September 15-16, 2010

National Summit on Youth Preparedness

FEMA

American Red Cross

Institute for Health and Social Science Research (IHSSR)

Community Resilience to Disasters: Opening to National Summit on Youth Preparedness

Kevin Ronan

CQUniversity AUSTRALIA

Outline

Setting the scene
-Disasters growing worldwide

Children, youth, and families in disasters
-vulnerability
-community motivational reservoir

Prevention & Youth Preparedness
-Rationale
-What we know
-What we don’t know

Setting the Scene

Disasters are growing worldwide

- UN projects two fold increase in risk for a "worst case flood" by 2050
- Reasons cited
  - Population growth in hazard prone areas
  - Greater, more advanced infrastructure and economies
  - Other reasons

Setting the Scene

Disasters are growing worldwide

- Recent events
  - Pakistan floods
  - Sumatran volcano
  - Victorian floods
  - Christchurch earthquake

Child & Family Vulnerability in Disasters

Children are a vulnerable group

- After disasters
  - Including more benign events
    - Mount Ruapehu eruption 1995
- Before disasters
  - Disasters as major fear in childhood

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Prevention as the Best Form of Cure

Our research focus in New Zealand, US, Australia emphasises helping and evaluating whether children, families, schools, and communities can become resilient to the effects of a disaster

- since 1996
- including in Christchurch

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Community Preparedness: Overall Findings

- Low levels of community preparedness

- Including in high hazard areas

- How do we increase preparedness and what does it require?

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Preparedness First Requires Knowledge and Skills

- Relearned and added to over time
- Stamped in through interactive discussions and “doing”

Preparedness Requires Knowledge and Skills

- But preparedness is also about motivation
- Change =

Skills/knowledge X

motivation

Preparedness Requires Motivation

- Motivation = emotional element

- Emotions that matter here
  - "Hazard concern"
  - Positive expectancy and sense of efficacy
    - Feeling "challenged" versus "threatened
    - Hazards as "problems to be solved" now & in the future

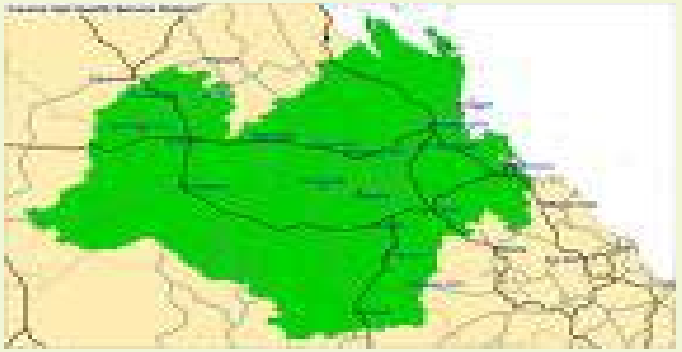
Preparedness Requires Motivation

- But preparedness tends to be low in most communities

- A main question then is are communities motivated to prepare for hazardous events and disasters?

Are Communities Motivated to Prepare?

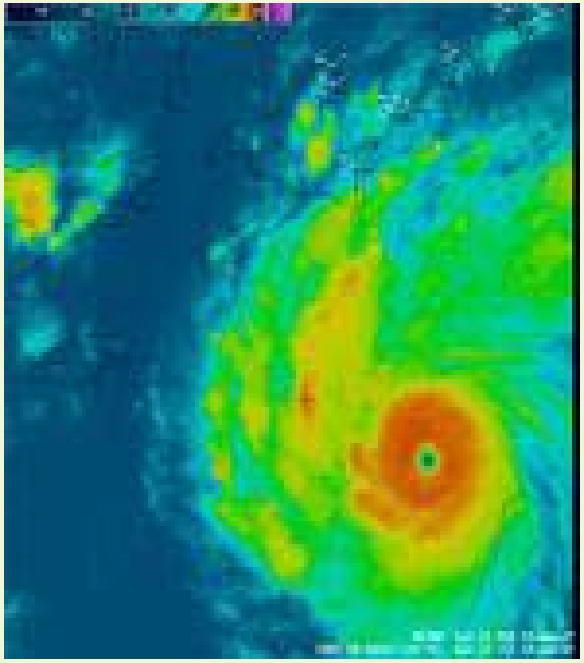
- Central Queensland Social Science Survey (Ronan & Crellin, 2010)



- Main Findings

Central Queensland Social Science Survey (Ronan & Crellin, 2010)

- 90% of 1208 households believe preparation useful
- 92% believe preparation reduced hazard risks
- Less than 50% reported a home emergency plan for any hazard
  - Likely an overestimate



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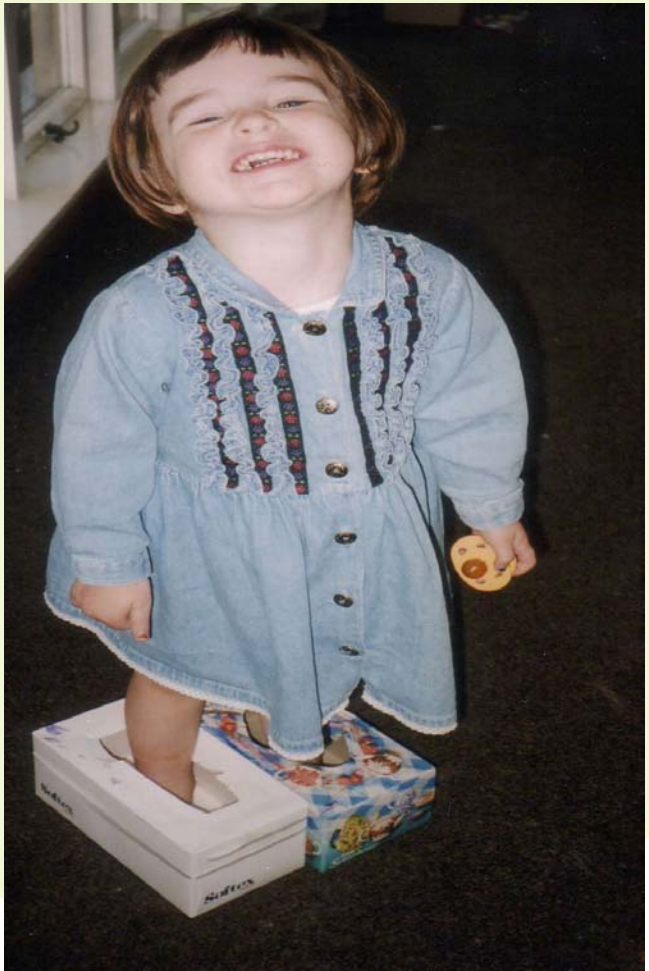
CQSS and Other Similar Findings: Implications

With beliefs high and preparedness activity low in CQ and many other areas, a key issue then is how to help turn beliefs into increased action

Both the Problem and the Solution Starts with Motivation



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Increasing motivation and community preparedness: Why focus on youth?

- It is our contention that youth are a motivational reservoir in a community
  - 50 – 60% of home settings have a young person under age 18
  - Having youth in a household
    - Increases adults' intention to prepare

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Why youth?

- Youth & families are a high risk group following disasters
  - Disasters are also a major fear of children
- Youth are adults of the future

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Increasing motivation and prep skills through youth: Summary

- Having kids in a household increases adults' intention to prepare
  - In CQ, around the world
- But, beliefs & good intentions do not translate into preparedness behaviours
  - Beliefs and intentions ≠ action
- One issue then is one of turning beliefs & good intentions to action
  - Through education programs

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Hazards Education and Preparedness Programs

- Teaching kids about hazardous events and risk mitigation
- Range from simple reading and discussion programs
- To emergency management-focused
- To different aspects of curricula
  - Science
  - Geography
  - Social Studies

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Research Findings: Do Hazards Education Programs Work?

- Correlational and experimental research
  - Started in 1996
- Overall findings
  - Research done globally
  - Including recent research in NZ, US, Australia
    - Including in Canberra with 12-18 yr olds from backgrounds with various risk factors

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What We Know About Education & Preparedness Programs

- Preparedness programs increase awareness and knowledge
  - More correct knowledge
  - Less incorrect knowledge
    - Though, some mixed findings here
- They increase emotional resilience
  - Reduced fears of hazards
  - Reduced perceptions of parents being fearful

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What We Know

- They increase home preparedness
  - Reported by children
  - Reported by parents
    - In Canberra study, parents reported an increase of 6 “adjustments” per household
      - And youth reported a 39% increase in knowledge, including multiple choice and short answer knowledge of what to do in various hazards, including bushfires and other local hazardous events over a 5 session, interactive program

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What We Know

- Emergency management focused is better than reading and discussion
  - Providing specific guidance, sequenced over time, that includes interaction, practice and simulations thought to work best
- But, even reading and discussion programs have produced some significant benefits

What We Know

- Specific guidance and interactive practice better than simply raising awareness
- Multiple sources of information better than through a single “channel”
  - Particularly linked and trusted sources
- Multiple programs over time are better than “one offs”
  - Be mindful of the “half life” effect

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What We Know

- Scaring youth (and adults) through fear messages doesn't work
  - Much other research in education and psychology point to other ways to "message" programs

What We Know

- Linking the program to home helps
  - Encouragement to interact with parents predicts increased preparedness
  - Parents' willingness to talk also a predictor
  - Actual discussions are also a predictor
    - Including simple, interactive homework exercises focused on both "talking" and "doing"

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What We Know

- **Linking the program to home helps**
  - **As parents go in disasters, so too their children**

What We Don't Know

- We know much less than we know including in these areas:
- Content of programs
- Delivery of programs
- Features of youth and families that predict best "uptake" of program messages
  - Inc important risk/protective factors
- Research is in its infancy

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What We Don't Know: Selected Examples

- "Ultimate" outcomes of prep programs
  - Does preparedness education lead to more effective response and recovery when a disaster strikes?
  - Does preparedness education promote a mindset that leads to promoting future community sustainability over time ?

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What We Don't Know: Selected Examples

- Some other important unanswered questions
  - What is necessary to get family plans and practice done more effectively?
  - Do various modes of education delivery perform better than a one off, standalone hazards education program?

What We Don't Know

– Are preparedness programs that are "embedded" and sequenced across the curricula more effective?

– Do youth preparedness programs that link with other community preparedness campaigns produce better outcomes?

– Do creative strategies help?
  - School & community competitions
  - Preparedness thermometers

Where We Want to Go

- I look forward to discussions over the next two days that will include a focus on what we do and don't know and where we collectively would like to see this field move to in the future, including the promoting the idea of pragmatic program evaluation.

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The Way Children Learn:

Implications for Youth Preparedness Education

Francie Alexander
September 15, 2010

SCHOLASTIC

American Red Cross

DEPARTMENT OF EDUCATION · UNITED STATES OF AMERICA

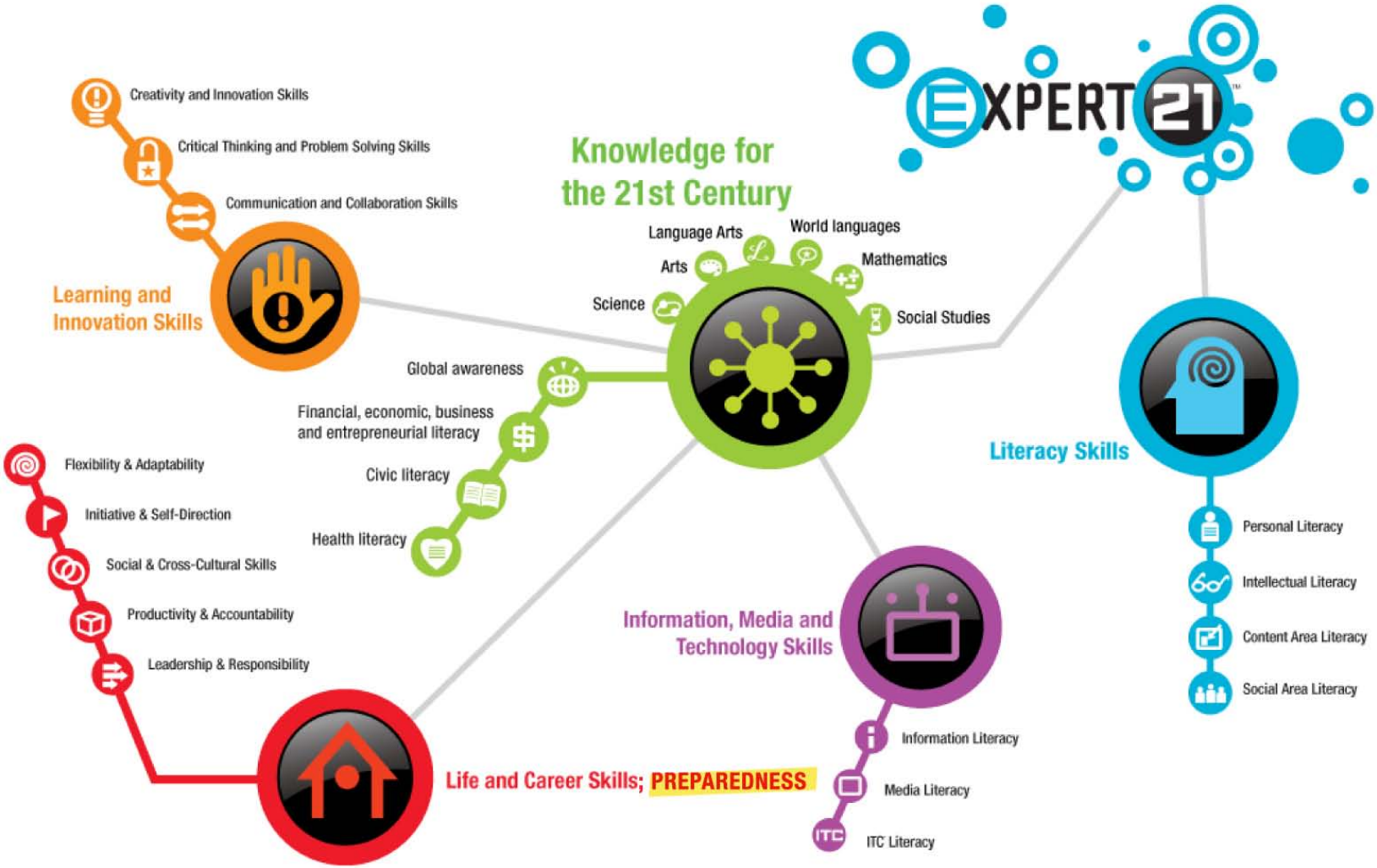
U.S. DEPARTMENT OF HOMELAND SECURITY

FEMA

National Summit on Youth Preparedness
Bringing Youth Emergency Preparedness Education to the Forefront

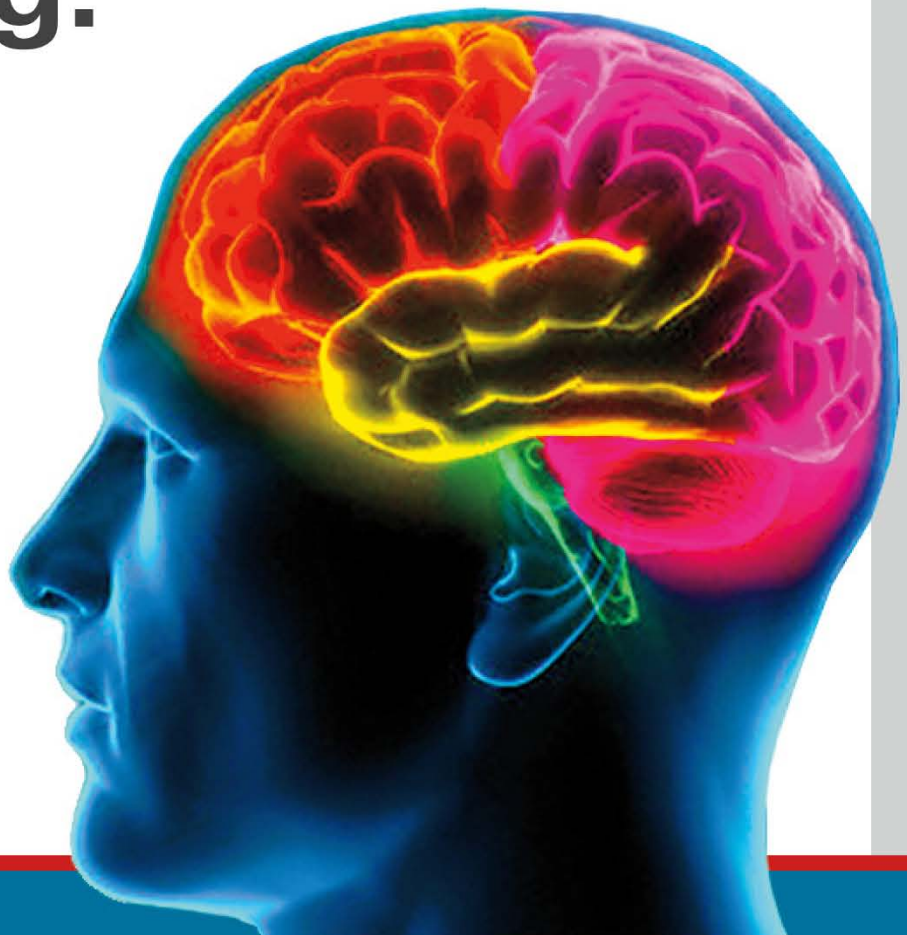
- The historic goal of education is preparation for citizenship.
- Today's citizens must be prepared as full participants for intellectual, social, physical, political and economic life in the 21st century.
- Health and safety preparedness are central to achieving the overall goals of education.

This is what 21st Century knowledge and skills look like.



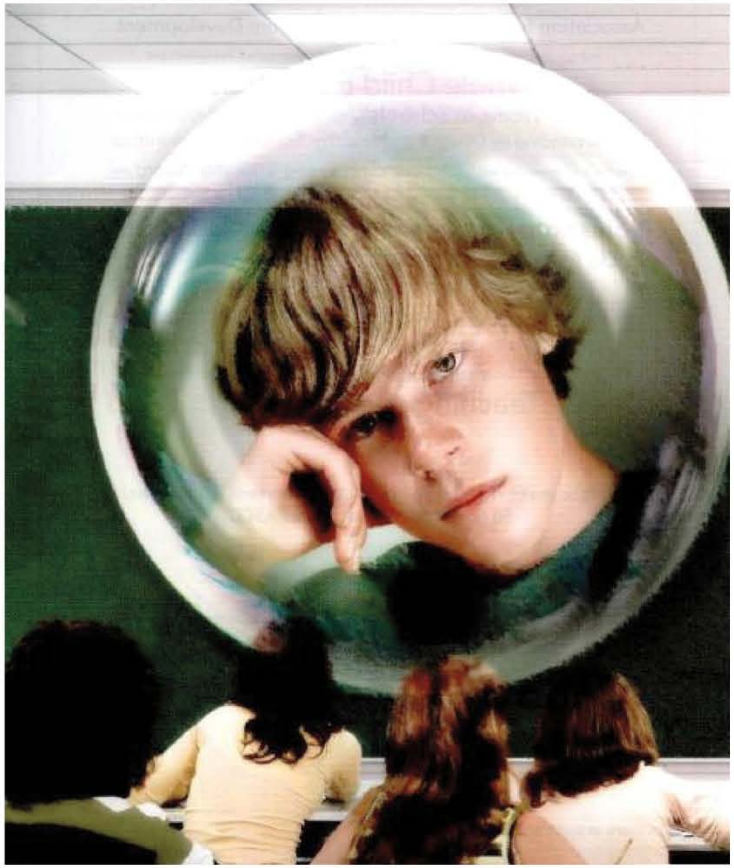
The 7 Strategies for Effective Learning

1 This is your brain on learning.



Brain-compatible teaching and learning:

- Keep it brief and relevant.
- The brain pays attention to what it considers important.
- Connections between neurons need to be continuously activated. It's not just critical "to fire them, but to wire them."
- Using new knowledge and repetition of skills is key to strengthening connections.

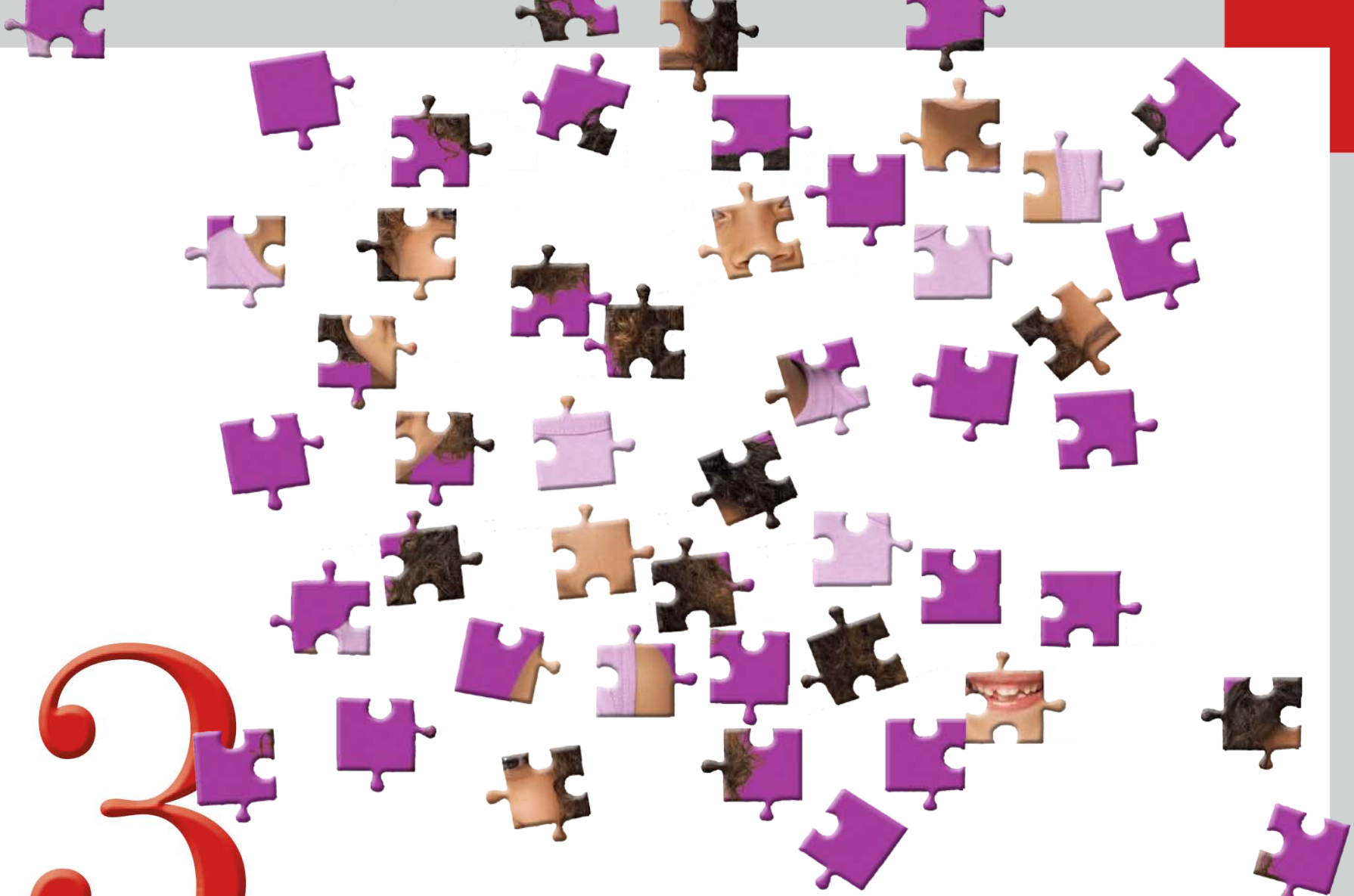


2

Pay Attention to Executive Function.

How to "burst the bubble" and engage students:

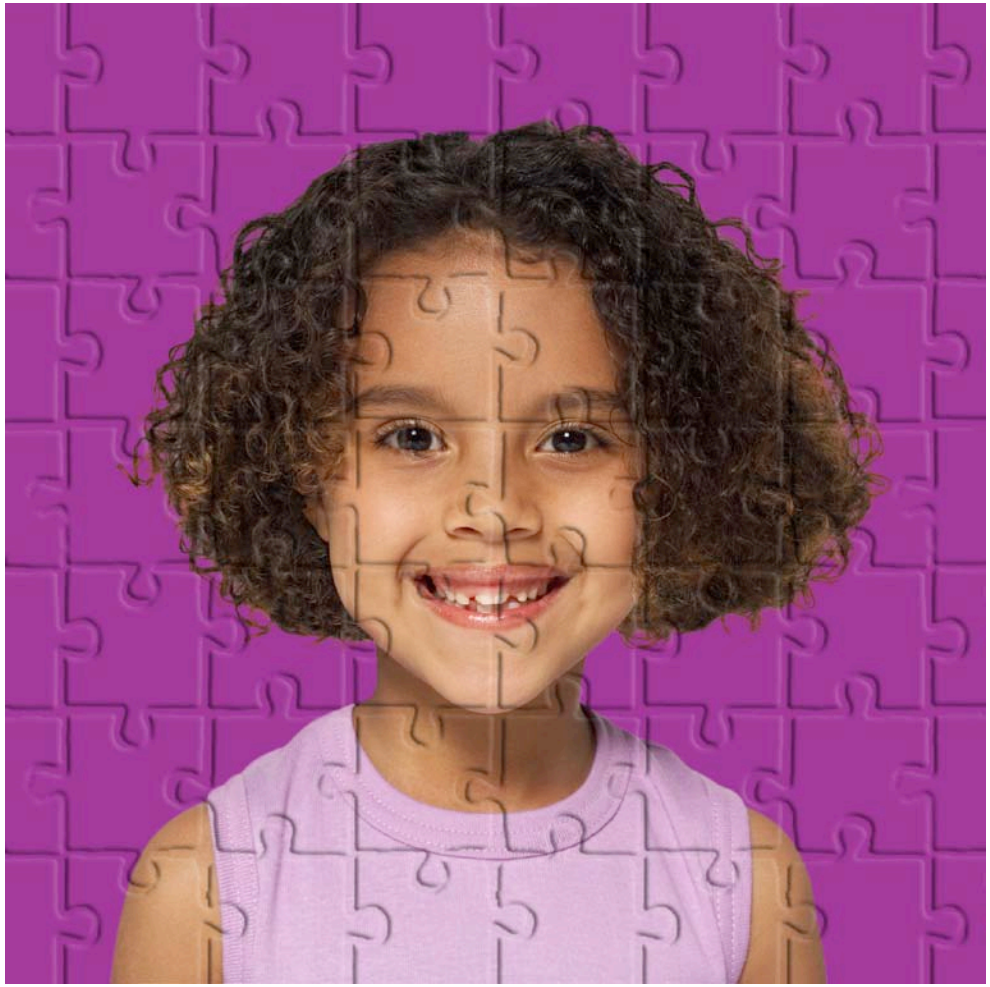
- The learner sets goals, makes plans and is self-motivated.
- Engage learner in self-regulated activities and focus on what's important.
- Anything you can do, I can do "meta."
- Metacognition is evidence of strategic learning.



3 Focus on the whole child.

Five M's of the whole child:

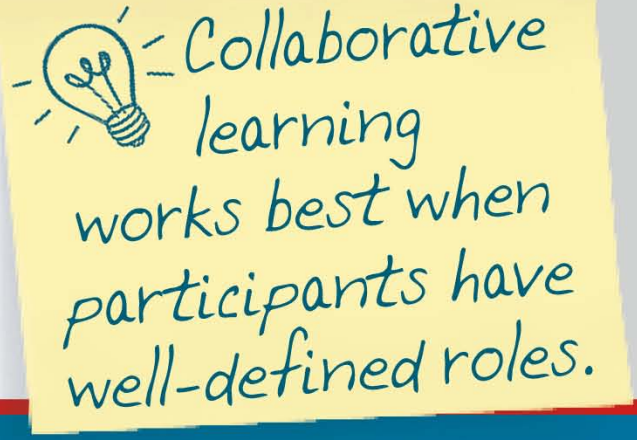
1. Metacognition
2. Multi-sensory
3. Meaningful
4. Motivated
5. Movement



4 Collaborative learning deepens understanding and socializes "smarts."

Collaborative learning is social, practical and effective:

- Collaboration with purpose aids learning.
- "None of us is as smart as all of us."



5 Today's technology tools are also known as "learning machines."

What technology does best:

- Differentiates instruction using data
- Personalizes education
- Communicates results
- Extends reach
- Provides intrinsic and extrinsic motivation
- Provides for simulated experiences


FEMA READY KiDS
STEP 1 CREATE A KIT
STEP 2 MAKE A PLAN
STEP 3 KNOW THE FACTS
STEP 4 GRADUATE FROM READINESS U!
LEARN ABOUT THE MOUNTAIN LION FAMILY
FUN & GAMES
PARENTS & TEACHERS
HURRICANE PREPAREDNESS WEEK
HOW YOU CAN HELP!

Practice makes ~~perfect~~ permanent.

Good "Practice":

- Effective practice is necessary to move from novice to expert.
- Effective practice is properly identified and "dosed."

Use analogies to deepen understanding and to transfer learning.


PRICE $4.99
THE NEW YORKER
SEPT. 4, 2006
Jessica Alba
YouTube
Snoop Dogg
AIM
Video iPod
MySpace
Scarlett Johansson
Family Guy
PS3
Counter-Strike
Manga
Algebra

A few words about differences:

- Special needs
- Language backgrounds
- Experiences

Read Every Day. Lead a Better Life.

WORKSHOP 3 CONTENT AREA LITERACY

Nature's Fury

Expert Question:
How can we deal with natural disasters?

Explore The Expert Question

21 Expert Knowledge

Watch the Anchor Media!

PAGE 4

An audiovisual introduction to **Nature's Fury.**

Explore Expert Space

Go online to explore **Nature's Fury.** PAGE 5

21 Meet the Expert

Shirley Murillo, Meteorologist

PAGE 6 See how a pro tracks a hurricane.

Read And Synthesize

Disaster Science

Reading 1 SCIENCE FEATURE

Super Disasters of the 21st Century

by Jacqueline Adams and Ken Kostel

Explore why natural disasters happen and how experts fight them.

PAGE 10

Reading 2 INTERVIEW

Get Inside the Tornado

by Shuhaidah Saharani

Two experts track down tornadoes for the sake of science.

PAGE 24

Reading 3 INFOGRAPHIC

Earth's Greatest Hits

Check out the biggest and deadliest natural disasters ever recorded.

PAGE 28

21 Expert Skill

Organize Information: Graphs

PAGE 32

The Human Cost

Reading 4 NOVEL EXCERPT

Storm in the Night

by Terry Trueman

Can José and his family survive a deadly hurricane?

PAGE 36

Reading 5 NOVEL EXCERPT

The Big Wave

by Pearl S. Buck

Witness the power of a tsunami that wipes out villages and lives.

PAGE 50

Reading 6 EDITORIAL CARTOONS

Cartoonists Capture Nature's Fury

Artists comment on natural disasters.

PAGE 56

21 Expert Skill

Solve Problems

PAGE 60

Write And Communicate

Expository Writing

Cause-and-Effect Essay

Describe the effects of extreme weather on your community.

PAGE 62

Apply Expert Skills

21 Expert Reading

NEWSPAPER ARTICLE

Flooding Wipes Out Two Communities

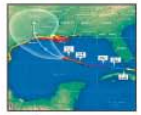
Discover how a storm surge drowned a city.

PAGE 70

expert 21 PROJECT CASE STUDY

Evacuate the City?

PAGE 74



Skills Check

PAGE 78

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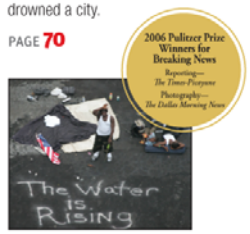

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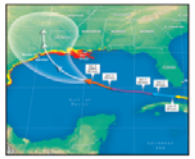


Skills Check

PAGE 78

Reading 1

Hurricane Katrina

NEW ORLEANS

Many people had to be rescued from their rooftops after Hurricane Katrina flooded New Orleans.

Hurricane Katrina was one of the costliest hurricanes in U.S. history. Total losses exceeded $150 billion. There was also a human toll. At least 1,800 people died. Hundreds remained missing. Over one million people were displaced from their homes. Most of the victims came from New Orleans, Louisiana. The event left many asking, "Why?"

The Storm Hits

In la
Katrin
region
Orlean
were hi
city ha
storm.

New
metho
the ris
storms
a few
protect

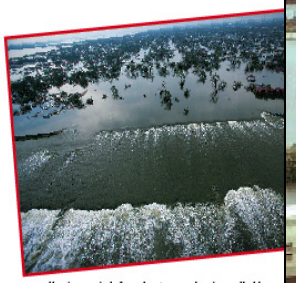
or were washed away. Soon, most of

Sinking City

Why did Willoughby and other experts expect a **catastrophe** like Katrina to occur? Nearly 80 percent of New Orleans sits in a bowl-shaped area between two bodies of water: Lake Pontchartrain to the north and the Mississippi River to the south. In some areas the city is more than 2.4 meters (8 feet) below sea level.

Delta, where water flowing from the Mississippi meets the Gulf of Mexico. At the Delta, the river's current slows, causing sediment, such as mud, to fall to the bottom. Over millions of years, this sediment has built up.

However, the resulting land is not sturdy. "The Mississippi Delta is basically a pile of mud in the Gulf of Mexico," says Willoughby



Hurricane winds forced water over barriers called levees. Eventually, some of the levees broke, causing floodwater part of New Orleans (right).

Read and Synthesize

COMPREHENSION

Cause and Effect

Review the second paragraph in "The Storm Hits," and complete this graphic organizer.

Cause: After the hurricane, barriers to prevent flooding broke.

Reading 1

SUPER DISASTERS of the 21ST CENTURY

BY JACQUELINE ADAMS AND KEN KOSTEL

NATURAL DISASTERS TAKE COUNTLESS LIVES AND COST BILLIONS OF DOLLARS. WHY DO THESE FORCES OF NATURE HAPPEN?

ADAPTED FROM *SCIENCE WORLD* MAGAZINE

The 21st century has just begun, yet it has already been marked by some of the worst natural disasters in human history.

In 2005, Gulf Coast residents braced themselves for what weather experts were predicting to be a violent hurricane. When the storm hit land, it lived up to the hype. Hurricane Katrina's mighty winds tore some towns to shreds, and drowned others in floodwaters. When it was over, more than 2,500 people were dead or missing. While Katrina devastated New Orleans and other parts of the U.S.'s Gulf Coast, this storm paled in comparison to other disasters unfolding in the new century.

In 2008, a tremendous earthquake rocked China. The quake toppled hundreds of buildings and left 12,000 lifeless bodies buried beneath the rubble. It was China's most destructive earthquake in decades, but as far as disasters go, it still wasn't the deadliest.

The most catastrophic event so far in this century occurred in 2004. On a quiet morning in December, the waters of the Indian Ocean rose far above sea level and traveled toward land at frightening speeds. A series of monstrous waves, called a tsunami, hit shore and destroyed everything in sight. More than 200,000 people died.

These disasters may seem unusual, but extreme weather has been shaping the Earth for millions of years. We can't keep these forces from happening, but scientists hope that by studying them we can find ways to predict and prepare for them. Take a tour of three super disasters

toppled *(v.)* made something fall
monstrous *(adj.)* horrible or frightening

KEY WORD **responsible** (ri-**spon**-suh-bul) When you can be trusted to do what you are supposed to do.

Safe on the Job

Stick With a Buddy

These people study sea animals for their job. They always swim with a buddy. They each make sure the other one is safe.

Stand in a Line

These people are in the Navy. They stand in lines quietly. That helps them hear what their leader says.

Clean Up

This construction worker cleans up a mess. He makes sure people can walk there safely.

2

Safe at School

Stick With a Buddy

These girls walk to school together. They help each other cross the street. They watch out for each other.

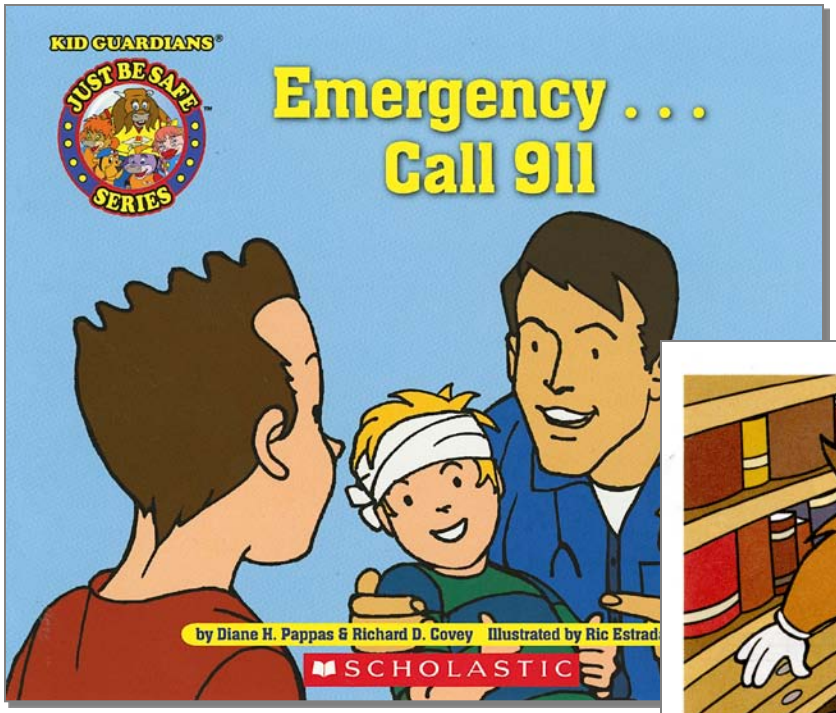
Stand in Line

These kids stand in line quietly. They are **responsible**. They listen to their teacher. They walk safely down the hall.

Clean Up

These kids clean up their class. That way, the floor is clear so no one will slip. They keep their class clean and safe.

3



At Kid Guardian Headquarters, Zak sees a Trouble Bubble alert.
"That boy is injured. Let's go, Scrubber."

Expect the best.
Prepare for the worst.

Ensure that children and young people are capable and confident learners.

NEMA

National Emergency Management Authority

Youth Preparedness to Emergency – The Israeli Program

National Summit on
Youth Preparedness 2010,
Washington DC

Kobi Wimisberg

FEMA

American Red Cross

Contributors & Partners

- IDF/Home Front Command
- Cohen – Harris Center for Trauma and Disaster Intervention
- Ben-Gurion University of the Negev/PREPARED Center for Emergency Response Research
- Israel National Police/Community & Civil Guard
- Magen David Adom (EMS)
- Ministry of Education
- Prof. Isaac Ashkenazi (Harvard University, National Preparedness Leadership Initiative)

Facts about Israel

- Geography – 20,770/22,072 km (151 st)
- Population size – 7,645,600
  - ❑ Jewish – 75.5%
  - ❑ Arab – 20.3%
    - 80% Muslims
    - 9% Christians
    - 11% Druze and others
  - ❑ other – 4.2%
- Urban population: 92%
- Rural population: 8%
- Youth (13-18) – about a third of the population

Possible Disasters

Mega Terror Attack

Cyber Terror

Man made accidents

War/missiles

Pandemic Influenza

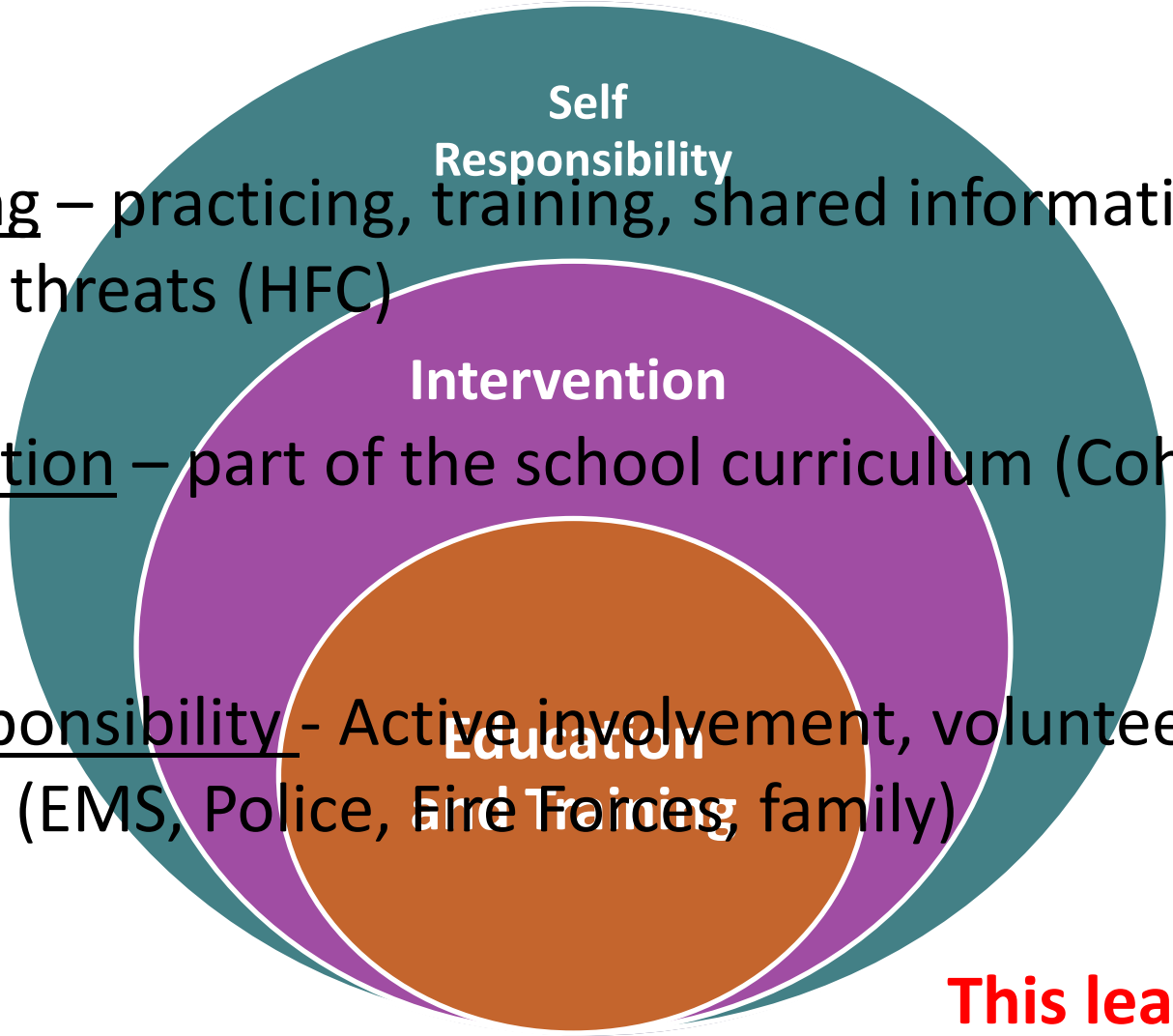
Earthquake

Homeland or Civil Front?

- In Israel, Home Front/ Homeland/ Civil Front (i.e. home) is under a threat.
- Civilians are becoming THE target.
- In addition, we face other kinds of threats
- A need to build up resilient society that can face hardships as a result of hostile and natural disaster, recover quickly and become stronger after the crises happens.
- Youth is a prominent target in the resiliency of the society ***both as one needing help and as a helper***.

How is that related to the Youth?

What is that we want from the youth?



- Educating – practicing, training, shared information about potential threats (HFC)
- Intervention – part of the school curriculum (Cohen Harris Center)
- Self Responsibility - Active involvement, volunteering, delegate, (EMS, Police, Fire Forces, family)

This leads to…

Culture of Preparedness

Education

- Through the Home Front Command with conjunction with the Ministry of Education

Education

- **Concept**
- To expose the youth to information - resiliency as “self immunity”.
- Children are agents or ambassadors of information and knowledge to their families!!!
- In order to create an emergency preparedness culture, one must start with the youth.
- **Educational institutions (training school children)**
- Training school children are presented with a 5-lesson unit in the course of which various types of emergencies are examined along with the appropriate ways to cope with them.
- The educational system HFC, NEMA hold an annual national drill in all educational institutions. The drill constitutes the climax of any school’s planning for emergencies of various kinds.
- **On going campaign for children in areas of risk (like Sderot)**
- the message is: “if you are aware, you are ready and know what to do, and less likely to get panicked” http://www.oref.org.il/sip_storage/FILES/7/477.pdf
- **Teacher’s Hour**
- The teachers talk about actual emergency /threat/event that took place

"If you are aware, you are ready and know what to do, and less likely to get panicked"

Home Front command youth Preparedness

- Home Front Command sees youth as a target group in training modules.
- Pupils in fifth grade are taught by teachers from the Home Front command during five meetings of two hours each.
- Home Front Command is creating a program for more age groups to keep a steady reminder over the years.
- Youth are educated in situations of emergency such as earthquakes, fires, weapons of mass destruction etc.

Home Front command youth Preparedness Cont.

- In the future the program will include 40 hours of classes: 6 hours in every age group, in 5th grade the program will stay in the format of 10 hours.

The program will include:

- 2 and 3th grade: teaching the basics.
- 5 and 7th grade: broadening the knowledge.
- 9 and 11th grade: building as a active citizens in the community.

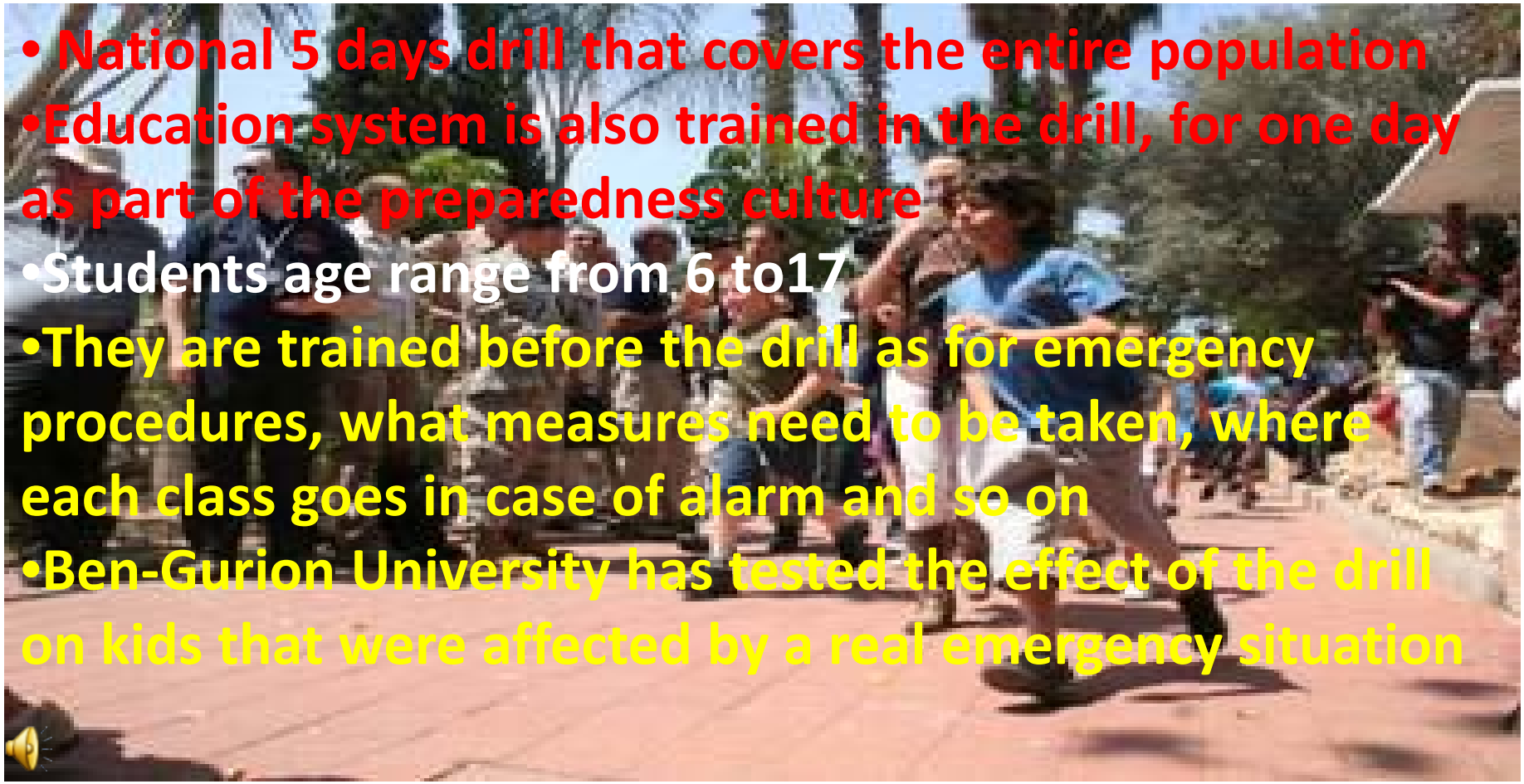
- The program is expected to be released to the public in 2011
- The program will be distributed by teachers trained for this purpose.

Youth in exercises

On Tuesday, June 2, at precisely 11:00 am, a drill alarm will be sounded throughout Israel. When the alarm sounds, all Israeli residents are requested to drill going into their pre - selected protected space, based on the entry time provided, at home, at work, or in any other building in which they are staying.

- Preparation for the drill included a campaign directed to children fitted to their needs, explaining the drill.

"Turning Point" National Emergency Exercise



Intervention

- Center for Trauma and Disaster Intervention Association for Children at Risk

Posttraumatic Symptoms Before and After School Activation Program: Past trauma

Wolmer, Laor & Yazgan, Child Adolesc Psychiatric Clin N Am, 2003;12:363-381

- School-Based Interventions:

❑Turkey: Immediate 50% reduction in PTSD rates following a brief teacher-based post-trauma intervention and better adaptation compared to controls 3 years later.

❑Israel: Better capacity to manage stress and improvement in classroom's atmosphere after a brief teacher-based resilience program during continuous terrorism.

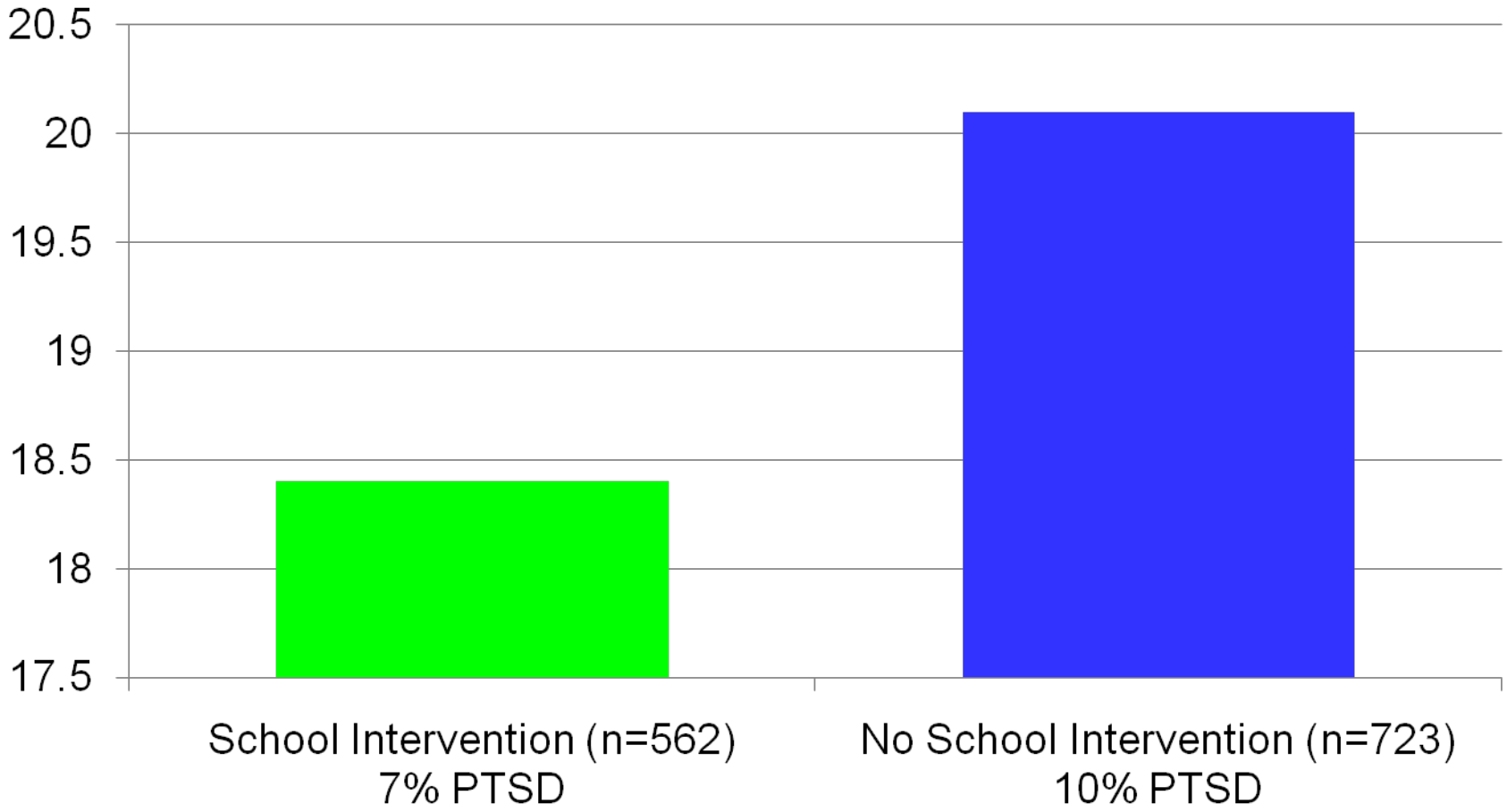


School Resilience

•Teacher-based and supervised by professional teams in schools: A unique teaching program in the classroom focusing on resilience building and enhancing coping strategies with continuous stress and psychological trauma:

- Routine/Preparedness: Resilience building and preparedness
- Emergency: Coping enhancement
- Aftermath/Rehabilitation: Return to routine, assessment, brief interventions

Post-traumatic symptoms in prepared and non-prepared schools in Ashkelon following Operation Cast Lead



Self Responsibility

- EMS
- Fire
- Police
- City

Self Responsibility

- Concept

- We believe that if we give an 18 year old person a gun to defend his or her country, they can also be responsible for themselves and the society from a younger age (13-18).
- Active involvement contributes to the self immunity of the Volunteer.
- We believe in the process of “bottom up” when it comes to creating culture of preparedness. The family must be the core element in this process.
- It is important to delegate the responsibility to the “lowest” unit (i.e., family).

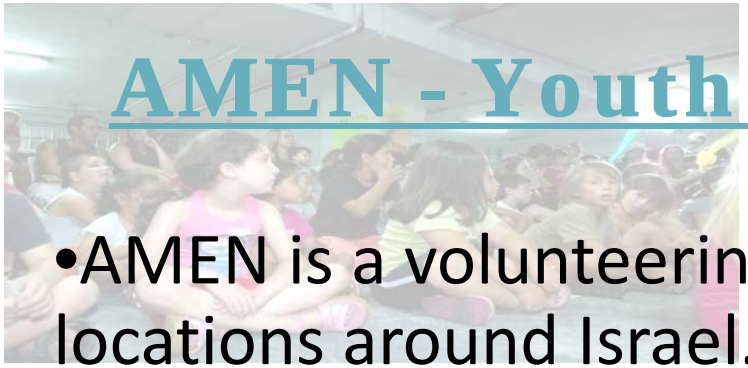
Youth Volunteers of Magen David Adom

- About 6,000 youth volunteer in MDA, ranging in age from 13 to 18.
- Teenagers are primarily involved in saving lives aboard ambulances and mobile intensive care units, as well as assisting in blood collection drives, first aid training, community humanitarian activities, accidents and illness prevention.
- **Many see this activity both as their youth movement afternoon activity, and as their vocation.**

Youth Volunteers of Magen David Adom

Youth Volunteers in the Israel Police – Civil Guard

- There are 2500 teenage volunteering for the Civil Guard of the Israeli Police (out of 45,000 volunteers).
- At the age of 16, many youth choose to volunteer in the Civil Guard as part of schools Personal Commitment Program.
- Their activities include road blocks, public transportation safety, guard duty in the neighborhood and patrolling in look for suspicions people and cars.
- The common interest of helping the community creates situations of youth a feeling of responsibility for the community.



AMEN - Youth volunteering in the City

- AMEN is a volunteering program that is in over 40 locations around Israel.
- The youth volunteer with kids with special needs, in the Arab community, with elderly people, international volunteering and more.
- The program involves youth at risk as volunteers as well.
- The youth train in field professions and leadership programs.
- **The youth are used during emergencies for volunteering where more hands are needed.**

Youth Movements

So???... what are you telling us?

- In order to create an emergency preparedness culture, one must start with the youth.
- you cannot go only passive – you need to make preparedness active!! (i.e. train, volunteer, actions).
- it is important to share with the youth the situation and let them know what is going on and what to do.
- Treat the youth as adults, trust them and give them responsibility.
- Youth who know how to handle life saving situations increase their communal service and are more involved.
- As youth become more involved in the community, the community becomes strengthened.

THANK YOU

We Welcome Cooperation

Contact: nema@mod.gov.il

WHAT'S THE PLAN STAN?

Disaster preparedness in schools

New Zealand

Chandrika Kumaran
Ministry of Civil Defence & Emergency Management

New Zealand Hazardscape

- Earthquake
- Tsunami
- Volcanic eruptions
- Storms
- Floods
- Landslides
- Other - fire, pandemic, terrorism

Magnitude 7.3 quake Canterbury NZ
0435hrs 4 September 2010

Purpose of national public education programme

- **To raise awareness** of hazards amongst individuals and communities
- **To improve understanding** of likely disaster impacts and why it's important to get ready, and know what to do
- To encourage people to **take action** to be prepared, and stay prepared

National public education programme

GET READY GET THRU

CD CIVIL DEFENCE

National social marketing campaign

A learning and teaching resource for students and teachers

Why a programme for youths

- Build a foundation of preparedness
- Empower young people by giving them the knowledge and skills to cope when disaster happens, and to know what to do to keep safe
- Build on the NZ Curriculum vision for young people who are “connected” and “actively involved” in their communities
- Get the message into homes and communities through kids at school
- Meet an identified need from teachers and emergency managers for an educational resource
- Address the need for resources designed specifically for the 7-12 age group

WHAT'S THE PLAN STAN?

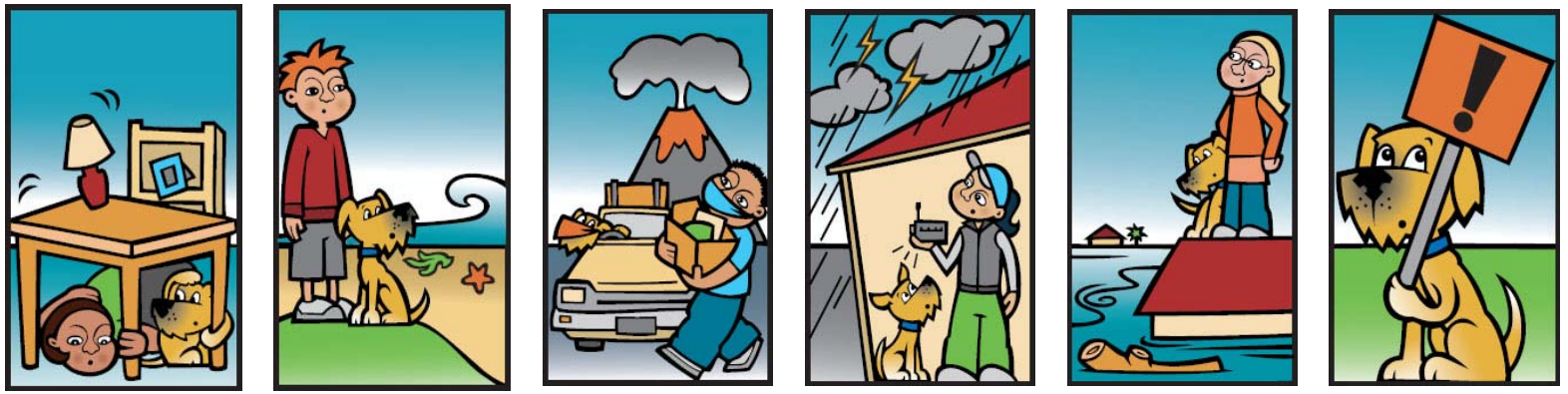
- A teaching resource for primary and intermediate schools
  - Handbook and CD-Rom sent free to schools
  - Online resources on dedicated website www.whatstheplanstan.govt.nz
  - Supported by emergency managers at community level
- A learning resource for students aged 7-12
- An accessible resource for students and their families

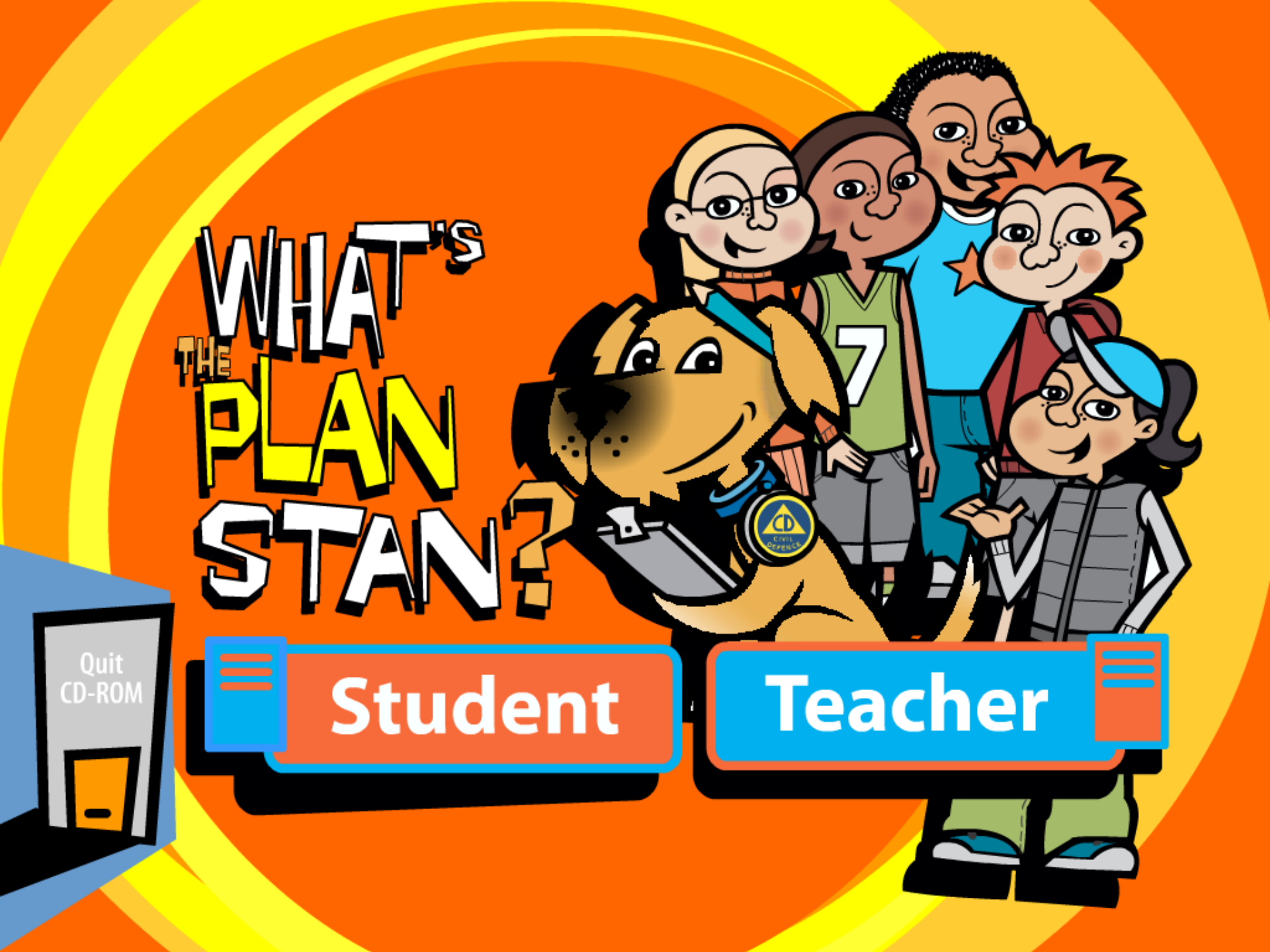
Resource for schools

- Information for teachers and school management to support disaster preparedness activities,simulation exercises and safety drills
- Aligned to the New Zealand Curriculum
- Teaching resources including unit plans, templates and activity sheets *(Word and pdf files on the CD-Rom and online allow for easy printing and adaptation)*
- Inquiry model and cross-curricular activities
- Fact sheets and activities relating to various disasters
- Information and templates for school practices and simulations

Information for students and families

- Featuring Stan the dog and five children who model what to do to be prepared and keep safe when a disaster happens
- Relevant information that is easy to understand and accessible online
- Facts sheets, photos and videos on disasters with links for further information
- Quizzes and games




WHAT'S THE PLAN STAN?
Quit CD-ROM
Student
Teacher

Earthquakes, floods, storms, tsunami, non-natural hazards and volcanic eruptions can be frightening because they strike at any time and often without warning. By helping your family be more prepared at home, you can reduce the risk of danger.

MAKE PLANS

You will need these things to be prepared:

- Get Thru Leaflet
- First Aid Kit

Download Acrobat Reader

WORK WITH YOUR FAMILY

Your family needs to have a plan for what to do if there is an emergency. Read the list of things you should talk with your family about.

YOUR PETS

During a major disaster such as an earthquake, storm or tsunami your pets need to be looked after too. If you have family pets you will need to include them in your emergency planning.

TEACHERS

What's the Plan Stan is an initiative which aims to support teachers to develop their students' knowledge, skills and attitudes to respond to and prepare for an emergency.

WHAT'S THE PLAN STAN?

Students

Quit CD-ROM

www.whatstheplanstan.govt.nz

FOR TEACHERS

Unit Plans And Activities

Junior unit plan and templates

Middle unit plan and templates

Senior unit plan and templates

Disaster activities and fact sheets

Simulation and practice activity templates

CLOSE


Join us on a
Storm Discovery
What's a storm
Frankie's Story
Stan's Plan
Cool Extras
Survival Items
Home
Map
Teachers
Quit CD-ROM

EARTHQUAKE

Print this page

New Zealand experiences hundreds of earthquakes every year. Most are either very deep or centred well offshore, causing little damage or injury. However, a severe earthquake can occur at any time with devastating effects.

WHAT IS AN EARTHQUAKE?

The surface of our planet is not a complete shell, but is made up of large pieces, much like a jig-saw puzzle, called 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.

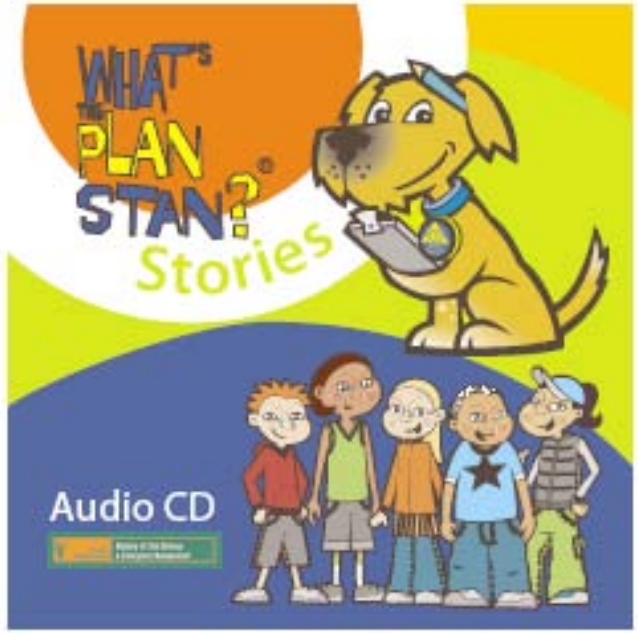
MAP
Historical disasters by region
Enter

PICS & CLIPS
Enter

READY FOR A QUIZ
Enter

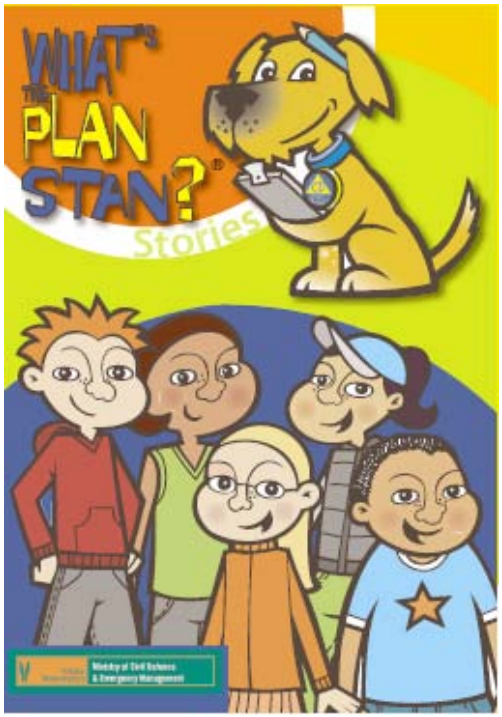
Audio CD

- Enables children to listen to stories of how Stan and his friends cope with earthquakes, volcanic eruptions, tsunami, floods and storms.
- Each story concludes with information on what to do before, during and after a disaster.
- The audio CD is suitable for younger listeners as well as the target audience of 7 to12-year olds.



Storybook

- Five stories in which Stan and his friends cope with earthquakes, volcanic eruptions, tsunami, floods and storms.
- Each story is followed by a checklist of what to do before, during and after a disaster.
- These stories can also be downloaded as Word or PDF documents from the CD-Rom and the website.



Developing the resource

- Workshops with teachers and emergency managers
  - What was on everyone's wish-list?
  - What was viable given budgets and resources?

- How does it fit with the New Zealand school curriculum?

- How do we best utilise the skills–mix of all players
  - teachers and education specialists
  - emergency managers
  - scientists and researchers
  - communication writers and designers

New Zealand experience

- National - Ministry of Civil Defence & Emergency Management
- Regional – 16 Civil Defence Emergency Management Groups
- District and City – 86 councils

- Issues and challenges we may have in common

Monitoring and Evaluation

Four years on –

Is it working?

- On 29 September 2009 a deadly tsunami hit Samoa, Tonga and American Samoa, claiming over 180 lives.
- Abby Wutzler and her family were on holiday in Samoa at the time of the tsunami. 10-year old Abby had learnt all about tsunami at school earlier in the year. She recognised the natural warning signs and raised the alarm. Her quick actions saved her family and many others on the beach.
- One of the first things they did when they got home was to ring Abby's teacher to thank her

Programme evaluation

- 89% of teachers surveyed at the end of the first year found the resource to be useful or very useful
- Indepth research planned for 2010 to better understand how it is being utilised and identify areas for improvement
- Annual research to measure awareness and preparedness indicates schools are an effective source of information
- Continued positive feedback and buy-in from teachers and emergency management staff around the country
- Ongoing requests for permission to utilise the resource from a range of international agencies

How prepared are we

- Fully prepared with an emergency plan and survival items to cope for at least 3 days
  - 24% (21% in 2006) are fully prepared to cope at home
  - 11% (7% in 2006) are fully prepared to cope at home and when away from home.
- Rates of being at least partially prepared are higher
  - 45 percent have taken some steps to be prepared in the last year
  - 43 percent have emergency supplies and stored water.
  - 65% say they have done something as a result of the Get Ready ads, even if it is to just talk about it with friends and family.

Reaching young people

People who are less prepared

- **the younger portion of the population**
- People who have lived in New Zealand for less than 10 years, and not be proficient at speaking English

New initiatives

- Greater use of social media networks such as twitter, facebook and youtube to reach those between 13 - 25

GOBIERNO DE
CHILE

Earthquake

27/2 - 2010

Earthquake 27/2 - 2010

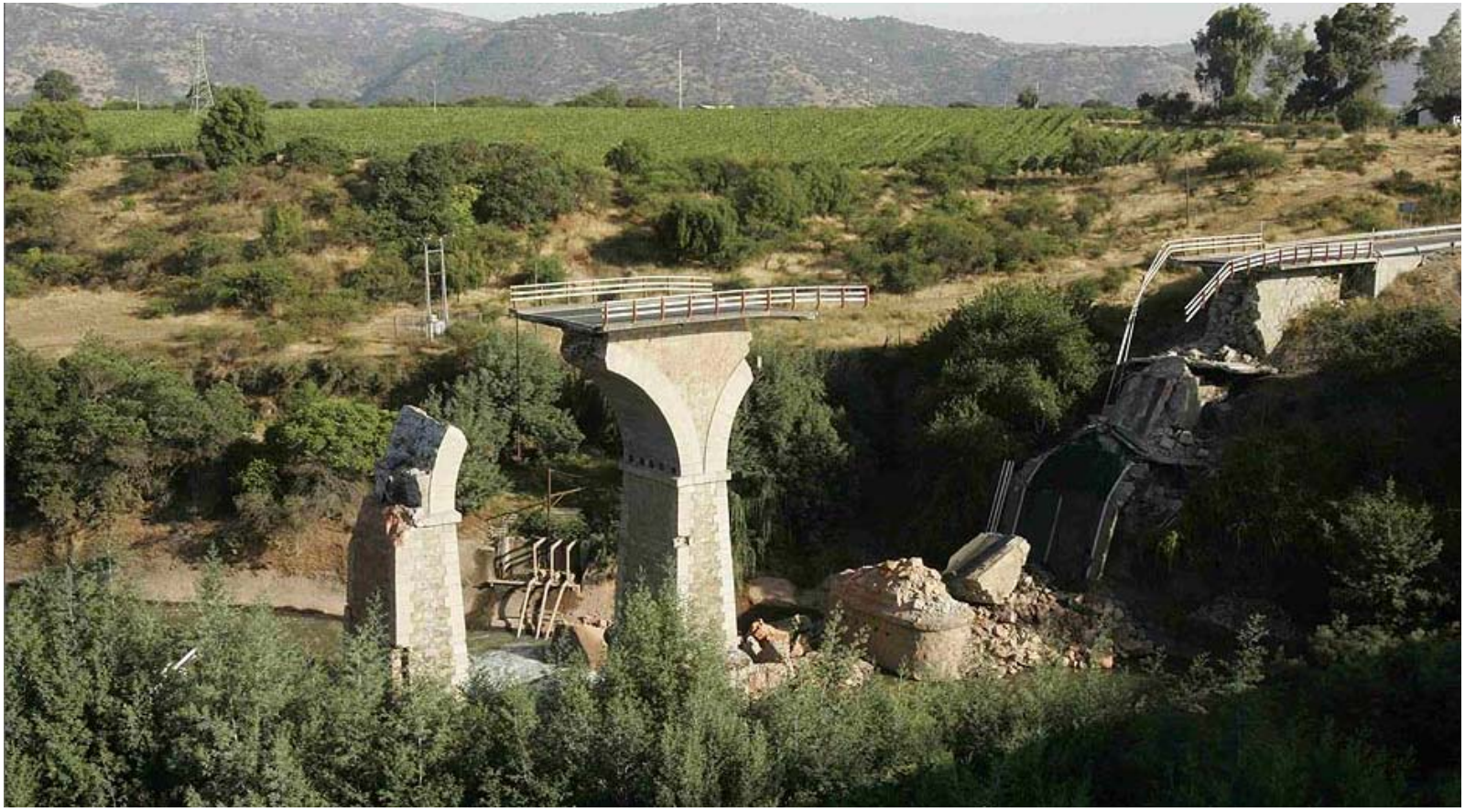
Damage caused by the earthquake

- **Area affected: from the Region of Valparaiso to the Araucanía, corresponding to 79.5% of the population (12,880,034 people).**
- **342 fatalities.**
- **95 missing.**
- **45% of schools in affected areas disabled or seriously damaged.**
- 25 hospitals in the affected areas disabled or over 75% damage.
- Total estimated cost of the earthquake: **U.S. $ 30 billion.**

Earthquake 27/2 - 2010

Damage caused by the earthquake

DAMAGE TO ROADS



Earthquake 27/2 - 2010

Damage caused by the earthquake

- **CONCEPCIÓN (BIOBÍO REGIOON),** Building **ALTO RÍO /**14 floors.

Earthquake 27/2 - 2010

Damage caused by the earthquake

- **DICHATO, BIOBÍO Region**

Earthquake 27/2 - 2010

Damage caused by the earthquake

- **817.754 AFFECTED**

Youth Movement

- Total volunteers mobilized by UTPCH: 85.989
- Emergency Housing Total built: 23 886
  - RM 1.290
  - V 360
  - VI 5.888
  - VII 8.559
  - VIII 7.789

Educating the population

North watch Program

- Mega drills simulating an earthquake of 8 degrees on a scale
- Evacuate the entire waterfront to the security zone.
- Evaluate the response time of the population.
- Evaluate the public participation.
- Prevent vandalism with 300 police officers who look after homes and businesses centers.
- Successful expercience: Arica and Iquique involving about 95 000 citizens.
- http://www.iquiquetv.cl/2.0/2010/06/30/simulacro-terremoto-y-tsunami-en-tarapaca/

Drill in kindergartens

Educating the population
Futures Programs

- Campaigns on safe tourism.
- Campaigns on mass care activities.

GOBIERNO DE CHILE

Earthquake

27/2 - 2010

31 Julio 2010