This pack contains lots of resources to help supplement your teaching on natural hazards and disasters. This is a broad topic with many possible focuses, so instead of going through all the hazards we have included a few adaptable activities for use with everything from floods to volcanoes.

Disasters, ICT and gaming

“Stop Disasters” is an incredible resource developed by the UN/ISDR to aid disaster learning. Pick your disaster type and have the pupils develop their strategy to protect their town in the game. The interface is very intuitive and will help your pupils pick up ideas of how we can mitigate the damage of a disaster. A game on the easy level (recommended) takes around 20 minutes. Ask your pupils to justify their selections and for older students consider having them think about different categories for the mitigation techniques.

“Stop Disasters” is available free from: http://www.stopdisastersgame.org/en/home.html

Glogging

Glogster is a dynamic way of producing posters online. You can add interactive media making them a little different to the conventional poster. A few topics are suggested below:

What happens after an earthquake?

How do we prepare for natural disasters?

Get Glogging here: http://edu.glogster.com/edit/glog/?action=glogs_create

Disaster Trumps

Get your pupils to research a specific type of natural hazard. Choose several categories for them to look out for (i.e. “height” for volcanoes, “magnitude” for earthquakes) and get them to fill out their “Trumps”. They can then be put together to form a pack for playing or small tables can play off against each other, playing the category of your choice each turn.

We have included a trump template at the back of this pack.

www.dynamicearth.co.uk
Pompeii Panic

Combine learning about the Romans with learning about volcanoes! In late summer AD 79 the town of Pompeii was destroyed by an eruption of Mount Vesuvius. This idea combines thinking about Roman life in ancient Pompeii with what it is like to be in a volcanic eruption.

First take a tour of modern day Pompeii: http://tinyurl.com/yl7jkwu. Get your pupils to think about what these ruins can tell us about the way people lived so long ago. What sorts of things could be left behind?

One of the ways we know about what happened to Pompeii is from the letters of a man named Pliny The Younger. Your students could write a letter describing the events at Pompeii.

Make a mosaic of a volcano. Have your pupils draw a simple picture on card that they want to make into a mosaic. Draw a 1cm grid over it and by using a coloured pencil make a note of which colours go in which square. All that remains is to use coloured card cut into 1cm squares and glue them into place (a rotary cutter/guillotine is helpful here!). This activity is quicker if run in small teams. If you are feeling flush, foraged bits of beach glass and small mosaic tiles look amazing, stick them to the image first, then spread the cement into the gaps.

If you really fancy getting into the spirit why not make togas out of old sheets, eat a few grapes and have a glass or two of Ribena!

What to take in an emergency

Use a shoebox as a container for a grab-bag for a disaster emergency. Families in areas of the globe that experience disasters often have these ready, but what do they put in them?

Ask pupils to collect things that they think would be really useful if disaster struck.

Guerrilla Hazard Mapping

Whilst you may not have a volcano on your school playing field you can introduce some of the ideas behind hazard maps in this activity. Assign your pupils with an area of the school and ask them to map the hazards in the area (be that banana skins on the floor, electric plugs or Mrs Collins). They can choose to present the information in any way they wish, drawing out the map and adding the data, but creating symbols for hazards is a good way to start.

In order to help, print off a few info-graphics and info maps (Google Image Search) to give them ideas. They can sort these into categories based on their opinion of them and combine these features into their own maps.
Make a shake table

Make spaghetti towers and test them on a shake table to see which designs hold up best.

Stuff:
- Two large-ish hardback books
- 4 solid balls (Golf/softball etc...)
- 2 strong elastic bands.
- Spaghetti
- Tape/marshmallows
- Ruler

Method:
Set your conditions for the towers (minimum height, maximum amount of spaghetti used etc...) to start. Have your pupils construct their towers using marshmallows for the joints and spaghetti for the pillars. You could do this activity after researching how to earthquake-proof buildings, you will probably get stronger designs. Meanwhile, sandwich the balls between the books and wrap the bands around the books. The amount you push the top book away from the bottom is displacement, the bigger it is the more shaking you will get. We will use different amounts of displacement to create stronger and stronger quakes.

Create earthquakes of different strength (perhaps 1cm, 3cm and 5cm) and see if their buildings survive!

Movement in an earthquake will not just be side to side as in this model. If you have Lego NXT we can provide instructions for a more complex shaking model.

Disaster Dance-a-thon

Have your pupils try to design and create a dance piece centred on one natural hazard. Creating costumes is often a good place to start and can aid thinking about the processes and movements. The table below gives a few starting ideas:

<table>
<thead>
<tr>
<th>Volcano</th>
<th>Red top, brown bottoms</th>
<th>Explosive movements, rising up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>Something that shakes!</td>
<td>Shaking, falling over</td>
</tr>
<tr>
<td>Tornado</td>
<td>Tassels</td>
<td>Spinning, upwards movements</td>
</tr>
<tr>
<td>Flood</td>
<td>Blue and floaty</td>
<td>Flowing and rain</td>
</tr>
</tbody>
</table>

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Workshops

Quake, Rattle & Roll
Relocate your school to a tropical island and design it to survive an earthquake.

Natural Disasters
Learn about natural disasters. Plan, design and build San Francisco’s next major hospital.

Journey from the centre of the Earth
Travel from the centre of our planet, discover the shifting plates and get blasted out of a volcano.

Restless Earth: Supervolcano
Unravel the theory of plate tectonics and investigate a supervolcano.

Tour
Our state of the earth gallery documents the powerful natural forces at play in the world today. Make an earthquake before experiencing one yourself, as the sulphur burns, the continents drift and the floor shakes.

Communication comics
Making comics can be a fun and thought provoking way of introducing a story element to teaching and allow pupils to focus on the human side of a disaster.

Have your kids draw out a series of squares and rectangles on a piece of paper or use our template at the back of this pack. You can have your pupils draw in their images or cut pictures of printed media to form small collages. Photos work great too, especially if taken for the purpose. Speech bubbles can show dialogue and chuck in some of the word effects at the back for good measure to give the comics some drama. Kids will tend towards drawing on one scale, so encourage close ups or panoramas for a really authentic and expressive final product!

Your trip to Dynamic Earth
This teacher resource pack was designed to supplement your teaching of natural disasters. A trip to Dynamic Earth has lots of opportunities to help reinforce the ideas in this pack, or vice versa.

www.dynamicearth.co.uk