KSHS Physical Geography Transition Work: Summer 2020 – Miss Chant and Mrs Livingstone

In Y12 Physical Geography lessons you will be studying the two topics of:

- Tectonic Processes and hazards
- Coastal landscapes and change

Task 1: GCSE work/revision:

- Ensure that you have completed all the GCSE work set by your Geography teacher (see resources in Y11 School Closure Folder).
- You will also need to read through and revise your notes on tectonic hazards as this work will form the basis of the classroom-based assessment at the start of the next academic year. This assessment will involve you answering GCSE style questions on the tectonic hazards unit.
- If you have not looked at this unit of work at GCSE or if there are elements you are unsure of please email Mrs Livingstone (sarah.livingstone@kshs.uk) or Miss Chant (sarah.chant@kshs.uk).

Key idea	Specification content
Earthquakes and volcanic eruptions are the result of physical processes.	Plate tectonics theory (convection currents, slab pull theory) Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins. Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.
The effects of, and responses to a tectonic hazard vary between areas of contrasting levels of wealth.	Primary and secondary effects of a tectonic hazard. Immediate and long-term responses to a tectonic hazard. Use named examples (e.g. Nepal/Haiti and Tohoku/New Zealand earthquakes) to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.
Management can reduce the effects of a tectonic hazard	Reasons why people continue to live in areas at risk from a tectonic hazard. How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.

Task 2: Glossary: Complete the glossary of key terms on pages 3-5.

Task 3: Tectonic Case Studies

For the A level course, you need to know a range of case studies from countries at different stages of development. We would like to you independently research the following examples of tectonic hazards:

Volcano: Montserrat 1995-97 (LIC)
Earthquake: Sichuan, China 2008 (NEE)
Tsunami: Tohoku, Japan 2011 (HIC)

For each case study you will need to include:

- The physical causes of the event e.g. plate boundary, names and types of plates, tectonic processes.
- The hazards associated with this event e.g. lava, pyroclastic flows, liquefaction, landslides.

- The specific effects of the tectonic event e.g. social, economic, environmental, short and long term.
- Management strategies used to reduce the impacts e.g. earthquake proof structures, education and planning, monitoring.

For each case study have a go at answering the following questions:

- What physical factors influenced the scale of the disaster? *e.g. magnitude, distance from epicentre, depth of focus, geology, relief, distance from sea etc.)*
- What human factors influenced the scale of the disaster? *e.g. level of development, governance, degree of urbanisation, population density, accessibility, the scale of damage etc.)*

You will need to incorporate maps, photos and diagrams into your work and each case study should be at least a page of typed work (excluding visuals).

PLEASE ENSURE THAT THE GLOSSARY OF KEY TERMS AND CASE STUDIES ARE PRINTED OFF AND SUBMITTED TO YOUR GEOGRAPHY TEACHER IN THE FIRST TWO WEEKS OF THE COURSE

Task 4: Developing independent geographical awareness

We encourage you to read around the subject and watch films/ documentaries for personal interest and to support your learning of the tectonic hazards topic. Have a look at the suggestions of documentaries, films and books on pages 6.

Glossary: Tectonic Processes and hazards

Asthenosphere	
Ash	
Benioff Zone	
Bomb (lava)	
Cone	
Collision Zone	
Conservative margin	
Constructive margin	
Continental drift	
Core	
Crater	
Crust	
Destructive margin	
Epicentre	
Fault	
Focus	
Fold mountain	

Governance	
Hot spot	
Hypocentre	
Island arc	
Intra-plate	
Jokulhlaup	
Lahars	
Lava	
Liquefaction	
Lithosphere	
Love wave	
Magma	
Mantle	
Nuée ardente/ pyroclastic flow	
Oceanic trench	
Palaeomagnetism	
Primary wave	

Pyroclastic flow	
Rayleigh wave	
Rift valley	
Sea-floor spreading	
Secondary wave	
Subduction	
Tsunami	
Alfred Wegener	

Books, movies and documentaries on this topic:

Books:

1. Richter 10 by Arthur C. Clarke and Mike Mcquay (1996)
   A novel about how a young boy's life is crushed by the impacts of an earthquake, and how this inspires him to work as a seismologist to prevent a future earthquake from having an impact
2. The day the island exploded by Alexandra Pratt (2009)
   A novel based on a boy's quest for survival after experiencing a volcanic eruption and the destruction it caused.

Documentaries:

1. Expedition volcano (available on BBC player for the next few weeks)
   This excellent documentary considers one of the most dangerous volcanoes in the world; the Nyiragongo volcano in the Democratic of the Congo most recently erupted in 2002, wreaking havoc and destruction on the people who live in the nearby city of Goma. But now, an international and local team of scientists are mounting a major expedition to study the volcano. They are attempting to discover the warning signs that it is building towards a new eruption, so they can alert the people of Goma before it erupts again.

2. Kate Humble: Into the Volcano (on BBC iplayer)
   Broadcast on BBC2 on 30th April and 1st May, Kate and a team of geologists travel to the heart of two volcanoes in Vanuatu.

3. Planet Earth – Episode 2 – Mountains (On BBC iplayer for11 months)
   Looks at how mountains are formed from tectonic processes. A great David Attenborough programme!

   Films:

1. Pompeii (2014) (12A)
   Inspired by the eruption of Mount Vesuvius in AD79 that buried the city of Pompeii, it looks at the terror causes by a volcanic eruption.

2. San Andreas (2015) (12A)
   A fictional film that portrays the destructive impact that a strong earthquake along California's notorious San Andreas fault line could have on nearby cities, such as Los Angeles and San Francisco.

3. The Impossible (2012) (12)
   Based on a survivor's experience of the 2004 Boxing Day tsunami in the Indian Ocean, which was caused by an undersea earthquake measuring over 9 on the Richter Scale.

4. Dante's Peak (1997) (12)
   Set in the fictional town of Dante's Peak the film looks at what can happen when a dormant volcano wakes up. Great for looking at the warning signs before an eruption and the difficulties of accurate prediction and evacuation orders.