safest places in the class to shelter in a storm, and also the most dangerous places (such as windows, metal and electrical fixtures).</p> <p>3. Ask students to make a small handheld lollipop sign (red one side and green the other). Stand in different parts of the classroom and display the green side to show a safe area or the red side to show a dangerous area in a storm.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Divide the class into groups to make a chart that shows the advice which they think would appear in the Yellow Pages® about what to do before, during and after a storm.</p> <p>3. Groups compare their predictions with the actual information in the Yellow Pages®. They can highlight same ideas and add missing ones to their chart.</p> <p>4. Use their charts to make a poster about what to do before, during and after storms.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What is a tropical cyclone? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Instruct students to research the <i>Wahine</i> storm (Cyclone Giselle) on the CD-Rom  or the internet.</p> <p>3. Ask students to identify the hazards that occurred on land during the <i>Wahine</i> storm, and to design safety guidelines that address each identified hazard.</p> <p>4. Ask students to compare their safety guidelines with those in the Yellow Pages®. Add anything they have not covered to their guidelines.</p>
Homework ideas		
<p>1. Identify safe and dangerous areas in your home with help from an adult at home.</p> <p>2. Ask an adult at home if they have ever been in a storm. With their help, write a sentence about what it was like for them.</p> <p>3. Discuss with an adult what you should do with pets during a storm. Draw a picture showing what you should do.</p>	<p>1. Interview an adult at home if they have ever been in a storm. List key words and sentences about their experiences.</p> <p>2. Imagine there was a major storm tonight, and you had to rely on your emergency supplies as they are right now. Check the Yellow Pages® with an adult, and write a list of the supplies you have and those you don't.</p> <p>3. If there are items missing from your emergency supplies, tell an adult at home.</p>	<p>1. Interview an older person about their memories of the <i>Wahine</i> storm (Cyclone Giselle) in 1968, or another storm they experienced.</p> <p>2. Write a paragraph about the things the person did to keep themselves safe during the storm.</p> <p>3. Check your family's emergency supplies at home.</p> <p>4. If there are items missing from your emergency supplies, tell an adult at home.</p>

Flood activities and homework ideas


Classroom activities		
Junior	Middle	Senior
<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a flood? • Are we at risk of a flood? • Have we ever had floods here? • How high did the water reach? <p>2. Brainstorm the effects of a flood in the classroom and consider possible damage (such as computers ruined, wet books, the playground underwater).</p> <p>3. Discuss what to do to lessen damage before a flood occurs, and to keep safe.</p> <p>4. Discuss and write a sentence about what to do in a flood at school.</p> <p>5. Practise a class evacuation to high ground.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a flood? • Are we at risk of a flood? • Have we ever had floods here? • How high did the water reach? <p>2. Using digital photos of the classroom, students label what would be underwater in floods of differing levels (if known, base these on likely levels for your school.)</p> <p>3. Ask them to add text boxes to the digital photos, showing what could be done to minimise damage. For example, turn off electricity, put computers up high, and pick up any books from the floor.</p> <p>4. Read the school evacuation plan, and practise it as a class.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a flood? • Are we at risk of a flood? • Have we ever had floods here? • How high did the water reach? <p>2. Ask students to list what should be done before, during and after a flood by children, adults or both.</p> <p>3. Divide the class into two:</p> <ul style="list-style-type: none"> • Those with younger siblings make brochures suitable for the junior and middle school, showing them what children should do in a flood. • Those without younger siblings make brochures for parents, outlining what adults can do in a flood.
Homework ideas		
<p>1. Identify what would be affected by a flood in your home.</p> <p>2. Talk to an adult at home about what they would do to protect important things in a flood.</p> <p>3. Ask an adult if they have been involved in floods before. If so, find out what happened so you can talk about it to the class.</p>	<p>1. Draw your home, and number each place or important object that could be damaged in a flood.</p> <p>2. Write a key for the numbered drawing, listing what could be done to lessen the damage from floods for that particular place or object.</p> <p>3. Discuss emergency exits from your house with an adult at home, and add them to your drawing. Point out the emergency meeting place if you need to evacuate.</p>	<p>1. Take home your brochure. Show it to younger siblings or parents, as appropriate.</p> <p>2. Make an evaluation of their response to the brochure. Could they understand it? Was it helpful to them?</p> <p>3. Ask an adult at home about any flood they have been involved in or known about. Write a report about what happened, and what they did.</p>

Non-natural disaster activities and homework ideas

Classroom activities		
Junior	Middle	Senior
<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What are non-natural disasters? Read a story about a non-natural disaster (eg the non-natural disasters story on the CD-Rom).  Students make a cartoon or use speech bubbles, showing the main character taking the appropriate action. Students explore where they can find out what to do in a non-natural disaster. For example, the Yellow Pages® or www.whatstheplanstan.govt.nz.  	<ol style="list-style-type: none"> Discuss with the class: <ul style="list-style-type: none"> What are non-natural disasters? Which types are more likely where we live? Give each group a different type of non-natural disaster. Each group makes a poster about their disaster, leaving the bottom third of the page empty. Let groups present their posters to the class. After each presentation, discuss with the class what they should do in that disaster. Refer them to the Yellow Pages® or www.whatstheplanstan.govt.nz.  Instruct groups to add 'what to do' information in the bottom third of their poster. 	<ol style="list-style-type: none"> Discuss with class: <ul style="list-style-type: none"> What are non-natural disasters? Which types are more likely where we live? Allow students to each choose a historic non-natural disaster to research. Instruct them to research the correct responses for that type of disaster. Ask students to design a board game about their chosen disaster, which rewards correct emergency response action before, during and after the event. Allow them to trial their games with classmates or other syndicates.
Homework ideas		
<ol style="list-style-type: none"> Show an adult at home the civil defence section in the Yellow Pages®. Use the Yellow Pages® or www.whatstheplanstan.govt.nz.  to find out what to do in the type of disaster you have been studying. Write a sentence or draw a picture to show what you have learned to do in that type of disaster. 	<ol style="list-style-type: none"> Interview an adult at home about what to do in a non-natural disaster (choose another type of disaster from the one your group studied at school). Make a cartoon with speech bubbles showing what to do before, during and after that type of disaster. Use the Yellow Pages® or www.whatstheplanstan.govt.nz.  to check your cartoon covers all the important points. 	<ol style="list-style-type: none"> Make a television commercial on video or a brochure to advertise the website or resource that you used to research your chosen disaster. Your commercial or brochure should also promote the correct response for that type of disaster. Share these with your class. Ask an older person to watch your commercial or read your brochure. Ask them about their response and whether they feel your family is fully prepared if this type of non-natural disaster occurred. Write a short report about the older person's response, and the readiness of your family for this type of non-natural disaster.

Disaster Fact Sheets

The fact sheets in this section provide information about different types of disasters and what to do before, during and after each type of disaster. While they are designed as a quick source of background information for teachers, they could also be used as reading activities for older students.

The fact sheets are also available on the **CD-Rom**  for cutting-and-pasting into lesson plans.

Fact sheet 1: Earthquakes

What is an earthquake?

New Zealand lies on the boundary of the Pacific and Australian tectonic plates.

Tectonic plates are always on the move. Tension builds up as they scrape over, under or past each other. In some places movement between the plates is happening all the time, causing frequent small or moderate earthquakes. Other areas, where the movement is not constant, are prone to stronger quakes separated by longer periods of time.

Most (though not all) earthquakes occur at faults, which are breaks extending deep within the earth, caused by the movement of these plates. The point under the ground where the earthquake actually begins is called the hypocentre or focus, while the place directly above it on the surface is known as the epicentre.

Earthquakes cause vibration waves to travel through the ground. The first sign of a quake is often the rumbling sound caused by the 'P' (primary or push) waves travelling at about 20,000 kilometres an hour, twenty times faster than a jet aircraft. The 'S' (secondary or shear) waves follow along at about 10,000 kilometres an hour, and cause the main rolling and shaking effects of an earthquake.

There are two ways of measuring earthquakes:

- The Richter scale uses instruments to measure the energy released by the earthquake. The scale ranges from one to nine (the largest so far was the 9.5 Chilean earthquake in 1960). It is a logarithmic scale, which means that a magnitude seven earthquake is 32 times as powerful as a magnitude six quake. The 1855 Wellington earthquake had an estimated magnitude of 8.2, and Napier was struck by a 7.8 quake in 1931.
- The Modified Mercalli (MM) scale is a judgmental measure of intensity based on the effects the earthquake on people and structures. This scale ranges from MM1 (smallest) to MM12 (largest). The 1855 Wellington and 1931 Napier earthquakes were both MM10 at their epicentres.

What do we do before an earthquake?

- Practise your earthquake drill: **drop, cover** and **hold**.
- Talk with your family, and prepare an emergency plan.
- Identify safe places to take cover close to you at home or school.
- Help your parents to **fix, fasten** and **forget** items at home.

What do we do during an earthquake?

- **Drop, cover** and **hold**.
- Stay where you are until the shaking stops.
- If inside remain inside, if outside stay outside.
- Do not attempt to run outside.

What do we do after an earthquake?

- Listen to and follow all instructions from adults or the radio.
- Stay calm.
- If you can, help others who may need it.
- Watch out for possible dangers or hazards.
- Remember there may be some aftershocks.
- Remember your prepared action plan and follow it, if it is safe to do so.



Fact sheet 2: Tsunamis

What is a tsunami?

Tsunami is a Japanese word meaning 'harbour wave'. A tsunami is a series of fast travelling waves caused by a large disturbance in the sea or on the ocean floor, such as an earthquake, landslide, volcanic eruption or meteorite. The waves can be separated by as much as an hour apart, and can travel many thousands of kilometres across the oceans at great speeds of up to 800 kilometres per hour.

A tsunami may pass unnoticed as it crosses deep oceans, but it loses speed and gains height when it reaches shallow water. Large waves up to 15 metres or more in height can come crashing onto the land. The effects may become worse in narrow bays and inlets.

Tsunami waves appear either as rapidly-moving tides with very strong currents that can wash people and objects out to sea, or as large breaking waves that can cause significant impact damage at the shoreline.

As New Zealand is surrounded by water, many of our coastal communities are at risk from tsunami. These can be caused by distant disturbances (for instance, the Chilean earthquake in 1960), or may be generated closer to our shores (such as the two near source tsunami experienced near Gisborne in 1947).

In a tsunami the water level may fall very quickly below the normal low tide mark then return just as quickly. If this happens, there won't be enough time to issue a warning, so it is important that you know what to do, and that you act quickly.

What do we do before a tsunami?

- Know if your local area could be struck by a tsunami.
- Talk with your family and prepare an emergency plan.
- Identify safe places close to your home and school – a place that is at least one kilometre inland or 35 metres above sea level.

What do we do during a tsunami?

- Stay calm.
- Leave the area immediately if you are at the beach or near a river when a strong earthquake occurs. Move quickly but safely.
- Go at least one kilometre inland or 35 metres above sea level.
- Don't go to a river or beach to watch the waves come in if a warning has been issued.

What do we do after a tsunami?

- Stay calm.
- Listen to, and follow, instructions from adults or the radio.
- Help others who may need it, if you can.



Fact sheet 3: Volcanoes

What is a volcano?

New Zealand is situated on the *Ring of Fire*, a geographic belt encircling the Pacific Ocean and containing about 90% of the earth's volcanoes. There are six active volcanic regions in New Zealand, five in the North Island and one in the northern offshore islands.

Volcanoes come in different shapes and sizes. There are three main types found in New Zealand:

- *cone* volcanoes such as Mounts Ruapehu, Taranaki and Ngauruhoe
- volcanic fields such as the ones found in the Auckland area
- *calderas*, large depressions formed by huge explosions, such as Lakes Taupo and Rotorua.

Volcanoes erupt when pressure builds up inside the earth and forces molten rock (magma) towards the surface. Volcanoes usually have short active periods, separated by longer dormant periods. Even extinct volcanoes are capable of coming to life again.

The type of eruption varies according to the amount of dissolved gases in the magma (which determines the explosiveness) and the silica content (which determines the runniness). Some eruptions are explosive, blowing out great volumes of rocks and molten material. Other volcanoes erupt in flows, pouring out clouds of hot gas mixed with small particles, or streams of liquid lava.

Those living in volcanic regions are at risk from ash, debris and lava flows. For instance, the eruption of Mount Tarawera in 1886 killed an estimated 153 people. If there is a crater lake or torrential rain, water can mix with volcanic debris to form a swiftly-moving avalanche of mud called a lahar, like the one that swept off Mount Ruapehu in 1953 and caused the deaths of 151 people in the Tangiwai railway disaster.

It is therefore important to know what to do before, during and after a volcanic eruption.

What do we do before a volcanic eruption?

- Know where active volcanoes are and whether they are likely to affect you.
- Have an evacuation plan – where to go and how to get there.
- Save water in your bath, basin and containers early on – supplies may become polluted.

What do we do during a volcanic eruption?

- Stay indoors – keep windows and doors shut.
- If outdoors – find shelter.
- Listen to the radio for instructions.
- If told to leave, cover your face and mouth and take your getaway items.
- Stay together.
- Do not go sightseeing.
- Take your outer layer of clothing off before entering a building – volcanic ash is difficult to get rid of.

What do we do after a volcanic eruption?

- If in a safe place – stay put.
- Listen to the radio for information.
- Return home only when told.



Fact sheet 4: Storms

What is a storm?

A storm is a disturbance of the atmosphere that can cause strong winds, rain, thunder, lightning, heavy snow and rough seas. A strong wind warning is issued by the MetService when winds of more than 87kph are expected over land.

New Zealand is particularly prone to storms, as it lies in the 'Roaring Forties', between 40 and 50 degrees latitude south, where mild air temperatures from the north meet cooler air from the south.

Tropical cyclones (called hurricanes in the Atlantic and east Pacific, and typhoons in the north-west Pacific) are large revolving storms which develop in the tropics, with a sustained wind-speed of more than 120kph.

Tropical cyclones usually weaken as they encounter the cooler sea temperatures around New Zealand, but sometimes they cause significant danger. In 1988 Cyclone Bola caused New Zealand more than \$200 million in damage, even though it was no longer a tropical cyclone by the time it reached our shores.

Storms have the ability to destroy roads, railways, bridges and buildings. Crops and livestock can be devastated. At sea, ships are at risk (the ferry *Wahine* foundered during Cyclone Giselle in 1968, with the loss of 51 lives). Hazards from storms include fallen trees and poles, torn-off roofs, fast-flowing currents in streams and rivers, flying objects, land slips, and flooding. Coastal areas can suffer from storm surges, which are extra-high tides caused by the high winds pushing the sea forward.

What do we do before a storm?

When a strong wind warning is issued:

- Listen to your radio for information.
- Bring pets inside.
- Clear away anything outside that may become a flying missile in the wind.
- Put tape across large windows to prevent them from shattering.
- Close all windows.

What do we do during a storm?

- Stay inside.
- Close all curtains.
- Stay away from doors and windows.
- Open a window on the side of the building away from the wind - this will relieve pressure on the roof.
- Stay away from metal and electrical fixtures.

What do we do after a storm?

- Stay indoors and listen to the radio.
- Avoid dangling and broken power lines, if evacuated.



Fact sheet 5: Floods

What is a flood?

Floods are one of New Zealand's most frequent disasters. They can occur as a result of storms and heavy rain causing rivers to overflow their banks.

Normal rainfall is partly absorbed by the soil and vegetation. The residue runs off the land to form our streams and rivers. Floods occur when there is too much water to be absorbed, and the run-off is too much to be carried by the rivers.

There are three main types of flood:

- Some rivers have periodic floods, forming flood plains. During heavy rain the river overflows its banks into the flood plain.
- Flash floods occur with little advance warning, and are caused by intense rainfall in a relatively small area.
- Coastal areas can occasionally be subject to floods from the sea caused by unusually high tides or tsunamis.

Flood waters can ravage the land, destroying roads, bridges, railway tracks and buildings. Crops can be inundated and livestock drowned. Human lives are also at risk, particularly in flash floods and tsunamis, where fast-flowing water filled with debris can sweep people away. The waters can even be strong enough to pick up vehicles.

After a flood there will be a lot of damage and pollution to clean up. It may take months or years to recover.

What do we do before a flood?

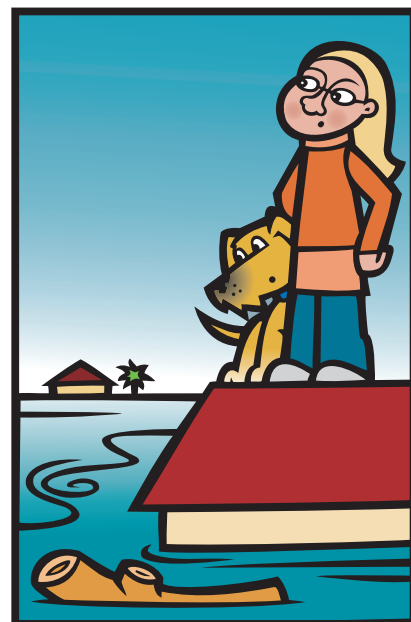
- Find out about the worst flood in your area and how high the flood waters reached. Would it reach your home?
- Know how to reach the nearest high ground.
- Move animals to safety.
- Keep valuables and some food and water above the high water mark. Attics or upstairs rooms are good places for storage, as long as there is easy access.
- Remind your family to store chemicals in a high, safe place. If a flood occurs and these chemicals leak, they could be dangerous.

What do we do during a flood?

- Listen to weather reports and updates for advice and instructions.
- Don't go into flood waters alone.
- Take your getaway items with you if you have to leave your home.
- Remind adults to turn off water, electricity and gas.

What do we do after a flood?

- Only return home once you are told it is safe.
- Do not go sightseeing through flooded areas.
- Do not drink floodwater. It could be contaminated.



Fact sheet 6: Non-natural disasters

What is a non-natural disaster?

Non-natural disasters are caused by human activity. These disasters may be limited to a small area or their effects might be widespread.

Non-natural disasters could include:

- wildfires (also known as bushfires)
- pandemics (Avian flu, SARS)
- biohazards (chemical spills)
- transportation accidents (trains, planes)
- terrorism (bombs, threats).

In these situations, always tell an adult or appropriate authority, and follow instructions.

As there are so many different kinds of non-natural disasters, this hazard sheet concentrates on wildfires and pandemics.

- A *wildfire* is an unplanned fire that starts outdoors, such as on a gorse-covered hillside or in a forest. They become a hazard when the fire threatens nearby people or property.

Many houses in New Zealand are surrounded by bush, which makes them vulnerable to wildfire. Even if people do not live anywhere near the bush, they often holiday in areas susceptible to wildfires. So it is important to know what to do.

- A *pandemic* is a widespread outbreak of an infectious disease throughout a region or even the world e.g. Avian flu, SARS (Severe Acute Respiratory Syndrome).

Devastating influenza (flu) pandemics swept the globe three times last century: 1918-19 (Spanish flu), 1957-58 (Asian flu) and 1968-69 (Hong Kong flu). The Spanish flu was New Zealand's worst disaster, killing about 8,600 people in our country and about 50 million worldwide.

Besides the large numbers of deaths caused by pandemics, they also result in huge disruptions to society. Medical services are overwhelmed, schools and businesses closed down, transportation and trade reduced, and borders closed.

What do we do before a non-natural disaster?

Wildfire

- Make sure that garden hoses are connected to taps and reach all areas of your property.
- Keep your driveway clear so that fire appliances can reach your house.
- Make sure your property is easy to find from the road.
- Plan and practise how you will evacuate.
- Know at least two suitable exit routes from your neighbourhood.
- Keep a kit of emergency supplies.

Pandemic

- Talk to your family and friends about health hygiene – hand washing, and safe coughing and sneezing.
- Make sure you have your emergency survival items.
- Include paracetamol (for fever) in your home emergency survival items.
- Have a plan for what you and your family would do if you had to stay at home during a pandemic.

What do we do during a non-natural disaster?

Wildfire

- Dial 111.
- Follow the instructions of emergency people.
- If you have to evacuate:
 - Close all doors and windows.
 - Leave outside doors unlocked so that fire-fighters can get in easily if they have to.
 - Leave a light on in each room to help improve the visibility for fire-fighters if it is smoky.
- If caught in the open, move to an area with low fuel, such as a clearing, lake, or previously burnt ground.

- Don't try to outrun the fire - move across the front of the fire to the flanks (sides).
- Move downhill - the most intense fire will be at the top of hills.
- Don't try to run through the flames unless you can clearly see behind them.
- Try to get in or behind something to avoid the radiant heat.
- Stay low and cover your mouth and nose with a wet cloth.

Pandemic

- Stay home if you are sick, keep away from other people and avoid visitors.
- Wash and dry your hands before handling food and after coughing, sneezing, using the bathroom, wiping children's noses and when looking after sick people.
- Use tissues to cover coughs and sneezes. Throw used tissues in the rubbish bin.
- Give fluids to people who have a fever and/or diarrhoea. Paracetamol can be used to bring down high fevers.

For more information, see the Ministry of Health website: www.moh.govt.nz/influenza

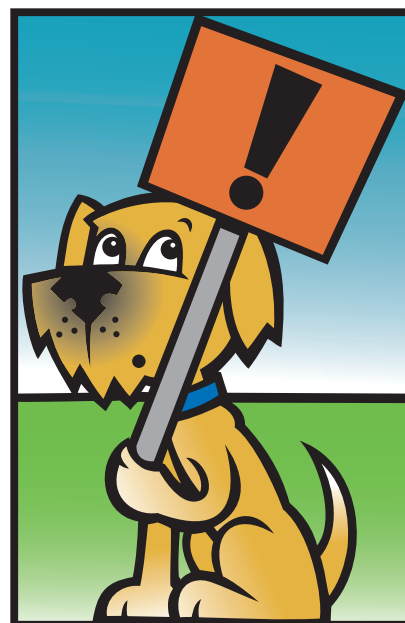
What do we do after a non-natural disaster?

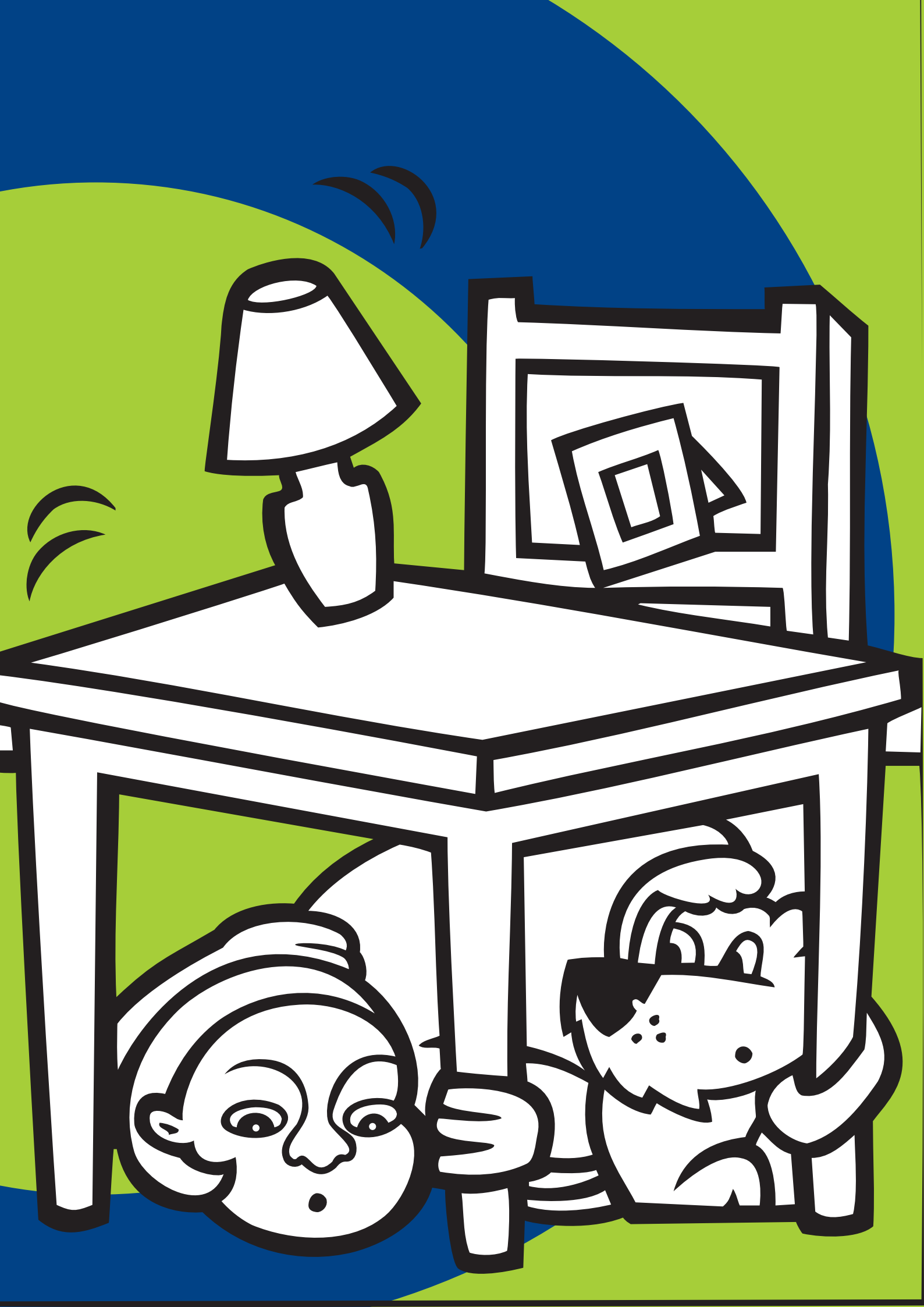
Wildfire

- Do not go sightseeing.
- Beware of hotspots as they can flare up again.

Pandemic

- Listen to the radio for instructions.
- Stay prepared – pandemics often come in waves.





Roles

Using *What's the Plan Stan* effectively in your school teaching and learning programme requires the support and involvement of various people and organisations besides the classroom teachers. This section outlines the roles of different people and groups to help make *What's the Plan Stan* happen. Roles include:

- Emergency management co-ordinator
- Principals and management teams
- Boards of trustees
- Parents, whānau and the community
- Ministry of Civil Defence & Emergency Management/CDEM groups.

Emergency management co-ordinator

Your school may want to assign someone to co-ordinate emergency management. This could be the health and safety co-ordinator, as some responsibilities do overlap, or it could be a separate role.

Here is a checklist of some tasks the emergency management co-ordinator could be responsible for:

- ☐ Identify natural and non-natural hazards that may affect the school.
- ☐ Identify the civil defence resources already available at school, and tell staff about these at a staff meeting or display them in the staff room.
- ☐ Discuss responses to potential types of emergency situations and record plans, with staff.
- ☐ Provide all staff and the office with a list of emergency wardens and contacts.
- ☐ Conduct a school-wide emergency response drill at least once each term.
- ☐ Keep a record of emergency drills and their testing frequency (see Template 26: Emergency drills and testing, page 97).
- ☐ Develop a plan for students with special needs and how to cater for them in an emergency evacuation (see Template 27: Ministry of Education toolkit 5D, page 98).
- ☐ Establish a process to ensure all fire alarms work, fire extinguishers are current, and fire exits are kept free of obstructions.
- ☐ Check prominent emergency signs are in all areas.
- ☐ Oversee and maintain records of emergency procedure training for students and staff.
- ☐ Oversee and maintain records of first-aid training for staff.
- ☐ Publish civil defence messages in school newsletters and the websites.
- ☐ Review current policies to ensure they reflect the school's commitment to emergency policy and procedures.

Principals and management teams

Principals and management teams have a key role to play in any school-wide initiative. Their leadership and enthusiasm affects staff and students. It is ideal if the principal and management team implement policies and procedures for preparing and practising civil defence emergency procedures.

Principals and management teams can ensure their school's commitment to *What's the Plan Stan* by incorporating it into management practices and systems. They can lead their staff in school-wide planning for emergencies and provide further leadership through:

- developing and reviewing policy
- inviting parents, whānau and community members to the school to share learning experiences
- developing emergency response plans and training
- holding emergency drill practices and revising plans
- involving the whole school in *What's the Plan Stan* and considering the learning needs of students
- consulting with the community
- generating discussion around emergency practices in their schools by exploring questions, such as:
 - what level of emergency preparation do the children in our school engage in?
 - how do we enable children in our school to be prepared for a civil defence emergency?
- arranging for the purchase, storage and maintenance of emergency supplies and equipment
- maintaining liaison with local emergency services and council officers.

Boards of Trustees

Legislative and regulatory requirements

The Board of Trustees is legally required to provide effective emergency procedures and planning to ensure the safety of all students and staff. There needs to be a policy to ensure these plans are regularly reviewed and tested for adequacy and effectiveness.

The Health and Safety in Employment Act 1992 is a comprehensive document that sets out requirements for the Board of Trustees to ensure the safety of everyone in the workplace. Schools can access this document through www.legislation.govt.nz.

As part of the Board of Trustees' safety obligations, schools need to have emergency evacuation procedures in place. There are specific regulations in relation to fire drills that are set out in the Fire Safety and Evacuation of Buildings Regulations 1992 (www.legislation.govt.nz, click on regulations then the letter F). These state that schools must have a fire evacuation procedure and carry out fire drills every term.

A process needs to be in place to ensure all fire extinguishers are current, fire alarms are working, and all fire exits have a prominent sign and are kept free of obstructions.

National Administration Guideline 5 states that each Board of Trustees is required to:

- (i) *provide a safe physical and emotional environment for students*
- (ii) *comply in full with any legislation currently in force or that may be developed to ensure the safety of students and employees⁴.*

When the Education Review Office conducts school reviews, they may ask questions that have civil defence implications, or they may ask to view your emergency planning. Examples of the type of questions they may ask:

- Has the board prepared plans that will enable the school to continue functioning during or after a national or local civil defence emergency?
- Has the board had occasion to undertake civil defence measures, or to perform functions or duties in relation to civil defence, since the last Education Review Office report?

⁴ Ministry of Education, The National Administration Guidelines (NAGs) [online], available URL: www.minedu.govt.nz.

- Has the board ensured systematic identification and remedying of existing and potential hazards?

Involvement at a governance level

The Board of Trustees can be involved with implementing *What's the Plan Stan* at a governance level by:

- resourcing and supporting the management's decisions to implement *What's the Plan Stan* within the school
- surveying parents and consulting with whānau to elicit their views with regards to incorporating emergency practices and procedures into the school programme
- adopting an emergency policy and procedures
- reviewing current policies to ensure they reflect the school's commitment to emergency policy and procedures
- providing opportunities and facilities for their employees to practise for civil defence emergencies.

Ministry of Education guidelines

The Ministry of Education has produced guidelines on civil defence planning for schools, which provide emergency response plan templates for developing plans to react to emergency situations. It has information on roles and responsibilities, training, emergency evacuation drills, first-aid and civil defence emergency background notes.

You can find this information on the Ministry's website at: www.minedu.govt.nz/index.cfm?layout=document&documentid=7082&data=l.

Parents, whānau and the community

Teachers will be aware of the importance of gaining parental support and co-operation when working with students on *What's the Plan Stan*. Students can help communicate with parents and whānau about the importance of being prepared and knowing what to do in a disaster. They can share their knowledge, skills and understanding of emergency awareness, preparedness and survival with their parents and whānau.

Dealing with students' fears and anxieties following and throughout the event of a disaster is crucial for those who have responsibility for a child, whether it be parents, family, whānau or teachers. A child may not understand such events (or even practising for them), and may feel confused, anxious or frightened.

If parents, whānau, teachers and other community members can approach this task together, reinforcing what is taught at school and vice versa, it helps to reassure students that they will know what to do and are more likely to be safe in the event of an emergency.

Every family member needs to be involved so they know what to do when disaster strikes. Experts tell us to plan to be on our own for a minimum of three days. Are families in your school community prepared?

Some suggested ways to involve parents and whānau in *What's the Plan Stan*

- Invite family and whānau to:
 - a meeting where *What's the Plan Stan* is explained, as well as what the school aims to achieve
 - share their emergency procedure practices from home – what works, what doesn't
 - come and share their experiences of disasters with the students
 - come and write, discuss and share their emergency plans with the students
 - help plan how to care for elderly community members, the young or those with special needs.
- Have a homework or school book with activities that promote discussion and encourage students to share what they learn from *What's the Plan Stan* with their families. Activities could include:
 - interviewing family members to find out their experiences of disasters
 - finding out what skills their neighbours have that might be useful in an emergency
 - helping other family members (younger siblings) to create their own escape plan
 - deciding on a meeting point for their family, co-ordinating an emergency evacuation, practising it, and reporting back to other class members

- preparing a list of emergency contacts.
- Check out what is in your local area for possible class visits involving parents, family and whānau. For instance:
 - local Civil Defence Centre
 - fire station
 - police station
 - hospital or ambulance station
 - Order of St John or Red Cross
 - radio station.
- Other ideas:
 - Hazard hunt at different locations such as the beach, park, pool or supermarket.
 - Practise emergency procedures and different scenarios at break times, outside, in the car park, in the library or in the school hall or gym.
 - Publish a regular civil defence message in your school newsletter or on your school website

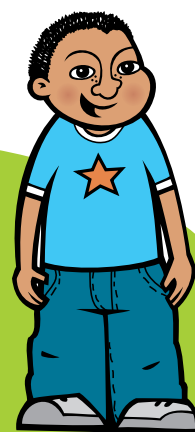
Ministry of Civil Defence & Emergency Management

Since its establishment on 1 July 1999, the fundamental driver for the Ministry of Civil Defence and Emergency Management (MCDEM) has been to work with its stakeholders to create a new way of thinking about civil defence emergency management. The goal is to build on existing civil defence practice. New Zealand is acknowledged as a world leader in developing a risk-based approach that will increase the capability of communities and individuals to prepare for, respond to and recover from disasters.

How did MCDEM come about?

MCDEM traces its history from the Emergency Precautions Scheme set up in the late 1930s in response to the threat of war. The scheme was never required to respond to enemy action, but was used after two earthquakes in 1942.

“You can find out more about the Ministry of Civil Defence & Emergency Management by checking out their website at www.civildefence.govt.nz.”



Fears of a nuclear war in the 1950s led to the Ministry of Civil Defence being formed in 1959. It was not until the 1960s that emphasis was placed on natural disasters rather than hostile attacks.

The Civil Defence Emergency Management Act of 2002 consolidated MCDEM's focus from a mainly response role to all of the four Rs – reduction, readiness, response and recovery.

What is the strategy for achieving resilience to hazards and disasters?

The strategy for achieving resilience to hazards and disasters is through a risk management approach based on the four Rs – reduction, readiness, response and recovery. For more about the four Rs, see page 5.

This approach starts with recognising the hazards we face and the vulnerability of our communities and infrastructure to those hazards. By addressing how these hazards could affect us, the focus can move to measures for reducing the risks and for managing the impacts when they occur.

Civil Defence Emergency Management groups/local authorities

Civil Defence Emergency Management (CDEM) groups, made up of local government (regional, district and city councils), utilities and emergency services are responsible for designing and implementing solutions at the local level.

Local people, including volunteers, help their communities prepare for, respond to, and recover from the impact of a mass emergency or disaster and when there is a need to co-ordinate the response.

When does CDEM become involved in an emergency/disaster?

CDEM will become involved in an emergency/disaster when police, fire and ambulance services can no longer look after the number of people affected by the disaster and where there is a need to co-ordinate the response.

When is a civil defence emergency declared?

A civil defence emergency can be declared by the local authority if:

- there is a threat of loss of life or injury and/or distress, and
- a situation exists that cannot be dealt with by the normal emergency services, and
- the situation requires the use of civil defence emergency powers.

How long do you need to look after yourself following a major disaster?

As CDEM does not have lots of people to help everyone, it is important that everyone knows how to help themselves and others if they can. You must be able to look after yourselves for at least three days following a major disaster.

What is a Civil Defence Centre or Sector Post?

In the event of an emergency, your local council will set up Civil Defence Centres, which could be at your school (or other public venues). Each centre will become a communications and management base. In some parts of New Zealand these are called Sector Posts. Find out about the arrangements in place in your area from your local council.

Simulation and Practice Activities

The three simulation activities suggested in this section could be used to help evaluate strengths and weaknesses in your school's emergency preparedness, and to facilitate the effective overall planning and operation of an emergency situation.

Activity	What happens	Scheduling
Emergency response practice	Students practise their immediate response to a specific type of disaster.	This simulation could take place at any time throughout the year, and should be repeated in different situations, such as the classroom, assembly, lunch-time and so on.
Evacuation exercise	Parents, caregivers or authorised people collect students from school.	This can take place at any time in the year. It could also be incorporated into, or at the end of, the <i>What's The Plan Stan</i> unit to encourage parents and caregivers to evaluate their own preparedness.
Disaster simulation	Students role-play agencies, casualties and the public in the response to a disaster striking a mythical town.	This is the biggest of the three activities. It is recommended that this come at the end of the <i>What's The Plan Stan</i> units of work (so that students can test their knowledge and preparedness for an emergency) and that it is carried out as a school exercise. It would also be particularly suitable as an EOTC activity for school camps.

Emergency response practice

The aim of the emergency response practice is to ensure that students are familiar with the immediate action to take to keep them safe in a disaster.

This practice should focus on the type of disasters most likely to strike the school. It should be done at all levels, either as individual classes or as a school.

Practices could be run in different situations, for instance:

- in the classroom
- at assembly
- during lunch-break
- in the library
- in hallways between classes.

Level

Individual classes or as a school: new entrants to Year 8.

Achievement objectives and learning intentions

Achievement objectives	Learning intentions
<u>Health and Physical Education</u> Levels 1-3, Strand A3 <i>Students will identify and use safe practices and basic risk-management strategies.</i>	Students will be able to: <ul style="list-style-type: none"> demonstrate ways to keep themselves safe when a disaster strikes practise the school's emergency plans and procedures.

Preparing the students

Every student needs to know what to do if a disaster strikes. The *What's the Plan Stan* units of work provide an opportunity for teaching your students the correct responses to the types of hazards that your school faces.

Students with special needs require particular consideration. It is important that these students know as much as possible what to do, and that teachers and adult carers have planned their responses in the event of an emergency.

Running the emergency response practice

- The practice should start with a clear command from the teacher, for instance, 'Earthquake - drop'.
- On hearing the command, students should quickly, quietly and without panic take the required action for that type of disaster. For instance, in the case of an earthquake, they would drop to the floor, take cover and hold on.
- Students continue their emergency response until the teacher gives the command, 'all clear'.
- Stress the importance of students remaining quiet, so that they can hear the teacher's instructions.

- Remind students to stay calm. They could take deep breaths, or count slowly in a whispered voice. The teacher keeps talking to minimise panic.

Where appropriate. This practice should include evacuation to the safe assembly area.

After the emergency response practice

After the practice is over, discuss with students:

- their fears and concerns about disasters
- how they could help and comfort each other during and after a disaster
- how they could help and comfort each other in a disaster if they were not with adults
- what they should do next.

Teachers evaluate the effectiveness of the emergency response practice:

- Was the students' response effective?
- Did they know what to do?
- Did the procedures in the school's emergency plan work for the situation in which the practice was held?
- Are there any new factors affecting the plan that need consideration?
- Do the students need more training?

Evacuation Exercise

During, or in the immediate aftermath of a disaster, children must not be allowed to make their own way home by themselves. In the event of an evacuation because of a disaster during the school day, it is the staff's responsibility to look after and care for the children until they can be safely returned to their parents and caregivers.

Thus, there must be planned, prepared and tested emergency evacuation procedures in place. This is the joint responsibility of the Board of Trustees, principal, staff and parents and caregivers.

This evacuation exercise aims to test the efficiency of these procedures to empty the whole school. It is not to be compared with a 'normal' evacuation drill, such as a fire drill, where children usually stay at school.

This exercise also ensures parents, caregivers and whānau know what to do if their children are at school when a disaster strikes, and it provides them with an opportunity for them to test their own household emergency plans.

Level

Whole school: new entrants to Year 8.

Achievement objectives and learning intentions

Achievement objectives	Learning intentions
<u>Health and Physical Education</u> Levels 1-3, Strand A3 <i>Students will identify and use safe practices and basic risk-management strategies.</i>	Students will be able to: <ul style="list-style-type: none">demonstrate ways to keep themselves safe when a disaster strikespractise the school's emergency plans and procedures.

Preparing families

Every household's emergency plan should include how and where to meet after a disaster. This plan should include who is responsible for collecting the children from school if an emergency occurs during school hours.

The school needs to check that parents and caregivers have made plans for this situation, before holding the evacuation exercise.

Parents and caregivers should be asked to supply the school with a list of several people authorised to pick their children up in the event of a disaster, in case they are not in a position to do so themselves. This could be done by:

- sending a form home to be completed
- setting a homework task for students to discuss their plan at home
- using the school newsletter or website
- writing personal letters
- making contact in person.

This list should be updated by the school every year.

Parents and caregivers are advised beforehand of the date and time for the evacuation exercise, and that they have to arrange for their children to be collected, either by themselves or an authorised person.

Preparing the school

Ensure all staff are familiar with the school's emergency plan, are informed about the date and time of the evacuation exercise and their roles in the exercise. The Ministry of Education has guidelines on civil defence planning for schools on their website at: www.minedu.govt.nz/index.cfm?layout=document&documentid=7082&data=l_

During the preceding week, remind children what they need to do when a disaster strikes.

Running the evacuation exercise

1. Start the evacuation exercise with an appropriate alarm. This could be verbal commands from the teachers or the school bell.
2. Students take the correct action depending on the type of disaster being simulated. For instance, they could do their earthquake drill of **drop, cover** and **hold**.
3. After a suitable amount of time, the teacher talks the children through what has happened, and what they would be doing now in a real disaster, for instance checking that everyone is alright and that no-one has been injured.

4. Classes leave their individual rooms and gather at the assembly area. This area should be identified in the school's emergency plan, but bear in mind that the disaster could make it unusable.
5. Teachers check the roll, and inform the principal and deputy of the status of their class.
6. Designated staff go to their reception points, equipped with the list of pupils and the people authorised to collect them. They check off names as people arrive, before passing over the children they are to pick up. If these staff members are classroom teachers, you will need to consider who will look after their children while they are doing this.
7. Students are all kept in the assembly area until they are picked up by their parents, caregivers or other authorised adults.

Exercise evaluation

Assemble all staff participants to discuss if the system worked.

- Did the pupils take the correct action?
For example, drop, cover and hold in an earthquake.
- Were class registers checked to ensure everyone was present and no-one was missing in toilets or on errands?
- Did the move to the assembly area go as planned?
- Was the assembly area checked for hazards such as broken glass to ensure it was safe?
- Did the nominated people collect their children?
- Were any children not collected? If so, why not? What happened to them?

You could also send a letter home asking for feedback from parents, caregivers and whānau. (See Template 19: Evaluation of evacuation exercise on page 90 for an example).

Options

This exercise describes a school evacuation. There are other options you could use, such as:

- individual classroom evacuations
- 'reverse evacuations' where students are contained inside the school because of an outdoor hazard
- evacuations to higher ground
- specific disaster procedures and evacuations.

Disaster simulation

This simulation brings to life the scenes of real disaster response operations, which students may have only previously seen on television.

Students role play the response after a disaster strikes the mythical town of Stanville. The type of disaster and number of casualties, is not previously revealed to the students who will be asked to respond appropriately.

Level

Whole school: new entrants to Year 8

Learning intentions and achievement objectives

Achievement objectives	Learning intentions
<u>Health and Physical Education</u> Levels 1-3, Strand A3 <i>Students will identify and use safe practices and basic risk-management strategies.</i> <u>Social Studies</u> Level 1-3, Social Organisation <i>How and why groups are organised within communities and societies.</i>	Students will be able to: <ul style="list-style-type: none"> • identify agencies and their roles in a disaster • explain the different roles people fulfil within groups in a disaster • demonstrate the importance of preparation, co-operation and organisation in responding to a disaster.

Resources

- Written scenario (see Template 20: Stanville simulation - scenario example, page 91)
- Photocopied plans of school or site (see Template 21: Stanville simulation - map example, page 92)
- Role cards (see Template 22: Stanville simulation - role cards for individuals, page 93 and Template 23: Stanville simulation - role cards for classes, page 94)
- Health cards (see Template 24: Stanville simulation - health card examples, page 95)
- Message forms if not using real radios (see Template 25: Stanville simulation - message forms, page 96)
- Name labels
- Adult helpers

Optional extras

- Video camera and/or digital camera.
- Sufficient water, cups, crackers or other food to ration out to all participants.
- Orange vests. Ask your Civil Defence Centre or Emergency Management Office, or use school traffic safety team vests.
- Two-way radios. Ask your Civil Defence Centre or Emergency Management Office.
- Make-up. Ask your Civil Defence Centre, Emergency Management Office, the Order of St John or Red Cross.

When to schedule this activity

It is recommended that this simulation comes at the end of the *What's the Plan Stan* unit, when students can test their knowledge and preparedness for an emergency.

Whole school approach

This disaster simulation is recommended to be run as a school exercise

Senior students, with assistance from outside agencies, play the various people and agencies

involved in a disaster in the mythical town of Stanville.

Juniors can use this simulation as an opportunity to build on what they have already learned in *What's the Plan Stan* by:

- being casualties or children that need to be looked after
- breaking into groups to observe different areas of the simulation
- talking to participants after the simulation about their role.

Timeline of simulation

When	What should happen
One term before (see page 59)	<input type="checkbox"/> Pick site <input type="checkbox"/> Invite agencies
One month before (see page 59)	<input type="checkbox"/> Write scenario (<i>see template 1</i>) <input type="checkbox"/> Invite parents <input type="checkbox"/> Assign supervisors <input type="checkbox"/> Obtain or draw map (<i>see template 3</i>)
One week before (see page 60)	<input type="checkbox"/> Make cards and forms (<i>see templates 22 - 25</i>) <input type="checkbox"/> Assign and discuss roles (45/60 minutes) <input type="checkbox"/> Assign and brief casualties (45/60 minutes) <input type="checkbox"/> Assign and brief media (45/60 minutes) <input type="checkbox"/> Make name tags and room signs
On the day (see page 62)	<input type="checkbox"/> Brief all participants (20/30 minutes) <input type="checkbox"/> Get into starting positions (20 minutes) <input type="checkbox"/> Simulation (45/60 minutes) <input type="checkbox"/> Debrief all participants (30 minutes) <input type="checkbox"/> Evaluate the simulation

This table suggests a timeline for the simulation. Teachers can use the check boxes to ensure they are on track. Each point in the table is explained in detail on the following pages.

One term before

Picking the site

This simulation should be held in a location that includes a number of buildings, rooms and open spaces to portray the town of Stanville. The area needs to be as large as possible. Ideal locations would include a school, park or camp.

Inviting agencies

Invite appropriate agencies in your area to help on the day. These could include your Civil Defence Centre or Emergency Management Office, the police, fire brigade or ambulance.

They could be invited to:

- conduct lessons earlier in the unit to show how they go about their duties in a disaster
- assist and supervise the students who are role-playing their organisation in the simulation
- demonstrate their activities to the whole school after the simulation.

One month before

Write the scenario

Choose a disaster appropriate to the area in which the school is located.

Write a scenario introduction that sets the scene. It should describe Stanville, its facilities, and the disaster that takes place (see Template 20: Stanville simulation - scenario example, page 91). This introduction will be used at the briefing to set the scene for the participants.

The scenario introduction should stop at the point that the rescue begins.

Involve parents

Consideration could be given to including parents in the simulation. Involving parents will help to encourage them to assess their own preparedness for disasters. They could be invited to:

- act as casualties
- supervise and assist the various groups during the simulation.

Assign supervisors

It is recommended that each venue or group has an adult supervisor, such as a teacher or parent. If you have visitors from outside agencies, they could supervise the students playing their role.

Supervisors assist as 'umpires' to ensure the simulation stays on course, but should resist the temptation to take over leadership!

Make the maps

Maps of the disaster area need to be produced for all participants. See the Stanville simulation - map example on Template 21, page 92.

1. Get or draw a map or plan of the site where the simulation will take place.
2. Define the boundaries of the simulation, and any areas that are out-of-bounds, on the map.
3. Nominate rooms for all the agencies in your simulation. Examples might include:
 - Civil Defence Centre (also known as a Sector Post in some parts of New Zealand)
 - Stanville public hospital
 - Police, ambulance and fire stations
 - Stanville Star newspaper and television studio
 - Stanville City Council offices
 - Government offices
 - any other facility involved in your simulation such as a registration centre for recording the details of victims and survivors.
4. Designate some other rooms or spaces as places that would be affected in the disaster, such as:

- schools
- shopping centres
- factories
- day-care centres
- housing areas.

5. Photocopy the map. You will need:

- one A4 map for every participant
- one A3 map for each agency in the simulation.

6. If the students have been introduced to mapping skills before this unit, you might consider overlaying a grid on the plan so that they can use map references.

One week before

Make the cards and forms

1. Each individual or agency being role-played needs a role card. These outline the participants' roles and provide clear instructions. Template 22: Stanville simulation - role cards for individuals, page 93 and Template 23: Stanville simulation - role cards for classes, page 94 provide some examples.
2. Make a health card to be worn by each casualty, which outlines their injuries. Leave space for the rescuers to write the treatment they are giving that person. Some ideas are shown on Template 24: Stanville simulation - health card examples, page 95.
3. If you are not using radios, you will need message forms on which participants can write messages to be carried to their recipients by runners. Template 25: Stanville simulation - message forms, page 96 provides an example.
4. If you have a Registration Centre, where the details of victims and survivors of a disaster are recorded, you will need sufficient copies of the Red Cross registration form. These are available from the New Zealand Red Cross National Office, 69 Molesworth St, Thorndon, Wellington, www.redcross.org.nz.

Assign and discuss roles

Each class (or part of a class) is assigned the role of a specific agency. Students in these agencies develop the individual roles they will play (see Template 22: Stanville simulation - role cards for individuals, page 93 and Template 23: Stanville simulation - role cards for classes, page 94 for ideas). Classes or individuals are given 45-60 minutes to discuss and plan their roles. If you have real agencies helping on the day, assign them to work with the appropriate individuals or classes.

Agencies could include:

- Civil Defence Centre/Sector Post
- Registration Centre
- First-aid/hospital
- Police
- Fire
- Ambulance
- Catering
- Casualties
- Media
- Local authority*
- Government*
- Other agencies appropriate to local area

* Suits older classes, as tasks are more theoretical than practical.

Assigning and briefing casualties

The students selected to play casualties should be able to work independently with little supervision. They could include hurt victims, panicked or shocked survivors, lost children, people looking for loved ones, helpful volunteers and so on.

Brief the group portraying public and casualties separately. Some ideas of the roles they could take could include:

- pupils at a school
- shoppers at a supermarket
- factory workers
- parents and young children at home.

Each casualty should have a health card (see Template 24: Stanville simulation - health card

example, page 95) on which the symptoms of their injuries are written. This card will be attached to their clothes on the day. If you have the resources, you might want to use make-up for injuries.

Work out with the casualties exactly where they will be positioned on the day, and how they will know the simulation is over if they are not located by rescuers.

Prepare the casualties for their role. This could be an opportunity for role play. They should find out what treatment to expect, and what to do if they don't get that treatment. For instance, someone who is unconscious, but not placed in the coma position could choke; a person who is bleeding heavily might fall into unconsciousness if it is not stopped.

Assigning and briefing the media

Students portraying the media should plan how they will go about their task during the simulation. They might decide to:

- go out into the field to interview victims and rescuers
- visit the Civil Defence Centre, local authority, emergency services or government
- record studio 'breaking news' and interviews
- make official announcements
- present public safety information about the disaster.

After the simulation, they will collate their written interviews and stories, and any video footage, into a mock newspaper or television report. This can be shared with the school and parent community.

Making name tags and room signs

Participants make name tags describing their individual roles (for example, controller, map plotter, doctor, casualty) to be worn during the simulation.

Identification signs are made for classrooms and other rooms that have been designated as agencies or areas for the simulation (for example, the Civil Defence Centre, Stanville shopping centre, and so on). These need to be put up in time for the simulation.

On the day

Briefing all participants

Just before the simulation begins, all participating students and supervisors gather together for a briefing from the staff member in charge of the simulation. Depending on the size of your simulation, this might happen in the hall or a classroom.

- Read your prepared scenario introduction to the group.
- Make sure the students know the physical boundaries of the simulation, and all areas that are out-of-bounds. For instance, you might state that all administration areas in the school are not involved in this simulation.
- State the audible method for indicating when the simulation starts and finishes (such as the school bell) and explain where students go and what to do when the simulation finishes.
- Point out that the ground scale in this simulation is 'elastic', and that although two areas in the school might be very close in real-life, for the purposes of the simulation they should imagine the distances to be much greater. Even though they can see a casualty in the adventure playground next to them, the casualty might actually be a few kilometres away.
- If you do not have radios, all messages between various teams must be written and carried by messengers. They will need message forms (see Template 24: Stanville simulation - message forms, page 95) and pens.
- Inform participants that first-aid is carried out by writing the procedure on the patient's health card. For example, wrapping in blanket, bandaging arm, placing in coma position or carrying on stretcher. Emphasise that they do not have to do any real first-aid to the person, nor really carry them in a stretcher.
- All rescue teams must only do what they are instructed to by the controller or their own management. They must report on the results of their search of an area, and await further instructions as to where to search next. Some teams (apart from their messengers) will not leave their venue at all, for example, Civil Defence Centre staff, hospital staff, management and communications centre staff from the various services.

Getting into starting positions

Everyone is sent to their 'agency' locations to wait for the start signal.

Meanwhile, the casualties are sent to their locations, where they wait until the simulation starts. This is not a game of hide-and-seek so they do not have to hide from view.

While waiting for the start signal, the students playing the controller and deputy controllers can give their first written instructions to the rescue teams. But these teams must not leave the Civil Defence Centre to start their searches until they hear the start signal. If participants have mapping skills, the controller and deputy controllers can use map references to tell rescue teams where to search. Otherwise they give map locations by name (for example, search the Stanville shopping centre).

The map plotters record the areas that have been searched on the A3 maps.

Simulation

Sound the start signal.

Rescue teams head out to their designated areas. If they locate a casualty in their area, they write their first-aid treatment on the casualty's health card. They then send a messenger with a message form to the Civil Defence Centre and await new instructions.

Other agencies play their respective parts of the operation. For example, students portraying the media go out and interview people.

All messages between teams and the Civil Defence Centre, or to any other location, must be written on a message form and carried by messengers. Students playing security staff will not allow anyone to enter the Civil Defence Centre other than messengers or authorised visitors.

Casualties are brought back to the hospital, where the staff take over their treatment by writing on the health cards. If the casualties cannot walk, the rescue teams write that they are being carried by stretcher, but the casualty walks back with them – do not allow untrained students to lift casualties in real stretchers.

Debrief all participants

Once the simulation has run its course, sound the signal to finish. All participants and casualties come together for a debriefing.

Depending on the numbers involved, this debriefing can be done as:

- the whole group in the hall or similar venue
- separate syndicates
- separate agencies
- separate classes.

Some participants could report back to the group(s) on what went well and what didn't work so well. Some of the patients and civilians could also report back on how they were rescued and treated.

Ask the participants what factors help or hinder in responding to a disaster.

Evaluating the simulation

The simulation can be evaluated in several ways:

- Teachers observe the students carrying out their roles during the exercise.
- Students work in pairs to describe their part in the exercise, and tell each other what they have learned.
- Students discuss in small groups what they and their families could do before, during and after this type of disaster.
- Students portraying media interview other students about their role in the disaster response operation.
- Students contribute articles to make a mock newspaper page or video news broadcast about the disaster.
- Students write letters of thanks to organisations involved, outlining what they have learned about that group's role in a disaster.
- If it was not possible to involve organisations in the exercise, students could still write to them and describe how they role-played that group.



Templates

This section contains all the templates referred to throughout this guide. All of these templates are also on the CD-Rom  and www.whatstheplanstan.govt.nz 

Template 1: *What If* cards

The *What if* cards need to be perforated and placed in the supplied plastic sleeves.

This template has been supplied so that you can make further copies of the cards if required.

How could you use these cards?

- Discuss each one in a group.
- Make a flowchart.
- Mime or act out in a group.
- Circle whisper, and ask for the outcome at end.
- Read out, jot down three main points.
- Speech - impromptu.
- Mime out and guess the scenario.
- Write your own 'What if?' situations.
- Make a game such as Snakes and Ladders.

Template 1: *What if* cards

Holiday 1

While holidaying at the beach you feel a strong earthquake. You notice the seashore suddenly receding.

Holiday 2

To get from your camping spot to the beach you have to cross a small river. After heavy rain the river has grown significantly.

Holiday 3

While on holiday warnings are given over the radio that a nearby volcano is erupting.

Holiday 4

You are on holiday with your family on a boat. The weather turns nasty and you are now being washed towards the rocky shore.

Holiday 5

You are in a hotel when there is a sudden low rumbling sound and the floor begins to shake.

Holiday 6

While tramping in the bush you see clouds of smoke billowing towards you.

Template 1: *What if* cards

Between home and school 1

While walking to school one morning the ground begins to shake violently.

Between home and school 2

After a major storm you notice a broken power line across the footpath.

Between home and school 3

The bus you are travelling on suddenly swerves during an earthquake. It rolls blocking the main doors. You are unhurt but you can't get out. People around you are beginning to panic.

Between home and school 4

A tsunami warning has been given. You have been advised by radio to evacuate the area. Your parents are not at home.

Between home and school 5

You are walking home from school after some very heavy rain. A deep puddle of water blocks your way.

Between home and school 6

You meet a friend after school in the park. You notice the sky getting dark and see bolts of lightning. Heavy rain begins to fall. Loud claps of thunder echo all around.

Template 1: *What if* cards

City 1

You are at the supermarket when suddenly the ground begins to shake and items start falling from the shelves.

City 2

You are on level six of a high-rise building when suddenly you hear alarm bells, and see people rushing towards the exits.

City 3

While shopping in a major city, the ground begins to shake violently and large glass window panels begin crashing to the ground.

City 4

You are watching the All Blacks playing when an announcement is made to exit the stadium.

City 5

You are in a movie theatre enjoying a movie when suddenly everything goes black. People around you start to scream.

City 6

You are in a shopping mall with your friends when alarm bells start ringing and sprinkler systems turn on.

Template 1: *What if* cards

Home 1

Your mother is in the garden.
You are watching television
when you smell gas.

Home 2

The river beside your house
has broken its banks in a
storm, and the water level is
rising.

Home 3

You are listening to the
radio when the song is
interrupted by a loud siren
noise followed by a special
message.

Home 4

A cyclone warning has been
given over your local radio
station. It is heading in your
direction.

Home 5

Your family are all asleep in
bed when you are suddenly
woken up by the noise of
furniture falling over and
pictures falling off the walls.

Home 6

It has been raining heavily all
night and all day - a flood is
threatened in your area.

Template 1: *What if* cards

Home 7

Due to an earthquake water pipes have burst in your house. Your parents are not at home and the lounge is starting to flood.

Home 8

It is evening and dark outside. The power has just gone off. You have no lights, phone, fax or computer.

Home 9

You are playing in your backyard with your brother and sister when you see smoke rising in the hills behind your house.

Country 1

While riding your bike strong winds begin to make it increasingly difficult to stay upright.

Country 2

While camping in the bush you smell and see smoke.

Country 3

You and your mates are playing in a nearby stream when you notice your skin becoming itchy and you notice a peculiar smell.

Template 1: *What if* cards

School 1

You are sitting at your desk at school when the room begins to shake violently. Windows smash and the computer monitor crashes to the floor.

School 2

The principal announces over the intercom that there has been a major chemical spillage on the road outside your school.

School 3

You are playing outside when the ground starts to shake. Younger children around you start screaming.

School 4

The school is closing early due to bad weather and a fast rising river close by. You know your parent or caregiver who usually picks you up is still at work.

School 5

You are outside when the wind suddenly strengthens and objects begin to get blown about.

School 6

You are in the classroom during bad weather. The wind is getting really strong, and suddenly a window shatters.

Template 2: Letter to parents - Introduction to unit

Dear Parent/Caregiver

Your child is working on a unit called What's the Plan Stan over the next three weeks. It is about disasters and emergencies. By the end of the unit, it is intended that all students will be able to:

- explain that disasters are natural and non-natural*
- practise keeping themselves safe from these disasters at school and home*
- identify different groups who respond to a disaster and explore their roles*
- explain how disasters affect people and communities now, and affected them in the past*
- discuss how prepared their family is for emergencies and to share this information with their classmates.*

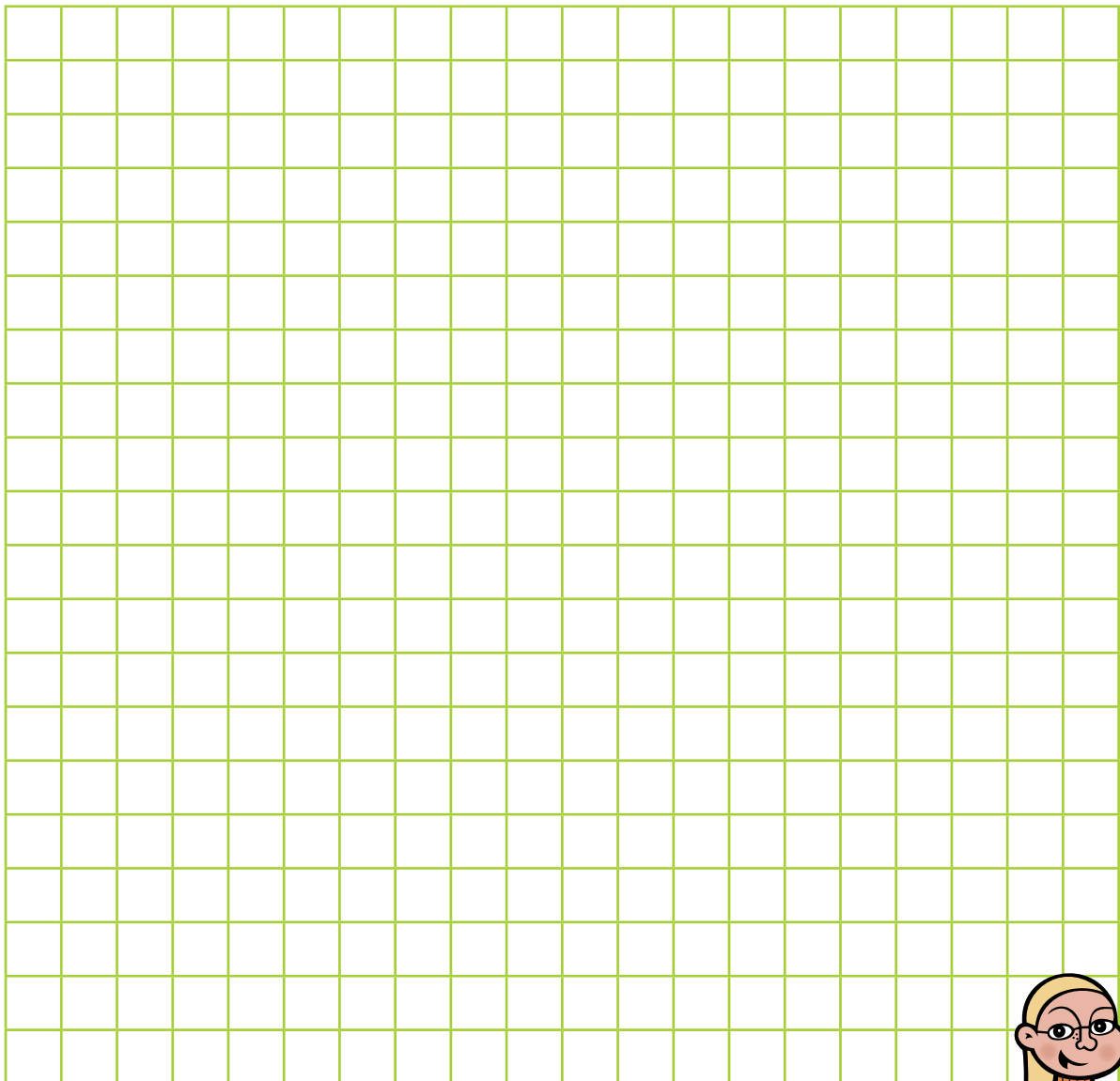
Your contribution and involvement over the next three weeks will help your child to learn as we progress through the unit. Please encourage them to talk to you about what they have learned at school. There will be some activities your child will need to complete at home that will require your involvement. For example, we'll be asking students to talk to their families about the ways in which they can prepare and practise for emergencies at home.

We'll provide you with information about these activities as they occur so that you can help. We look forward to your support over the coming weeks as we learn about disasters and emergencies and how we can all prepare for them.

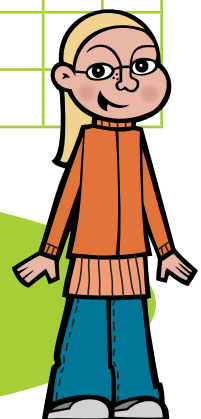
Many thanks

Template 3: Home emergency plan

1. Draw a floor plan of your home that shows all the exits like doors and windows.
2. Use symbols to help draw your plan (see examples for window and door).
3. Show safe places to take shelter during an earthquake.
4. Show where water, electricity, and/or gas mains are located.



"Remember not to turn the gas off during practice, as you'll need the gas company to come out to reconnect it."



Template 4: Survival items 'cut and stick' sheet

Cut out the items:



Pet food



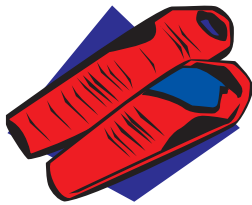
Food



Cooking equipment



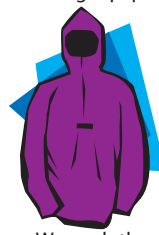
Children's things



Sleeping bags



Water



Warm clothes



Rubbish bags



Spare batteries



Medicine



Can opener



Torches



Reading glasses



Sun hat



First aid kit



Radio

Glue the items you will need to survive here:

Template 5: Emergency survival items at home

Dear Parents/Caregivers

We've asked your child to use this emergency survival items checklist to see which items they can find at home.

Please discuss this checklist with your child and encourage them to tick the items that they can find in the house. You might be able to help them to locate any items they can't find themselves.

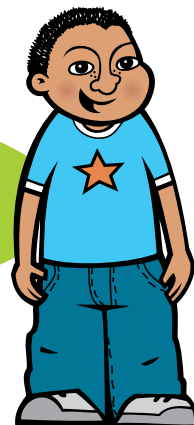
Thanks for your help!

Emergency survival checklist

Have these supplies ready or make sure everyone in your family knows where to find them in a hurry or in the dark, if there's a power cut.

- ☐ Torch(es) are in the _____
- ☐ Spare batteries are in the _____
- ☐ Transistor radio is in the _____
- ☐ Manual can opener is in the _____
- ☐ Canned or dried food are in the _____
- ☐ First-aid kit is in the _____
- ☐ Primus or BBQ to cook on is in the _____
- ☐ Stored bottled water (at least three litres per person per day) is in the _____
- ☐ Large plastic bags for an emergency toilet are in the _____

"Make sure you check and renew your water every 12 months. Be prepared, not scared!"



Template 6: Letter to parents - emergency evacuation and response plans

Dear Parents/Caregivers

As part of the What's the Plan Stan unit we are doing at school, we are talking to students about how to prepare for disasters at home as well as at school.

Please encourage your child to tell you more about the emergency evacuation and response procedures we've been practising at school recently. We would like students to find out what emergency procedures they have at home. It's a great opportunity for your family to get prepared!

Here's an activity sheet you could use as a guide to emergency procedures, which you might like to display in a place that everyone in your family can see. We look forward to hearing more about your family's emergency plans.

Many thanks

Emergency Plan

Family name and cell phone number				
Local emergency phone numbers				
Parents/Caregivers at work				
Police				
Fire				
Ambulance				
Doctor				
Other relatives				
Name	Address	Home telephone	Work telephone	Mobile
Neighbours				
Name	Address	Home telephone	Work telephone	Mobile
How will we get home from school or work (if it's safe to do so)? For example, Mum will collect Ben and Mary from school.				
_____ will _____				
_____ will _____				
_____ will _____				
If we are separated we will meet at:				
In an earthquake we will:			In an emergency when we need to evacuate the house we will:	
Date practised			Date practised	
Emergency situations we may need to leave our house			Emergency situations when we would be safer to stay indoors	
Our nearest Civil Defence Centre or Sector Post is at:				

Template 7: Feelings pictures



Template 8: Self or peer assessment chart



Achieved well



Ok



Could have done better

Complete this assessment chart with your relevant assessment criteria. Students can use the visual symbols or continuum to reflect how well they think they have achieved the set criteria.

Success criteria	Smiley face

Template 9: What might happen?

The people in our group are:

The emergency we are finding out about is:

How can this emergency happen?

What dangerous things or damage might happen at school?

What dangerous things or damage might happen between school and home?

What dangerous things or damage might happen at home?

What might happen to us or our families?

Template 10: Disaster similarities and differences

Disasters type and cause	Similarities	Differences
eg Tsunami Caused by disturbances on the ocean floor.	You need to stay calm like in other disasters. You need to move to high ground (or safety inland) like in a flood. There won't be time to issue a warning if it happens like an earthquake	It's a series of fast travelling waves unlike other disasters. You need to leave the area immediately if you are at the beach or near a river when a strong earthquake occurs.

Template 11: Report checklist

Structure

The opening statement classifies the subject of the report.	
The opening statement is followed by sentences (usually factual) that describe things such as appearance, behaviour and other aspects of the phenomenon.	
The writing has paragraphs, each focuses on a different aspect of the phenomenon.	
A general statement about the topic usually rounds off the report.	
Diagrams, illustrations or photographs are often used.	

Language

Present tense verbs are used.	
Verbs for describing and classifying (is, are, has, have, belongs to) are used.	
Active verbs are used to describe behaviours (climb, eat).	
Personal reports focus on the individual (my dog).	
Scientific or technical reports focus on classes of things (dogs).	
Descriptive language that is factual rather than imaginative (possums have prehensile tails) is used.	
Nouns and noun phrases are used rather than personal pronouns.	



**"This checklist is from the
TKI website at: [www.tki.
org.nz/r/esol/esolonline/
classroom/teach_strats/
checklists/report_e.php](http://www.tki.org.nz/r/esol/esolonline/classroom/teach_strats/checklists/report_e.php)"**

Template 12: Historic disasters

Summarise the events of a historic disaster:

What can you learn from these historic disasters and experiences?

What would you do differently?

What would you do the same?

Template 13: Writing about hazards

Paste a picture of a hazard here.

What is the hazard?

Where is this hazard?

How can we become aware or deal with this hazard?

Template 14: Health rules after disasters

Listen to your radio for advice and information on ways to help yourself and others recover from the emergency. If it has been a major event, a number of everyday services such as water, sewage and rubbish collection may no longer be functioning. To avoid a health hazard follow these simple instructions.

Water supply

Until you are told otherwise, regard all water as contaminated and do not use it until it has been boiled for several minutes.

Use bottled water. Turn off the power and water to your hot water cylinder and use water sparingly.

Bottles and cans of drink are a good source of drinking fluids and will leave more water for cooking and hygiene.

You may be able to collect rainwater from the roof if it rains. Don't collect the initial water coming off the roof as it may contain foreign matter.

Sewage disposal

If the radio announcements say the sewage system is not working don't use the toilet. It may end up in someone else's home!

Until the system is fixed, dig a deep hole in the garden for a temporary toilet. Find something for a flyproof cover to go over it and you will probably want to make a privacy screen around it. An alternative is a caravan toilet or covered bucket in the garden or shed. You will still need the hole with the flyproof cover to empty these into.

Have disinfectant and water handy for washing hands. Remember to use the water sparingly though.

Rubbish collection

It may be some time before regular rubbish collection resumes. Bury biodegradable rubbish in the garden, or store it in well sealed bags in a place where animals can't get at them. Rubbish collection sites might be arranged – listen to your radio.

Food

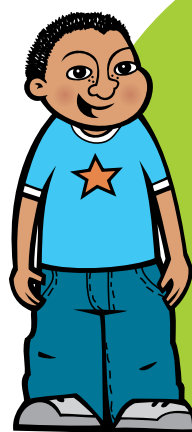
If the electricity has failed, food stored in refrigerators and freezers will eventually spoil. You can make the most of your food supplies by using them in the correct order:

- Fresh foods and food from the refrigerator should be used first but open the fridge as few times as possible.
- Food from a cabinet freezer. Cook food as soon as it starts defrosting as cooked food lasts longer than uncooked food.
- Food from a chest freezer – putting blankets over this type of freezer can help keep food colder for longer.
- Canned and packet foods should be kept until last.

Hygiene becomes very important when preparing food after an emergency. Remember to ensure that water used in preparing and cooking food has been boiled for several minutes to make it safe.

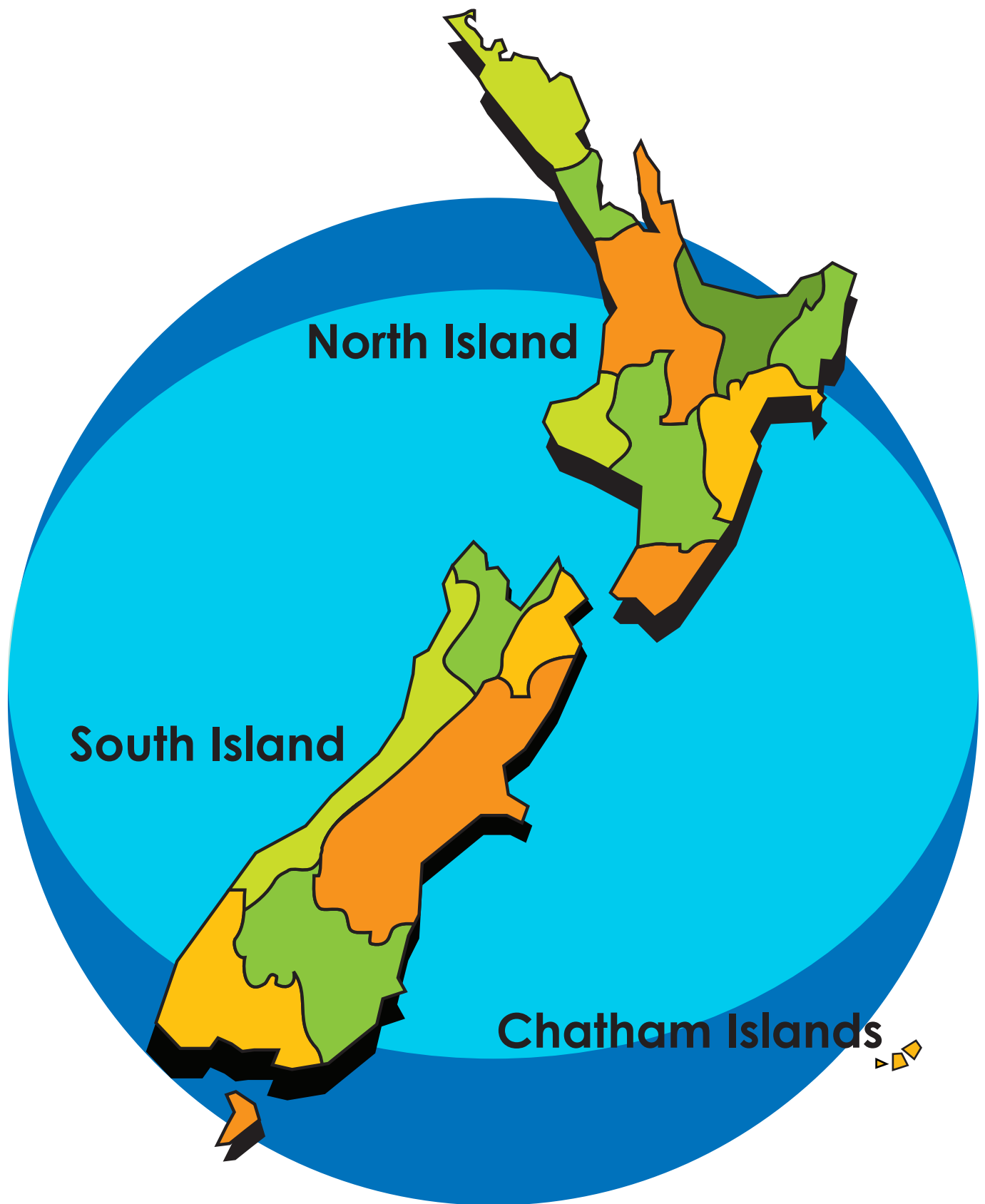
If using a barbeque or camping stove to cook food, use it outside to avoid harmful fumes in the house or accidental fire – the ambulance and fire services may be unable to respond if you have an accident.

As soon as possible after an emergency, check on the state of your garden chemicals, fuel and cleaning products in the house, garage and shed. Some of these can be dangerous to your health if spilled and mixed. If there has been a spill, use rubber gloves to handle containers and dispose of them into separate plastic bags. If fumes are present it may be best to seek help to deal with the situation.



"You can get more information about this from your local council. Links can be found at www.civildefence.govt.nz"

Template 15: Map of New Zealand



Template 16: Plus, minus and interesting (PMI) chart

Students could use this chart to help compare their thinking from their first map to the information they found through research.

Plus	Minus	Interesting
<p>For example:</p> <p>I knew where the fault-lines in NZ were located.</p>	<p>I didn't know there had been any serious floods in NZ where people had to leave their homes.</p>	<p>One of the fault-lines goes through Wellington where I live.</p>

Template 17: Identifying the effects of an emergency

The people in our group are:

The emergency we are responding to is:

How can this emergency happen?

What dangerous things or damage might happen at school or home?

What could we do to help our families and siblings?

Who else could we help and in what way?

Template 18: Hazard hunt

Potential classroom hazards	How could it affect you?	Action points

Potential school hazards	How could it affect you?	Action points

Potential home hazards	How could it affect you?	Action points

Our school recently held an exercise to test our procedures in the event of a disaster.

Could you please answer the questions below, and return this form to the school?

Many thanks

Parents/Caregivers feedback

Name _____

How many of your children are at school: _____

Were your children collected? _____

How well do you think the school evacuation exercise went?

[illegible]

What went well or did not go well? Please write any suggestions over the page.

How well do you think your own household emergency plan went?

1 2 3 4 5 6 7 8 9 10

Poor Excellent

What went well or did not go well? Please write any suggestions on a separate page.

Template 20: Stanville simulation - scenario

Stanville is a mythical small town situated somewhere in New Zealand. The 20,000 inhabitants live, work, go to school and have fun in their town, just like you.

Stanville has a central shopping area, including a new mall. The town centre is also where the main facilities are situated, such as the hospital, fire and police stations, the Civil Defence Centre and so on.

The town centre is surrounded by several suburbs. Some are residential with houses, shops and schools, and others have lots of factories and warehouses.

This morning, the locals are all going about their business as usual. Children have gone off to school, parents are at work or at home, the shopping mall is crowded, and the factories busy.

At 11.07am, there is a sudden deep rumbling sound. The ground begins to roll, telephone poles sway to and fro, and buildings shake. People stop what they are doing to drop, cover and hold. The earthquake lasts only 23 seconds, but feels like an eternity.

When the shaking stops, the inhabitants emerge dazedly and look round them. Some buildings have been damaged, especially in the town centre. Chimneys have fallen everywhere, and some houses have moved from their foundations.

The Civil Defence Centre, which has been specially designed to survive most earthquakes, swings into operation.

Today, our school (*or other site*) is Stanville and each of you has a role to play in the simulation. We are pretending that the school (*or simulation site*) is a whole town, so that means you will have to imagine the distances are much greater. Even though you might be able to see a casualty in the adventure playground next to you, the casualty could actually be in the shopping centre a few kilometres away!

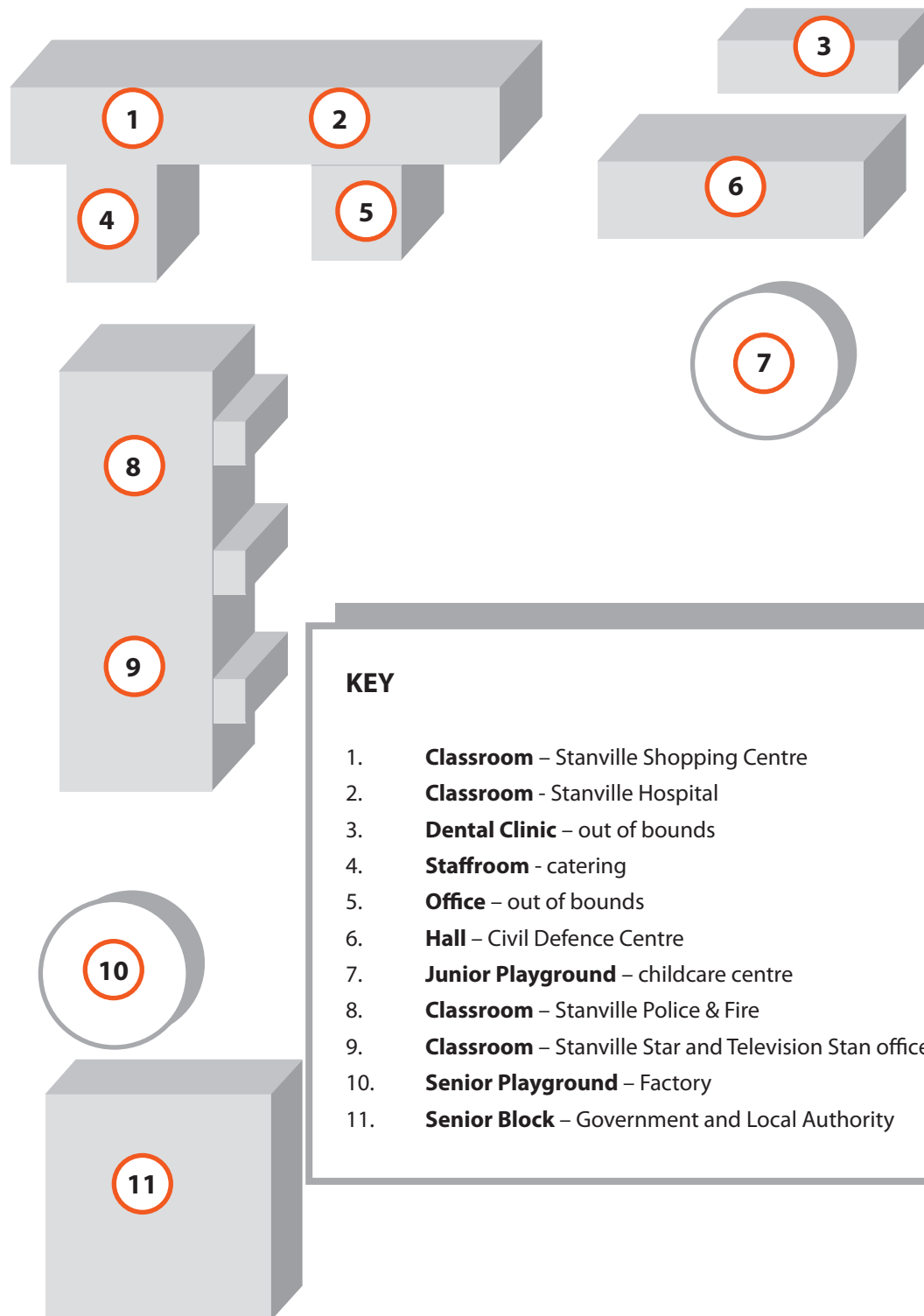
If someone requires first-aid, write what you would do on their health card. This isn't an opportunity

to practise real first-aid but to test your knowledge about what to do.

All teams must only do what the controller or their management orders them to do. You must report any casualties you find in your search area to the Civil Defence Centre, then await directions as to what to do with them, and where to search next.

The simulation will start and finish when you hear the signal. When the finish signal sounds, you must all immediately assemble at the briefing venue.

Template 21: Stanville simulation - map example



Template 22: Stanville simulation - role cards for individuals

Civil Defence Centre Controller You are in charge of the entire rescue operation. You will give directions to your rescue teams. You must not leave the Civil Defence Centre.	Civil Defence Centre Deputy Controller You help the controller to run the whole rescue operation. You must not leave the Civil Defence Centre.
Civil Defence Centre Radio Operator You stay in contact with the rescue teams and other services, by radio (if available) or written messages. You must not leave the Civil Defence Centre.	Civil Defence Centre Map Plotter You plot with coloured highlighters, the areas on the map that have and have not yet been searched, and what has been found, so that the controller can see what's happening. You must not leave the Civil Defence Centre.
Messenger You run written messages for the group you are assigned to, if no radio is available. You always wait for a written reply before returning to your group.	Registration Centre Clerk You are responsible for recording the details of every person located in the search. Use the top part of the Red Cross registration form. You must not leave the Registration Centre.
Civil Defence Centre Rescue Team Leader You are in charge of a rescue team. You may only search areas that the Civil Defence Centre has told you to search. You must send a message to the Centre/Sector Post by runner with the result of the area search, and asking for new instructions.	Civil Defence Centre Rescue Team Member You are part of a small rescue team. Your leader will tell you what area to search. You may not search any other areas until ordered to do so. You can perform first-aid on victims by writing what you are doing on their health cards.
First-aid/Hospital staff You are in charge of victims after they have been rescued. You need to treat their injuries by writing what you are doing on their health cards. You may not leave the First-Aid Post/Hospital.	First-aid/Hospital Victim Support You are responsible for helping and counselling victims of the disaster. You will be based in the First-Aid Post/Hospital.
Catering Officer You are responsible for making sure everyone (victims and rescuers) gets food and drink. Work out how much everyone can have, and then organise the supplies to be distributed.	Media You will write or film a story about the disaster. You should write notes and interview victims, rescuers and other organisations. Take photos or video footage. After the simulation, you will edit and publish your article or television story.

Template 23: Stanville simulation - role cards for classes

<p>Civil Defence Emergency Management Centre</p> <p>The nerve centre of the whole operation. All directions will be sent from here, and all information will be returned to the centre so that the controller knows exactly what is going on.</p> <ul style="list-style-type: none"> • controller • deputy controllers • radio operators • map plotters • several rescue teams • security officers • messengers 	<p>Registration Centre</p> <p>This is where the details of all people affected by the disaster are obtained. There needs to be a system to ensure Red Cross registration forms are completed for every victim and survivor.</p> <ul style="list-style-type: none"> • manager • receptionists • clerks • messengers
<p>First-Aid/Hospital</p> <p>All casualties are treated and cared for here. Treatment is done by writing on the patient's health card. Staff must not leave the First-Aid Post/Hospital.</p> <ul style="list-style-type: none"> • manager • receptionists • orderlies • nurses • doctors • victim support • messengers 	<p>Police</p> <p>The police will send an officer (with runner) to the Civil Defence Centre. The officer will work with the controller and instruct police through their own communications system to help with rescues, searches and traffic. Victims might come to the police station</p> <ul style="list-style-type: none"> • commander • communications centre • map plotters • watchhouse (front desk) • police officers • messengers
<p>Fire</p> <p>The fire service will send an officer (with runner) to the Civil Defence Centre. That officer will work with the controller, and instruct fire staff through their own communications system to help with fires, rescues and searches.</p> <ul style="list-style-type: none"> • commander • communications centre • map plotters • fire crews • messengers 	<p>Ambulance</p> <p>The ambulance team will send an officer (with runner) to the Civil Defence Centre. That officer will work with the controller, and instruct ambulance staff through their own communications system to help with first-aid and rescues.</p> <ul style="list-style-type: none"> • commander • communications centre • map plotters • ambulance crews • messengers
<p>Catering</p> <p>The caterers are responsible for making sure that everyone (victims and rescuers) gets food and drink. They work out how much everyone can have, and then organise the supplies for distribution.</p> <ul style="list-style-type: none"> • manager • cooks • distributors • messengers 	<p>Media</p> <p>The media are responsible for writing a newspaper article or filming a TV news report about the disaster. They should write notes and interview victims, rescuers and other organisations, and take photos or video footage. After the simulation, they will be given time to edit and publish an article or television story.</p> <ul style="list-style-type: none"> • manager • print journalists • TV presenters (school video camera) • studio camera • TV journalists • photographers (school camera)
<p>Local authority</p> <p>The local authority is responsible for mass transport arrangements, construction equipment, and public health issues and so on. It will have a representative at the Civil Defence Centre.</p> <ul style="list-style-type: none"> • mayor • councillors • town clerk/city manager • public works staff • transport staff • building inspectors • public health officers • messengers 	<p>Government</p> <p>The government can declare an emergency, release military or police to assist, assign resources such as helicopters, and speak to the media. They will want reports from the ground, and might want to make official visits.</p> <ul style="list-style-type: none"> • Prime Minister • Minister of Civil Defence • Minister of Police • Minister of Defence • ministry staff • public relations staff • military staff • messengers

Template 24: Stanville simulation - health card examples

<p>I am unconscious. I have no other injuries.</p> <p>Treatment:</p>	<p>I have a broken arm.</p> <p>Treatment:</p>
<p>I have a broken leg. I cannot walk.</p> <p>Treatment:</p>	<p>I am hysterical. I have no other injuries.</p> <p>Treatment:</p>
<p>I have no injuries, but I am sick with worry because my children were at Stanville Kindergarten when the disaster struck.</p> <p>Treatment:</p>	<p>I have blood coming from a wound on my head. I am conscious and can walk.</p> <p>Treatment:</p>
<p>I am shocked, and look very pale and confused.</p> <p>Treatment:</p>	<p>I have lost my parents. I am very upset, but not hurt.</p> <p>Treatment:</p>

Template 25: Stanville simulation - message forms

Message to: From: Message text: (Reply on back if necessary)	Message to: From: Message text: (Reply on back if necessary)
Message to: From: Message text: (Reply on back if necessary)	Message to: From: Message text: (Reply on back if necessary)
Message to: From: Message text: (Reply on back if necessary)	Message to: From: Message text: (Reply on back if necessary)
Message to: From: Message text: (Reply on back if necessary)	Message to: From: Message text: (Reply on back if necessary)

Template 26: Emergency drills and testing

Classroom number _____

Teacher _____

Month	Date	Fire drill signed by	Other appropriate drill (eg tsunami) signed by
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

Template 27: Ministry of Education toolkit 5D

Assisting person/s with disabilities during an emergency

Assistance register for people with disabilities

Date	Likely location of people requiring assistance	Person requiring assistance	Person assigned to assist

Register of staff members assigned to help person with disability visiting the school

Staff member	Date appointed	Person/s assigned to assist

Date last reviewed: _____ Date to be next reviewed: _____

Other Resources

Civil Defence Emergency Management resources

Some city and district councils are helping schools to become more aware of civil defence emergency management, and provide resources to help equip children with the necessary knowledge and skills to respond to a disaster.

The following are some resources that may already be in your school:

- Auckland City Council n.d., *Emergency Planning Guidelines – Schools and Early Childhood Centres*, Auckland.
- Canterbury Regional Civil Defence 2004, *Emergency Preparedness Policy Guidelines for Christchurch and Banks Peninsula Schools*, Christchurch.
- Hawkes Bay Regional Council Civil Defence Management and Environmental Education 2001, *Action-Reaction – NZ East Coast Hazard Education Kit*.
- Johnston, D M and Pearse, L J (eds) 1999, *Natural Hazards in Hawke's Bay*, Hawke's Bay Regional Council.
- Ministry of Civil Defence n.d., *Be a Survivor*, Level 2-4 Education Resource.
- Ministry of Civil Defence n.d., *Civil Defence Education Kit*.
- Ministry of Civil Defence n.d., *How to Survive Emergency Procedures*.
- Taranaki Regional Council n.d., *Civil Defence Resource Kit for Primary Schools*.
- Upper Hutt City Council n.d., *Emergency Planning Guide for Schools*.
- Wellington City Council Emergency Management Office 2003, *Are you Prepared for an Emergency - a resource to support Levels 2 and 3*, Learning Media, Wellington.
- Wellington City Council Emergency Management Office n.d., *Be Ready for an Emergency*, Wellington.
- Wellington City Council Emergency Management Office 1998, *Post Disaster Information Earthquake, Flooding*, Wellington.

Non-fiction resources

- Andrews, P 1986, *Tarawera and the terraces*, Bibliophil and the Buried Village, Rotorua.
- Ansell, R 1996, *Caught in the Crunch: earthquakes and volcanoes in New Zealand*, Harper Collins, Auckland.
- Boon, K 1990, *The Napier Earthquake*, Events in New Zealand, Nelson Price Milburn.
- Boon, K 1990, *The Influenza Epidemic*, Events in New Zealand, Nelson Price Milburn.
- Boon, K 1990, *The Tangwai Rail Disaster*, Events in New Zealand, Nelson Price Milburn.
- Boon, K 1990, *The Wellington Flood*, Events in New Zealand, Nelson Price Milburn.
- Boon, K 1990, *The White Island Eruption*, Events in New Zealand, Nelson Price Milburn.
- Conly, G 1985, *Tarawera: the destruction of the Pink and White Terraces*, Wellington.
- Ganeri, A 2000, *Earth-Shattering Earthquakes*, Horrible Geography, Scholastic Children's Books, UK.
- Ganeri, A 1999, *Odious Oceans*, Horrible Geography, Scholastic Children's Books, UK.
- Ganeri, A 2000, *Raging Rivers*, Horrible Geography, Scholastic Children's Books, UK.
- Ganeri, A 1999, *Violent Volcanoes*, Horrible Geography, Scholastic Children's Books, UK.
- Grayland, E 1959, *New Zealand Disasters*, Reed, Wellington.
- Grayland, E 1978, *More New Zealand Disasters*, Reed, Wellington.
- Herman, G 2003, *Earthquake, The Magic School Bus to the Rescue*, Scholastic, New York, USA.
- Hicks, G & Campbell, H (eds) 1999, *Awesome Forces: The Natural Hazards that Threaten New Zealand*, Te Papa Press, Wellington.

- Lind, C 1987, *Southland's Black Friday: the January 1984 flood*, Invercargill, Craigs, Invercargill.
- McCloy, N 2004, *New Zealand Disasters: Earthquakes, Eruptions, Wrecks and Fires - events that rocked the nation*, Whitcoulls, Auckland.
- Morris, B 1987, *New Zealand's Darkest Days*, Wilson and Horton, Auckland.
- Rogers, A 1996, *New Zealand Tragedies: Earthquakes*, Grantham House, Wellington.

Novels

These novels are suitable for teacher reading, shared reading or novel study.

- Beames, M 1999, *Storm*, Scholastic New Zealand, Auckland. When a storm strikes and her dad goes missing, Erin has to take charge and find him.
- Buck, P 1986 reprint, *The Big Wave*, Harper Collins, USA. The story of a Japanese boy who must face life after escaping the tsunami which destroys his village.
- Dunlop, B 1984, *Earthquake Town*, Dunlop, Hodder and Stoughton, Auckland. An earthquake hits a coastal town. The children attempt to make their way home through the chaos.
- Hall, M 1989, *After the Earthquake*, Ashton Scholastic, Auckland. An earthquake strikes the West Coast of New Zealand.
- Hill, D 2003, *My Story – Journey to Tangiwai*. The diary of Peter Cotterill, Scholastic, Auckland. When Peter Cotterill begins his diary in 1953, little does he realise that something is happening elsewhere in New Zealand that is going to have a huge impact on his life.
- Hill, D 2003, *No Safe Harbour*, Mallinson Rendel, Wellington. Two children travel on the ferry *Wahine* during Cyclone Giselle in 1968
- Hill, D 2001, *The Sleeper Wakes*, Puffin, Auckland. Mount Taranaki erupts after 250 years.
- Hunter, E 1999, *The Quake*, Scholastic, Auckland. Hannah has to care for her siblings after an earthquake.
- Morpugo, M 1999, *Kensuke's Kingdom*, Heinemann, UK. A storm leads to a boy being

washed up on an island in the Pacific where he has to survive on his own.

- Paulsen, G 1992, *The Voyage of the Frog*, Pan Macmillan Children's Books, UK. A boy is caught on his boat in a fierce storm and must survive many days on his own.
- Thorburn, J 2002, *Stranded*, Mallinson Rendel, Wellington. A dinghy is driven by a storm on to a deserted shoreline – a story of resourcefulness and endurance.

Junior school readers

<i>The Storm</i>	Sunshine Level 1	Red 1
<i>The Storm</i>	The Story Box	Red 1
<i>Did You Say Fire?</i>	Ready to Read	Yellow 2
<i>Fire Fire</i>	New PM Story Book	Yellow 3/Blue 1
<i>The Doctor</i>	PM Library Non-Fiction	Blue 3/ Green 1
<i>The Teacher</i>	PM Library Non-Fiction	Blue 3/ Green 1
<i>Our Parents</i>	PM Library Non-Fiction	Blue 3/ Green 1
<i>The Wild Wet Wellington Wind</i>	Ready to Read	Green 1
<i>The Flood</i>	New PM Story Books	Green 3
<i>After The Flood</i>	New PM Story Books	Green 3
<i>Is That An Earthquake?</i>	Ready to Read	Orange
<i>When The Volcano Erupted</i>	Pm Library	Big Blue 1
<i>The Dog Who Chased Lightning</i>	Journal 3	Purple
<i>Fire Fire</i>	Journal 10	Purple 2
<i>Rumbling In The Chimney Poems</i>	Literacy Links Plus	Multi Levelled
<i>Forces Of Nature</i>	First Explorer	Silver

Picture books

- Leeson, C 2003, *Molly and the Storm*, Tiger Tales, Wilton, USA. Molly and the mice are caught in a storm. The other animals offer shelter, but their nests are too high, too small or too crowded. At last the mice find a safe place, but Molly can't settle as she is worried about her friends.
- Riley, K 2004, *Cow Power*, Random House, New Zealand. A true story about Cow Number 569, who rescued her farmer during the devastating floods in the Manawatu in early 2004.
- Rowe, R 2000, *Isabel's Upside-Down Day*, Reed Children's Books, Auckland. Isabel is at a new school when the Napier earthquake strikes. Isabel and her family have to make major adjustments to survive.

National Library of New Zealand

The National Library of New Zealand's Curriculum Information Service makes free loans of curriculum-related resources to New Zealand primary and secondary school teachers, and to home schoolers, to support student learning. They provide skilled reference assistance when selecting resources, and database searches that suit your needs.

www.natlib.govt.nz/en/services/3request.html

Other useful National Library of New Zealand online resources include:

- Catalogue nlnzcat.natlib.govt.nz
- Images timeframes.natlib.govt.nz
- Newspapers paperspast.natlib.govt.nz
- Art and music discover.natlib.govt.nz
- Te Puna web directory webdirectory.natlib.govt.nz

Websites

The Ministry of Civil Defence & Emergency Management's website: www.civildefence.govt.nz
This site offers links to your nearest local council and related agencies.

- The Earthquake Commission's website features advice for being prepared for earthquakes: www.eq-iq.org.nz/eq-intro.aspx
- The background facts on many New Zealand disasters can be found at the Christchurch City Libraries' website: www.library.christchurch.org.nz/Childrens/NZDisasters/
- Although aimed at secondary schools, there is a wealth of useful information on this website: www.quaketrackers.org.nz
- Te Papa's Awesome Forces online learning resource: www.tepapa.govt.nz/TePapa/English/Learning/OnlineResources/AwesomeForces/
- Geological and Nuclear Science's special website for kids covers New Zealand earthquakes and volcanoes: www.gns.cri.nz/kids/index.html
- The National Geographic website allows you to build your own volcano or start an earthquake: www.nationalgeographic.com/forcesofnature
- How Stuff Works tells you how earthquakes, volcanoes, storms, wildfires and floods occur: <http://science.howstuffworks.com>

School Journal stories

Title	Author	Description	Issue	Guided reading level
<i>The Abbotsford Slip</i>	Colin Emslie	Article: An eyewitness, who was nine at the time, remembers how scared she was when her house slid away in the night.	1996 Pt3, No. 1	8.5 - 9.5
<i>The Big One</i>	Keith Tonkin	Story: In Chile, a huge earthquake has caused devastation. The next day and 10,000km away in Redcliffs, Christchurch, the school must be evacuated. No one pushes or fights as they make their way to high ground. A tsunami is coming.	1999 Pt 3, No. 2	9.5 - 10.5
<i>Escape from the Wahine</i>	Kathy White	Article: Eleven-year-old Ryan Poole recorded an oral history interview with his grandfather Graham about the <i>Wahine</i> ; one of New Zealand's worst-ever disasters. This report is based on that interview. Graham shares his painful memories of being one of the passengers on the <i>Wahine</i> on the fateful day in 1968 when the ship hit Barrett's Reef, sank and 51 passengers died.	2002 Pt 4, No. 3	9.5 - 10.5
<i>Flood</i>	Sonny Mulheron	Article: This article's sequential account of the Paekakariki flood emergency is based on the experiences of Ama and her mother, who have to evacuate their home at the height of the flooding. Additional safety information is provided at the end of the article.	2004 Pt 2, No. 2	8.5 - 9.5
<i>Waiohine Flood</i>	Alice Robertson	Poem: A taniwha leaps in the roaring, muddy water.	2003 Pt 2, No. 1	
<i>111 Emergency</i>	Pat Quinn	Article: Find out what happens when you dial 111.	1992 Pt 3, No. 2	9.5 - 10.5
<i>A Bit of a Blow</i>	David Hill	Article: A tornado comes in the night to Taranaki. It only lasts five minutes, but does enormous damage.	1991 Pt 2, No. 1	9 - 10
<i>Earthquake</i>	Jan Grainger	Story: Adam and his mother wonder why Skip the dog is running around and barking, then howling under the table, until they hear a loud rumble, and the whole house starts to shake	1992 JJ No. 8	<8
<i>The Body Run</i>	Amanda Bowes	Article: Amanda Bowes was working on a sheep farm in North Canterbury at the time of the disastrous snow storm that struck during the 1992 lambing season. She describes the aftermath.	1993 Pt 4, No. 3	10 - 12
<i>Christmas after the Cyclone</i>	Nydia Aloaina	Story: Christmas 1991 was a sad one for the people of Western Samoa. It was only three weeks after Cyclone Val had struck, causing a great deal of damage.	1994 Young Persons Writing	

(details from School Journal Search)

Emergency Management Offices

Emergency Management offices can be contacted through your local council. You can find a direct link to council websites by going to www.civildefence.govt.nz and using the 'Locate the nearest council' section.

Northland

Northland Regional Council, 36 Water Street,
Private Bag 9021, Whangarei 0120,
Phone: (09) 438-4639, Fax: (09) 438-0012

Far North District Council, Memorial Avenue,
P O Box 752, Kaikohe 0400, Phone: (09) 401-2101,
Fax: (09) 401-2137

Kaipara District Council, 42 Hokianga Road,
Private Bag 1001, Dargaville 0300,
Phone: (09) 439-7059, Fax: (09) 439-6756

Whangarei District Council, Rust Avenue,
Private Bag 9023, Whangarei 0120,
Phone: (09) 430 4200, Fax: (09) 438-7632

Auckland Regional Council, 21 Pitt Street,
Private Bag 92012, Auckland 1032,
Phone: (09) 366-2000, Fax: (09) 373-4907

Auckland City Council, 1 Greys Avenue,
Private Bag 92-516, Wellesley Street, Auckland
1036, Phone: (09) 379-2021, Fax: (09) 307-7579

Franklin District Council, 82 Manukau Road,
Private Bag 5, Pukekohe 1800,
Phone: (09) 237-1300, Fax: (09) 237-1301

Manukau City Council, 31-33 Wiri Station Road,
Private Bag 76917, Manukau City 1730,
Phone: (09) 262-8915, Fax: (09) 262-5151

North Shore City Council, 1 The Strand,
Private Bag 93500, Takapuna 1332,
Phone: (09) 478-9696, Fax: (09) 478 3233

Papakura District Council, 35 Coles Crescent,
Private Bag 7, Papakura 1730, Phone: (09) 299-8870,
Fax: (09) 298-1906

Rodney District Council, Centreway Road,
Private Bag 500, Orewa 1461, Phone: (09) 426-5169,
Fax: (09) 426-7280

Waitakere City Council, 6 Waipareira Avenue,
Private Bag 93109, Waitakere 1231, Phone: (09)
837-0790, Fax: (09) 837-4076

Waikato

Waikato Regional Council, 401 Grey Street,
P O Box 4010, Hamilton East 2032,
Phone: (07) 856-7184, Fax: (07) 856-0551

Hamilton City Council, Garden Place,
Private Bag 3010, Hamilton 2020,
Phone: (07) 838- 6699, Fax: (07) 838-6599

Otorohanga District Council, Maniapoto Street,
P O Box 11, Otorohanga 2564,
Phone: (07) 873-8199, Fax: (07) 873-7991

South Waikato District Council, Torphin Crescent,
Private Bag, Tokoroa 2392, Phone: (07) 885 0778,
Fax: (07) 886-1719

Taupo District Council, 72 Lake Terrace,
Private Bag 2005, Taupo 2730,
Phone: (07) 376-0803, Fax: (07) 376-0619

Thames-Coromandel District Council, 515
Mackay Street, Private Bag 1001, Thames,
Phone: (07) 868-6025, Fax: (07) 868-9586

Waipa District Council, 101 Bank Street,
Private Bag 2402, Te Awamutu 2400, Phone: (07)
872 0030, Fax: (07) 871-4061

Waikato District Council, 15 Galileo Street,
Private Bag 544, Ngaruawahia 2171, Phone: (07)
824-8633, Fax: (07) 824-8091

Waitomo District Council, Queen Street,
P O Box 404, Te Kuiti 2500, Phone: (07) 878-8801,
Fax: (07) 878-7771

Bay of Plenty

Bay Of Plenty Regional Council, Quay Street,
P O Box 364, Whakatane 3080, Phone: 0800 368
267, Fax: 0800 368 329

Kawerau District Council, Ranfurly Court,
Private Bag, Kawerau 3083, Phone: (07) 323-4123,
Fax: (07) 323-8072

Opotiki District Council, 108 St. John Street,
P O Box 44, Opotiki 3092, Phone: (07) 315-6167,
Fax: (07) 315-7050

Rotorua District Council, 061 Haupapa Street,
Private Bag RO 3029, Rotorua 3220, Phone: (07)
348-4199, Fax: (07) 346-3143

Tauranga District Council, Willow Street,
Private Bag, Tauranga, Phone: (07) 577 7000,
Fax: (07) 577 7193

Western Bay Of Plenty District Council, Barks
Corner, Greerton, Private Bag 12-803, Tauranga
3020, Phone: (07) 571-8008, Fax: (07) 541-2168

Whakatane District Council, Commerce Street,
Private Bag 1002, Whakatane 3080,
Phone: (07) 306-0500, Fax: (07) 307-0718

Gisborne

Gisborne District Council, Fitzherbert Street,
P O Box 747, Gisborne 3815, Phone: (06) 867-2049,
Fax: (06) 867-2884

Taranaki

Taranaki Regional Council, 47 Cloten Road,
Private Bag 713, Stratford 4700,
Phone: (06) 765-7127, Fax: (06) 765-5097

Emergency Management Office, 45 Robe Street,
New Plymouth 4601, Phone: (06) 758-1110,
Freephone: (0800) 736-222, Fax: (06) 757-8019

New Plymouth District Council, Liardet Street,
Private Bag 2025, New Plymouth 4620,
Phone: (06) 759-6060, Fax: (06) 759-6062

South Taranaki District Council, Albion Street,
Private Bag 902, Hawera 4800,
Phone: (06) 278-8010, Fax: (06) 278-8757

Stratford District Council, Miranda Street,
P O Box 320, Stratford 4700, Phone: (06) 765-6099,
Fax: (06) 765-7500

Hawkes Bay

Hawkes Bay Regional Council, 102 Vautier Street,
Private Bag 6006, Napier 4020,
Phone: (06) 835-9200, Fax: (06) 835-3601

Napier City Council, Private Bag 6010, Napier
4020, Phone: (06) 835-7579, Fax: (06) 835-7574

Central Hawkes Bay District Council, P O Box
127, Waipawa, Ph: (06) 857-8060, Fax: (06) 857-7179

Hastings District Council, Lyndon Road east,
Private Bag 9002, Hastings 4220,
Phone: (06) 878-0500, Fax: (06) 878-0581

Taupo District Council, 72 Lake Terrace,
Private Bag 2005, Taupo 2730,
Phone: (07) 377-9899, Fax: (07) 378-0118

Wairoa District Council, Queen Street, P O Box 54,
Wairoa 4192, Ph: (06) 838-7309, Fax: (06) 838-8874

Manawatu-Wanganui

Manawatu / Wanganui Regional Council
(Horizons Regional Council), 11 - 15 Victoria
Avenue, Private Bag 11025, Palmerston North 5320,
Phone: (06) 952-2800, Fax: (06) 952-2914

Palmerston North City Council, The Square,
Private Bag 11034, Palmerston North 5320,
Phone: (06) 356-8199, Fax: (06) 355-2262

Horowhenua District Council, 13 Bath Street,
Private Bag 4003, Levin 5500, Phone: (06) 949 4949
(24 hrs), Fax: (06) 368-7110

Manawatu District Council, 135 Manchester
Street, Private Bag 10001, Feilding 5600,
Phone: (06) 323-0829, Fax: (06) 323-0822

Rangitikei District Council, High Street,
Private Bag 1102, Marton 5460,
Phone: (06) 327-8174, Fax: (06) 327-6970

Ruapehu District Council, Huia Street,
Private Bag 1001, Taumarunui 2600,
Phone: (07) 895-8188, Fax: (07) 895-3256

Tararua District Council, 26 Gordon Street,
P O Box 115, Dannevirke 5491,
Phone: (06) 374-4080, Fax: (06) 374-4137

Wanganui District Council, 101 Guyton Street,
P O Box 637, Wanganui 5015,
Phone: (06) 349- 0515, Fax: (06) 349-0000

Wellington

Wellington Regional Council, 142 - 146 Wakefield Street, P O Box 11646, Wellington 6034,
Phone: (04) 384-5708, Fax: (04) 385-9855

Wellington City Council, Emergency Management Office, 2 Turnbull Street, Thorndon
P O Box 2199, Wellington 6015,
Phone: (04) 460-0650, Fax: (04) 473-7982

Hutt City Council, 30 Laings Road, Private Bag 31912, Lower Hutt 6320, Phone: (04) 570-6666,
Fax: (04) 566-5493

Porirua City Council, Cobham Court,
P O Box 50-218, Porirua 6215,
Phone: (04) 237-5089, Fax: (04) 237-6384

Upper Hutt City Council, 838 - 842 Fergusson Drive,
Private Bag 907, Upper Hutt 6420,
Phone: (04) 527-2169, Fax: (04) 528-2652

Carterton District Council, Holloway Street,
P O Box 9, Carterton 5951, Phone: (06) 379-6626,
Fax: (06) 379-7832

Kapiti Coast District Council, 175 Rimu Road,
Private Bag 601, Paraparaumu 6450,
Phone: (04) 298-5139, Fax: (04) 297-2563

Masterton District Council, 64 Chapel Street,
P O Box 44, Masterton 5915, Phone: (06) 378-9666,
Fax: (06) 378-8400

South Wairarapa District Council, Kitchener Street,
P O Box 6, Martinborough 5954,
Phone: (06) 306-9611, Fax: (06) 306-9373

Nelson City Council, 110 Trafalgar Street,
P O Box 645, Nelson 7015, Phone: (03) 546-0200,
Fax: (03) 546-0239

Marlborough

Marlborough District Council, Seymour Square,
P O Box 443, Blenheim 7315, Phone: (03) 578-7039,
Fax: (03) 578-7039

West Coast

West Coast Regional Council, 153 Tainui Street,
P O Box 366, Greymouth 7801,
Phone: (03) 768-0466, Fax: (03) 768-7466

Buller District Council, Brougham Street,
P O Box 21, Westport 7615, Phone: (03) 788-9111,
Fax: (03) 789-7233

Grey District Council, 105 Tainui Street,
P O 382, Greymouth 7801, Phone: (03) 768-1700,
Fax: (03) 768-1703

Westland District Council, 36 Weld Street,
Private Bag 704, Hokitika 7900,
Phone: (03) 755-8321, Fax: (03) 755-8026

Canterbury

Environment Canterbury, 58 Kilmore Street,
P O Box 345, Christchurch 8015,
Phone: (03) 366-2359, Fax: (03) 366-9960

Christchurch City Council, 163 - 173 Tuam Street,
P O Box 237, Christchurch 8015,
Phone: (03) 379-1660, Fax: (03) 371-1786

Ashburton District Council, 5 Baring Square West,
P O Box 94, Ashburton 8300, Phone: (03) 308-5139,
Fax: (03) 308-1836

Banks Peninsula District Council, Norwich Quay,
P O Box 4, Lyttleton 8033, Phone: (03) 328-8065,
Fax: (03) 328-8283

Hurunui District Council, Carters Road SH1,
P O Box 13, Amberley 8251, Phone: (03) 314-8816,
Fax: (03) 314-9181

Kaikoura District Council, 34 Esplanade,
P O Box 6, Kaikoura 8280, Phone: (03) 319-5026,
Fax: (03) 319-5308

Mackenzie District Council, Postal Address:, Main Street, P O Box 52, Fairlie 8771, Phone: (03) 685-8514, Fax: (03) 685-8533

Selwyn District Council, High Street,
Private Bag 1, Leeston 8151, Phone: (03) 324-8080,
Fax: (03) 324-3531

Timaru District Council, 2 King George Place,
P O Box 522, Timaru, Phone: (03) 684-8199, Fax: (03) 684-2209

Waimakariri District Council, 215 High Street,
Private Bag 1005, Rangiora 8254, Phone: (03) 313-6136, Fax: (03) 313-4432

Waimate District Council, Queen Street,
P O Box 122, Waimate 8791, Phone: (03) 689-8079,
Fax: (03) 689-8075

Waitaki District Council, 20 Thames Street,
Private Bag 50058, Oamaru 8920,
Phone: (03) 434-8060, Fax: (03) 434-8442

Otago

Otago Regional Council, 70 Stafford Street,
P O Box 1954, Dunedin 9020, Phone: (03) 474-0827,
Fax: (03) 479-0015

Dunedin City Council, P O Box 5045, Dunedin
9031, Phone: (03) 474-3111, Fax: (03) 477-7997

Central Otago District Council, 1 Dunorling
Street, P O Box 122, Alexandra 9181,
Phone: (03) 448-6979, Fax: (03) 448-9512

Clutha District Council, 52 Wilson Road,
P O Box 25, Balclutha 9200, Phone: (03) 418-1350,
Fax: (03) 418-3185

Queenstown / Lakes District Council, 10 Gorge
Street, Private Bag 50072, Queenstown 9197,
Phone: (03) 442-7333, Fax: (03) 442-7334

Waitaki District Council, 20 Thames Street,
Private Bag 50058, Oamaru 8920,
Phone: (03) 434-1644, Fax: (03) 434-9701

Southland

Environment Southland, Corner Price Street &
North Road, Private Bag 90116, Invercargill 9520,
Phone: (03) 211-5225, Fax: (03) 211-5252

Invercargill City Council, 101 Esk Street,
Private Bag 90104, Invercargill 9520,
Phone: (03) 211-1777, Fax: (03) 211-1433

Gore District Council, Civic Drive, P O Box 8, Gore,
Phone: (03) 208-9080, Fax: (03) 208-9087

Southland District Council, 15 Forth Street,
P O Box 903, Invercargill 9515,
Phone: (03) 218-7259, Fax: (03) 218-9460

Chatham Islands

Chatham Islands Council, PO Box 24, Chatham
Islands, Phone: (03) 305-0033, Fax: (03) 305-0044

Glossary

Aftershock	Shake or tremor that can occur after an earthquake and cause damage
Ash	Fine dust from inside a volcano
Casualty/casualties	People killed, injured, sick, missing or homeless after a disaster
CDEM	Civil Defence Emergency Management
Civil defence	System of measures used by the government to protect civilians in times of war, disaster and major emergencies
Cyclone	Very strong rotating winds with sustained wind-speed of over 120kph (see hurricane and typhoon)
Disaster	Event that causes significant loss or damage, and that overwhelms the capability of the community to handle it
Earthquake	Violent movement of part of the earth's crust
Emergency	Situation that can cause loss of life or injury and cannot be contained by the emergency services
Emergency management	Range of measures to handle risks before, during and after an emergency or disaster
Evacuate	Move out of a dangerous place
Fault line	Break in layers of rock, where the earth shifts and moves
Flood	Overflow of water
Hazard	Source of risk or danger
Hurricane	Word for cyclone in the west atlantic and east pacific
Lava	Flowing, hardened or molten rock from a volcano
Magma	Molten rock before it erupts from a volcano
Magnitude	Size and strength of an earthquake
MCDEM	Ministry Of Civil Defence and Emergency Management
Mercalli scale	Measure of an earthquake's strength based on effects on people and structures
Natural disaster	Disaster caused by nature
Non-natural disaster	Disaster caused by human activity
Richter scale	Measure of the energy released by an earthquake
Storm	Strong winds, rain or snow
Tsunami	A series of fast-travelling waves caused by a disturbance in the sea or on the sea-floor
Typhoon	Word used for cyclone in the western pacific
Volcano	Mountain with a vent through which lava, gas and debris is forced