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|  | Australian Curriculum Year 5 Geography sample assessment ׀ Student booklet  Investigating natural hazards |

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| [File:Colleges Crossing Flooded-11.jpg](http://upload.wikimedia.org/wikipedia/commons/e/e7/Colleges_Crossing_Flooded-11.jpg) |
| Image: *Colleges Crossing Flooded-11, 8 January 2011*, lordphantom74, Creative Commons Attribution 2.0, <https://flic.kr/p/98ApgH> |

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| Create a multimodal presentation to propose actions of how to reduce the impact of future flooding in an identified flood area. |
| **You will undertake a geographical inquiry that includes:**   * selecting an area that is prone to flooding * developing geographical questions * collecting, recording and evaluating data and information * interpreting data to draw conclusions * representing location and spatial patterns on a map * communicating findings in a multimodal presentation. |

## Section 1. Selecting a case study

During this unit you have explored flooding around the world and ways in which humans have contributed to, and responded to flood events.

**Your task:** Select a geographical area prone to flooding as a case study. It may be at the local or regional scale.

Use the following criteria to select a case study.

**Describe the relative location[[1]](#footnote-1) of the geographical area of your selected case study**

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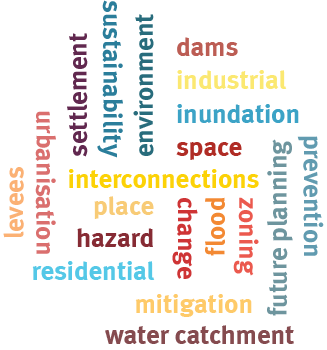
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**I chose this case study because:**

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**Review the geographical concepts and terminology below and check for understanding.** Provide examples where appropriate.



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## Section 2. Developing geographical questions

You will investigate the **human impact** on the environment that contributes to flooding in your case study.

You will also:

* examine the strategies used by authorities to **prevent**, **mitigate** and **prepare** for flood events
* generate questions that you could use to help guide your research. You may wish to consider Who, What, Why, When and How when generating your research questions.

**List relevant geographical concepts and terms to help you structure your questions.**

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| Research area | Relevant geographical concepts and terms | Possible research questions |
| The environmental, human and managed features of this area | e.g.  Place  Interconnections  Environment  Water catchment |  |
| The spatial pattern and distribution of flooding over time |  |  |
| The human impact on the environment that contributes to flooding |  |  |
| The impact of flooding |  |  |
| Flood prevention and mitigation strategies |  |  |
| Recommendations for the future |  |  |

## Section 3. Collecting, recording and evaluating data and information

**Locate and record a range of sources to answer your research questions in the table below.**

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| --- | --- | --- | --- | --- |
| Research question | Type of source[[2]](#footnote-2) accessed | How useful is this source? | How reliable is this resource? | Summary of key ideas |
| e.g. How have humans changed the natural environment? | Series of aerial photos of the local area including the land contours, water catchment and residential areas. | Identifies the extent of new residential development in close proximity to the river, an area prone to flooding over time. | Google Earth — satellite images taken in 2011 and 2014. Pattern of development clearly reveals the extent of development. | The natural contour of the land has been altered by land clearing to develop new residential estates and supporting infrastructure such as roads and petrol station. This has changed the flow of water and run off during times of high rainfall. Substantial areas of concrete means that there are less opportunities for water to soak onto the land. |
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| Research question | Type of source accessed | How useful is this source? | | How reliable is this source? | Summary of key ideas |
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**Use the questions in *Assessment resource: Evaluating geographical sources* to reflect on your research before completing this section.**

Explain how you decided if the information and data you have located is useful and reliable.

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## Section 4. Representing and communicating

### Representing data

**Create a base map using Google Earth[[3]](#footnote-3) or Queensland Globe.[[4]](#footnote-4)**

Your teacher may provide you with a video tutorial to show you how to create a base map.

Below is an example of a base map that shows the location of the Brisbane Exhibition and Convention Centre, relative to the Brisbane CBD.

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| Map Data: Sinclair Knight Merz and Fugro. Source: Google Earth, Brisbane BCEC and CBD. This image originally appears in the Queensland Curriculum and Assessment Authority, G20 resource for schools, [www.qcaa.qld.edu.au/31004.html](https://www.qcaa.qld.edu.au/31004.html) |

**Outline the area affected by flooding**

Use cartographic conventions[[5]](#footnote-5) to locate and represent:

* places identified in your research
* major infrastructure, such as roads
* relevant landmarks
* water catchment area.

## Section 5. Interpreting and analysing sources

**Review sources of data and information to respond to the following questions.**

Identify the spatial distribution[[6]](#footnote-6) of flooding in the identified geographical area. Explain how the pattern[[7]](#footnote-7) of flooding has changed over time.

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Explain the relationship between the pattern of flooding and the human-altered features of the environment. To what extent have features of the natural environment been changed over time?

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What strategies are being used to prevent, mitigate and prepare for future flooding in the area?

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What recommendations can you make to reduce the impact of future flooding and future flood events?

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How will these actions prepare for and respond to future flood events?

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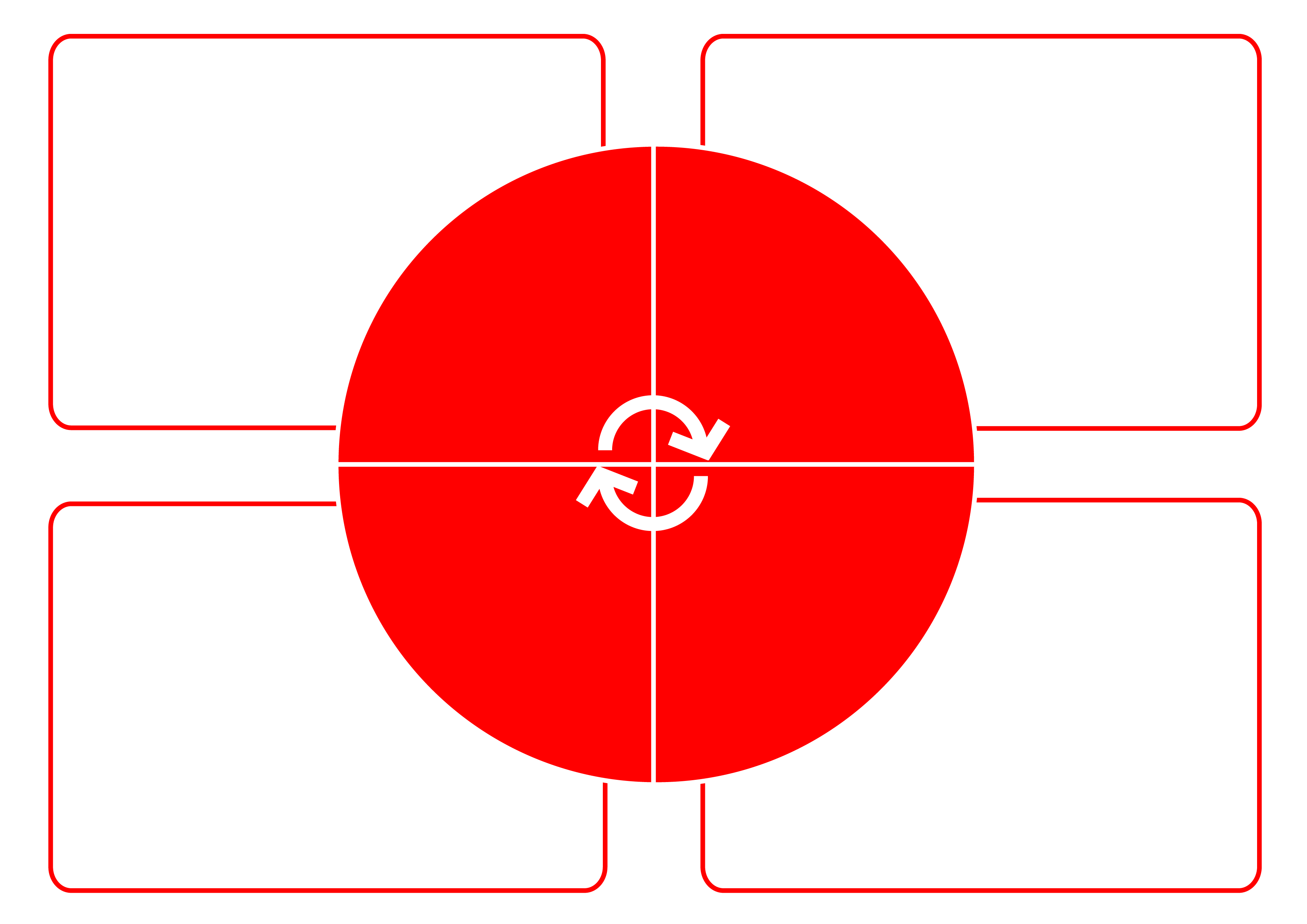
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**Section 6. Presenting findings**

**Plan a multimodal presentation using a format such as PowerPoint or infographics.[[8]](#footnote-8)**

[Your](file:///C:\Users\chol\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\BZT0740Y\Your) teacher will provide you with examples of infographics.

Use the diagram below to plan the content of your presentation. Use the headings as a starting guide. Adapt the diagram and headings to develop your findings.



The influence of human interaction on environmental features of the identified area

Spatial pattern and distributions of flooding over time

Proposed actions to reduce the future effects of floods and the expected effects of these proposals

Flood prevention and mitigation strategies used by different groups

**Use the following checklist to review your planning.**

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| Have you: | **X:\D_CIS\B_Curriculum_Support\U_Publishing\QCAA\web\_pending\14631_Year 5 Geography sample assessment\Assets\thumb up.png** | **X:\D_CIS\B_Curriculum_Support\U_Publishing\QCAA\web\_pending\14631_Year 5 Geography sample assessment\Assets\thumb down.png** |
| * identified key messages about flood management? |  |  |
| * used images that are relevant to the content of your presentation? |  |  |
| * explored spatial patterns and distributions in flooding data? |  |  |
| * connected visuals and ideas together? |  |  |
| * used layout, graphics and language effectively? |  |  |
| * used relevant geographical concepts and terminology? |  |  |
| * represented data and information clearly |  |  |
| * engaged the interest of the viewer of your presentation? |  |  |
| * labelled images with clear headings and titles? |  |  |

1. Relative location: Location relative to other places, e.g. the distance of a town from other towns. [↑](#footnote-ref-1)
2. Types of geographical sources: interviews, surveys, field notes and sketches, graphs, data tables, maps, satellite images, reports, diagrams, photographs, plans [↑](#footnote-ref-2)
3. Google Earth [www.google.com/earth](http://www.google.com/earth/) — a spatial online tool, which provides up-to-date maps, imagery, and other spatial data. [↑](#footnote-ref-3)
4. Queensland Globe [www.dnrm.qld.gov.au/mapping-data/queensland-globe](http://www.dnrm.qld.gov.au/mapping-data/queensland-globe) — a spatial online tool, developed by the Department of Natural Resources and Mines, which provides up-to-date Queensland maps, imagery and other spatial data. [↑](#footnote-ref-4)
5. Cartographic conventions include border, scale, legend, title and north. Symbols and shading may be used to represent particular features and spatial distributions. [↑](#footnote-ref-5)
6. Spatial distribution — the arrangement of particular phenomena over the Earth’s surface. [↑](#footnote-ref-6)
7. Pattern — a regularity in data shown in graphs or maps, e.g. the decline of rainfall in Australia as distance increases from the coast. [↑](#footnote-ref-7)
8. Infographics are visual representations of information, data or knowledge used to present complex ideas quickly and clearly. They can be created using online tools, such as [easel.ly](http://www.easel.ly/), [piktochart.com](http://piktochart.com/) and [infogr.am](https://infogr.am). [↑](#footnote-ref-8)