

**Activity Title:**

# 3d – Tsunami & inundation mapping

*(This activity was adapted from the ideas generously provided by the teachers at Tauranga Girls College)*

**Learning outcome(s):**

- Understand the concept of an inundation map
- Map the western Bay of Plenty suburbs most at risk

**Key words:**

Tsunami; Inundation maps; Evacuation zones

**Materials:**

- Internet access and the Bay of Plenty civil defence website – [www.bopcivildefence.govt.nz](http://www.bopcivildefence.govt.nz)
- Copies of the latest inundation / evacuation zone map (see following pages)
- Blank outline map (see following pages)
- Coloured pens and pencils

**Approximate time required:**

Activities are broken into 20 minute segments. Each numbered activity below takes approximately 20 minutes. Completing all the activities in this topic will take up to 40 minutes.

**Suggested prior learning:**

- 3b Existing knowledge brainstorm
- 3c Précis map

**Possible learning activities:**

1. Locate a copy of the 2011 inundation map (see following page) OR visit the BOP Civil Defence website at [www.bopcivildefence.govt.nz](http://www.bopcivildefence.govt.nz) and download the latest inundation map for Tauranga, Mt Maunganui and Pāpāmoa from the tsunami page (to access click on the tsunami icon on the natural hazards page or use the following link <http://www.bopcivildefence.govt.nz/be-prepared/what-to-do-in-a-Tsunami>. Note: the map links can be found at the bottom of this page. Spend time discussing the function of the map and what it illustrates. Using coloured pens and pencils and the blank outline provided create your own map showing the suburbs that are (a) most at risk, (b) at risk and (c) not at risk. Locate other key features (such as roads) on your map as an aid to orientation.

Activity #:

# 3d

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Tsunami and inundation mapping.

Curriculum Level:

Level 6 / 7 / 8

Curriculum Links:

**Social Science Achievement objective**

**7.1** Understand how the processes that shape natural and cultural environments change over time, vary in scale and from place to place, and create spatial patterns.

Curriculum:

Key competencies:

Thinking

Principles:

Future focussed

Values:

Community and participation

Geographic Key

Concepts:

Processes, Change

Geographic skills:

Map construction, Map interpretation

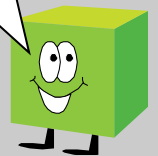
Assessment

opportunities:

Geography Achievement Standards: 1.5, 1.8, 2.5, 2.6, 2.8, 3.3, 3.5, 3.8

Sustainability tip!

Print and laminate large inundation maps for future use



2. Discuss the following:

- The maps and the mapping process
- Where residents from different suburbs could go to escape a tsunami (consider issues such as accessibility, modes of transport etc).
- What and why Tauranga areas are at risk (e.g. reclamation areas)?
- What impact does tsunami risk have on population growth and population distribution?
- How does population growth impact on tsunami evacuation planning?

**Follow-on activities (found elsewhere in this resource):**

6c Survey & compare perceptions of tsunami risk & level of preparedness