

SECTION 3 – EFFECTS AND RESPONSES TO THE TSUNAMI

What were the primary and secondary effects of the Tsunami?

Objectives/End Points

Pupils will learn that:

- Effects of disasters can be categorised into primary and secondary effects
- There are social, economic and environmental effects which follow a Tsunami event
- The Japanese Tsunami had a range of social, economic and environmental effects

Primary effects

Impacts and problems that occur due to a disaster straightaway and as the disaster is happening e.g. ground shaking and buildings collapsing (within 24-48 hours)

Secondary effects

Impacts and problems that occur due to a disaster as a knock on effect and as the disaster is happening e.g. people are made homeless due to their homes collapsing



What kind of effects can we see?

- **Social** – effects to do with people and society
- **Economic** – effects to do with money and businesses
- **Environmental** – effects to do with nature and wildlife

**Can you design an emoji to
represent each key term?**

Write out each key word with its definition and
draw your own emoji



What can you see?

Is it a Social, Economic or Environmental effect?



Look back at the definitions of primary and secondary effects. Which group do you think this effect would be in?

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Effect fact file

To help you with your final piece of work you need to create a table (you can just draw this out like the one below) and write in as many effects from the images in the different categories as you can think of. This will help you plan your final piece of work

Social	Economic	Environmental
		



Effects – additional answers

- 20,000 deaths
- 2500 missing
- 500,000 homeless
- Bullet train stopped only 15 seconds after the initial earthquake
- 90% deaths from drowning
- Fukushima – nuclear meltdown and release radioactive materials
- Rice production declined, impacting on the economy
- 120,000 building destroyed
- The waves travelled up to 6 miles in land
- The trees are all flattened
- 10% of Japanese households were without electricity
- 1 million without water
- Sendai airport is swept away
- Postponed the world figure skating championships
- Loss of tourism over a long period of time
- Toyota, Nissan and Honda suspended their production

You could add these to your table and think about whether they are primary or secondary effects as well as if they are social/economic/environmental

What were the responses to the Japanese tsunami?

Objectives/End Points

Pupils will learn that:

- Responses can be categorised into immediate and long term responses
- There are different roles involved in responding to a Tsunami
- Each role has a different responsibility in helping solve the responses

Immediate responses

Help that is received within 24-48 hours (1-2 days) of the disaster happening

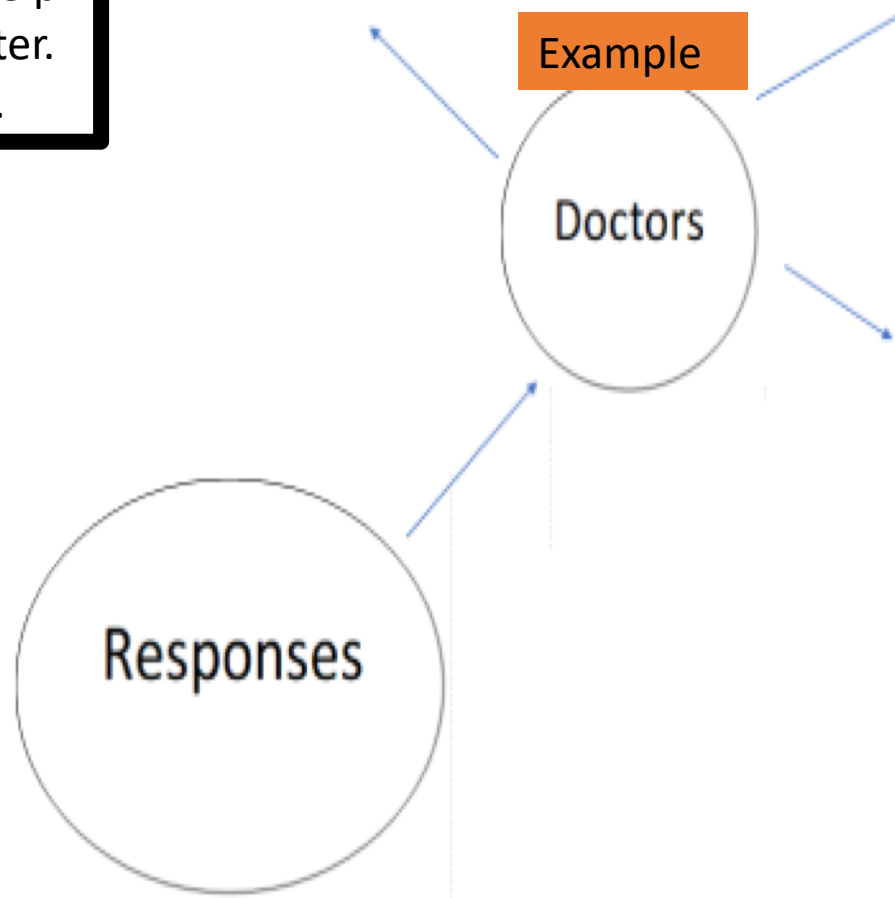
Long – term responses

Help that is received within weeks to months of the disaster happening



Who would be involved in the emergency response?

Create a spider diagram or think of the people that would help in the aftermath of a disaster. You could also list these.



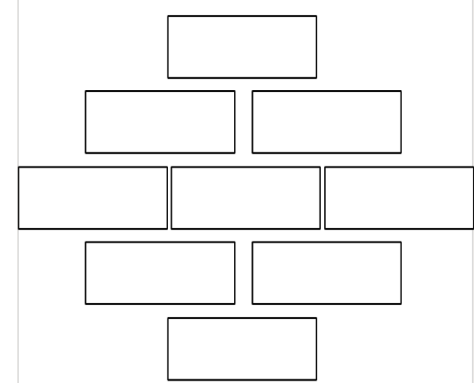
Roles involved in the emergency response

1. Order the people involved from **most important** to **least important**.
2. Write a paragraph to give reasons for your order especially your top and bottom choice.
3. Remember this is your own opinion so there is no wrong answer – however you need to be able to explain your choices.

- Ambulance/Helicopter rescue
- Police
- Travel agents
- Fire brigade
- Builders
- Aid workers/charities
- Commercial brands
- Government
- Councillors



Diamond 9



You could structure this like a diamond 9 order if you would prefer

What do you think would happen in the first 15 mins after the earthquake?

Japan has the most advanced earthquake early-warning system in the world.

A nationwide online system launched in 2007, it detects tremors (small shaking in the earth's crust/ground), calculates an earthquake's epicentre (where the earthquake is felt on the ground) and sends out brief warnings from its 1,000-plus seismographs scattered throughout the country, one of the most earthquake-prone nations on the planet.

Seismographs – Advanced pieces of technology that can create a graph showing the movement of the ground from earthquakes and tremors

Tsunami warnings take longer because more calculations are involved. A **regional tsunami warning was made** nine minutes after the quake struck. In the areas hardest hit by the tsunami, **residents probably had only about 15 minutes of warning.**

What do we think would happen in those 15 minutes?

- Emergency is declared
- Sirens sound
- Police drive around with loudspeakers to issue warnings
- All TV channels stop and issue warnings
- 270,000 people were evacuated and sent to higher ground
- Due to the nuclear power plant at Fukushima a nuclear emergency was declared.
- Helicopters were sent in to rescue stranded survivors
- UNICEF provided food and shelters in the form of tents
- USA sent aid (help like medicines, food, water and shelters)
- Roads were cleared of debris (bricks and mud)
- \$1.1million clothes from Gap.



Long term responses and rehabilitation:

- 14 ports were rebuilt to receive goods
- Fukushima was decontaminated and clean up took place
- 10 year time frame set up for reconstruction was formed and in 2016
- 60,000 people were still in temporary homes.



The charity shelter box sent 500 disaster relief boxes containing tents, sleeping bags, cooking equipment in the first 3 weeks of the disaster.	At Fukushima the subsequent tsunami disabled emergency generators required to cool the reactors.
Two nuclear plants on the Pacific coast in Fukushima were automatically shut down	Just 6 days after the quake a motorway was repaired – this shows the incredible rapidity with which the Japanese can work with their capacity to cope.
The Japanese government responded by sending in specially trained people such as the Self-Defence Forces, a domestic response to help co-ordinate the rescue and rebuilding effort.	the Japanese Meteorological Agency issued warnings along the Sendai coast
The JMA gave warning giving people 20 minutes to get to safety	Over 340,000 displaced people in the region needed catering for, and issues included shortages of food, water, shelter, medicine and fuel for survivors.
The bullet trains were immediately stopped by sensors along the track to prevent further injury or damage	Residents within a 20 km radius of the Fukushima Plant were evacuated.
40% of Japan's coastline has sea walls of up to 10m high to withstand incoming tsunami waves for example.	A Tsunami warning was issued 3 minutes after the earthquake.



Print/draw/write or list the responses in the table above. Can you colour code or group these into responses that happen immediately and the responses that happen into the long term?

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Who would carry out these responses? Which job roles? Eg. Builders, doctors

Your final task

Remember!!!

This work will be taken into account and used in the judging of a winner when you go into year 7 in your secondary school. The best, most detailed, well presented, creative and informative piece of work will win.



Good luck!!!

Your final task

Using all your information and understanding of the effects and responses to the Japanese tsunami you have to create a story from the perspective of a survivor.

You could complete this in the following ways:

- Written story focusing on your writing skills
- Storyboard with images and explanations with what is happening
- Newspaper article where you are either writing the article or being interviewed

To be the best you need to remember to include:

- Set the scene – what is happening?
- Time scale of effects with primary effects before secondary effects
- Using your key terms and categories (social/economic/environmental)
- How you feel, what you see, what is happening to others around you, what do you do
- How you, other people and the country/world responds to the disaster with immediate responses before long term responses
- Images or symbols of the steps in the 'tsunami story' or your own catchy title



Examples for the layout

