

UK agencies warn of serious disease after disaster

There is a risk of serious outbreaks of disease in the aftermath of the Nepal earthquake, aid agencies have warned.

A lack of shelter, contaminated water and poor sanitation could lead to cholera, dysentery and other water-borne diseases. Immediate action is needed to tackle the problem.

The 7.8 magnitude earthquake has killed more than 7,000 people and injured more than 10,000. More than 4,000 aid workers from around the world have been helping with relief and rescue operations.

There have already been reports of diarrhoea outbreaks and chest infections. Organisations have been working to provide better emergency shelter and to ensure drinking water and sanitation are a part of the emergency response.



Volunteers have been helping to clear debris caused by the earthquake.

\$415 million needed for humanitarian relief:

- 3 million people in need of food aid
- 130,000 houses destroyed
- 24,000 people living in makeshift camps
- 20 teams working to reunite lost children with their families

Nepal earthquake

Name _____ Date _____



The UK's Disasters Emergency Committee (DEC) appeal has so far raised more than £33m. A spokesperson for the committee said, "Cholera is endemic in Nepal, so an outbreak would not be unprecedented; last year (2014) 600 people caught cholera and in 2009 a major outbreak affected more than 300,000 people."

DEC are delivering trucks of water to camps to provide drinking water for displaced people, establishing toilets in camps, distributing family hygiene kits and providing information on the importance of hand-washing.

Glynnis Brooks at the British Red Cross, said: "Water and sanitation remain critical at this stage of the disaster, as those affected are generally much more susceptible to illness and death from disease."

Among the DEC member agencies, Oxfam has been providing water and sanitation in four camps in the Kathmandu Valley and Action Aid has distributed disinfectant kits for cleaning to 2,500 people.

World's Twelve Largest Earthquakes Includes all measured earthquakes since 1900		
Magnitude	Location	Date
9.5	Chile	05/22/1960
9.2	Alaska	03/28/1964
9.1	Off the coast of Northern Sumatra	12/26/2004
9.0	Honshu, Japan	03/11/2011
9.0	Kamchatka	11/04/1952
8.8	Off the coast of Chile	02/27/2010
8.8	Off the coast of Ecuador	01/31/1906
8.7	Rat Islands, Alaska	02/04/1965
8.6	Northern Sumatra	03/28/2005
8.6	Tibet	08/15/1950
8.6	Off the coast of Northern Sumatra	04/11/2012
8.6	Andreanof Islands, Alaska	03/09/1957

Sources: <http://geology.com/records/largest-earthquake/>
<http://www.bbc.co.uk/news/uk-32583422>

Nepal earthquake

Name _____ Date _____

Use the information on pages 1-2 to answer the questions. *



You can use a calculator for some questions but you must still show your working out.

- 1) How many people have been killed or injured by the earthquake? (L1)

- 2) What is the difference in magnitude between this earthquake and the earthquake with the highest recorded magnitude since 1900? (L1**)

- 3) Create a bar chart to show the figures for the magnitude of the earthquakes. **
E3 – largest 3 earthquakes since 1900
L1 – largest 5
L2 – largest 12

- 4) Create a new data table by placing the table of earthquakes in date order, starting with the newest first. (**E3)

- 5)
 - a. Do you think that exactly 4,000 aid workers have been helping? (L1)

 - b. Why have they not given the exact number? (L1)

 - c. This is an example of: (tick one) (E3)
 - i. Rounding
 - ii. Adding
 - iii. Multiplying

- 6) How many houses have been destroyed? Write your answer in words. (L1)

- 7) What are the critical things the government needs to spend their money on first?

Nepal earthquake

Name _____ Date _____

- 8) a. Look at the data table. In what month do the most earthquakes occur?
- b. Look carefully at all the dates in the table. Do you notice anything interesting?
- 9) Use the information in the table to calculate the modal and median magnitude of the world's 12 largest earthquakes since 1900.

- 10) With the money raised from the UK how much have the Nepalese Government still got to find? (L2. Use an exchange rate of \$1 = £0.66)



- 11) a. How many people contracted Cholera last year compared to 2009? (E3)
- b. Was it less or more? (L1)
- c. What was the difference? (L2)

- 12) If 10,000 people were injured how many more disinfectant kits does Action Aid need to distribute? (L1)

Answers and teaching notes

Nepal earthquake

Scene setting

It is recommended that the resource introduced using a suitable YouTube or news video about the Nepal earthquake and general discussion about natural disasters, rescue workers and foreign aid.

For example: <https://www.youtube.com/watch?v=0L4mXdSxwtI>

Notes

*No in brackets after each question = approximate Functional Skills level.

** Note that magnitude is measured on the Richter Scale. An increase of 1 on the scale indicates a ten-fold increase in strength. For example, a magnitude 3 earthquake is 10 times larger than a magnitude 2 and 100 times larger than a magnitude 1 earthquake. There is not necessarily a need to explain this to learners but teachers should be aware of this when asking learners to subtract one level of magnitude from another, and when asking them to plot the bar chart.

*** Note that dates are written US style with the month first! Although understanding dates is an Entry Level skill, this gives the question an extra challenge. (Although in reality, only the years are important).

Answers

1. What is the total number of people killed and injured by the earthquake? **More than 17,000 (10K + 7K)**
2. What is the difference in magnitude between this earthquake and the highest recorded? **$9.5 - 7.8 = 1.7$**
3. See next page.
4. Create a new data table by placing the table of earthquakes in date order, starting with the newest first.

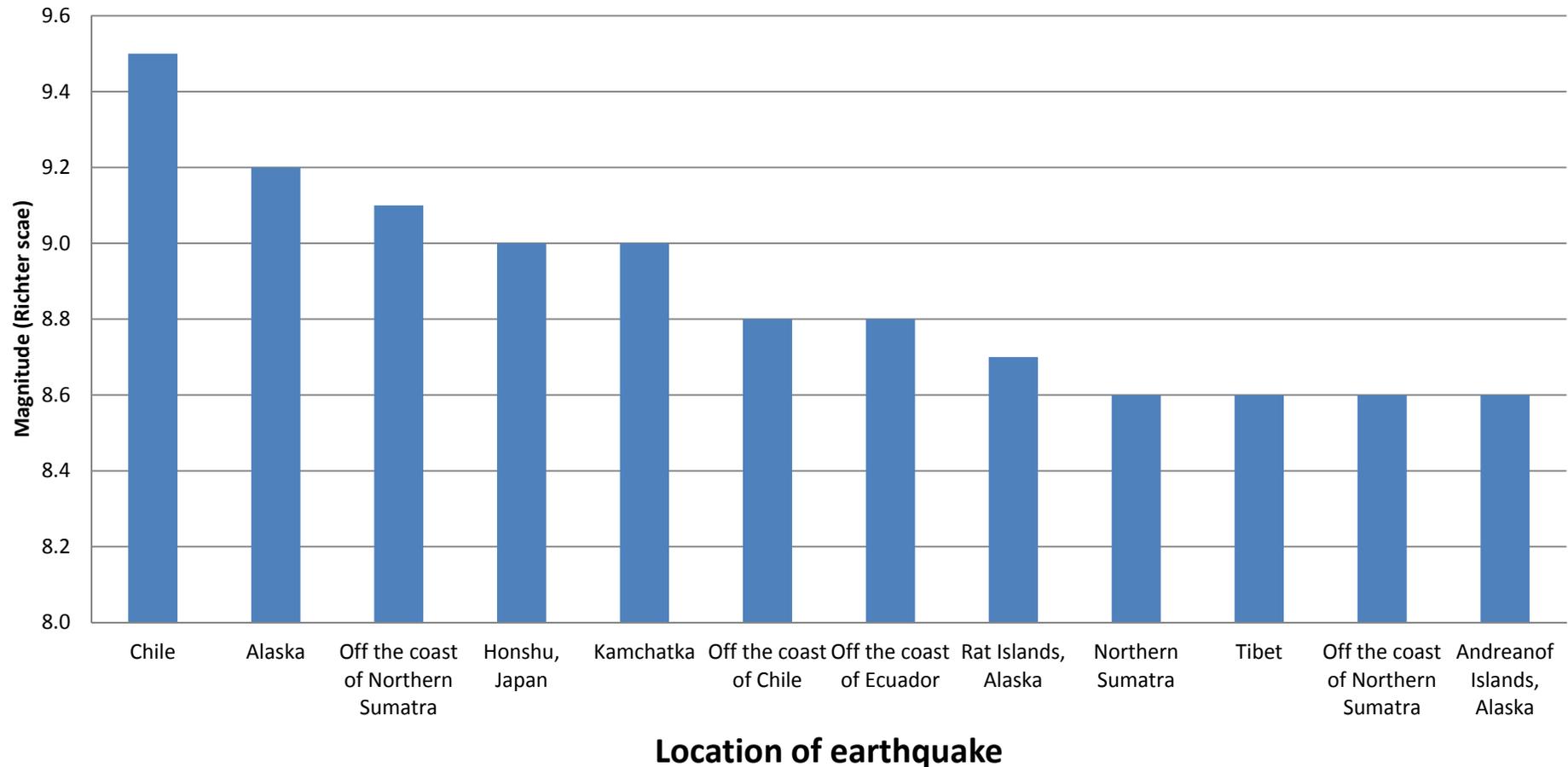
Magnitude	Location	Date (US style)	Date (UK style)
8.8	Off the coast of Ecuador	01/31/1906	31/01/1906
8.6	Tibet	08/15/1950	15/08/1950
9.0	Kamchatka	11/04/1952	04/11/1952
8.6	Andreanof Islands, Alaska	03/09/1957	09/03/1957
9.5	Chile	05/22/1960	22/05/1960
9.2	Alaska	03/28/1964	28/03/1964
8.7	Rat Islands, Alaska	02/04/1965	04/02/1965
9.1	Off the coast of Northern Sumatra	12/26/2004	26/12/2004
8.6	Northern Sumatra	03/28/2005	28/03/2005
8.8	Off the coast of Chile	02/27/2010	27/02/2010
9.0	Honshu, Japan	03/11/2011	11/03/2011
8.6	Off the coast of Northern Sumatra	04/11/2012	11/04/2012

5. a. Do you think that exactly 4,000 aid workers have been helping? **No.**
b. Why have they not given the exact number? **They don't know and/or unnecessary detail.**
c. This is an example of: **Rounding**
6. How many houses have been destroyed? Write your answer in words. **One hundred and thirty thousand.**
7. What are the critical things the government needs to spend their money on first? **Water and sanitation.**
8. a. Look at the data table. In what month do the most earthquakes occur? **March (on 4 occasions)**
b. Look carefully at all the dates in the table. Do you notice anything interesting? **2 entries on 28 March.**
9. a. Mode (most common value) = **8.6** (occurs 4 times)
b. Median = **8.8** (middle value when all 12 values are lined up in order of size)
10. With the money raised from the UK how much have the Nepalese Government still got to find?
Use an exchange rate of \$1 = £0.66.
 $\$450,000,000 \times 0.66 = \pounds 297,000,000.$
 $\pounds 297,000,000 - \pounds 33,000,000 = \pounds 264,000,000$ (£264 million)
11. a. How many people contracted Cholera last year compared to 2009? **600 compared to 300,000.**
b. Was it less or more? **Less**
c. What was the difference? **299,400.**
12. If 10,000 people were injured how many more disinfectant kits does Action Aid need to distribute?
 $10,000 - 2,500 = 7,500$ more kits (assuming it is one kit per person)

Answers and teaching notes

Nepal earthquake

World's Twelve Largest Earthquakes
Includes all measured earthquakes since 1900



Source: <http://geology.com/records/largest-earthquake/>