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# Programming for

# geographical inquiry K–10

## Presenter notes

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## How to complete this course

Course participants should work their way across the tabs at the top of each page and complete the embedded activities. On completion of the course, participants must also ensure they follow the applicable procedures under the Wrap-up tab.

Please ensure that the course supervisor has scheduled Programming for Geographical Inquriy K–10 on My PL@Edu. The **Course deliverable** is found in the Inquiry design tab andmust be completed by participants and submitted to their supervisor for accreditation. For information on scheduling an event, see the tutorials on the [Professional Learning and Leadership Development website](https://www.det.nsw.edu.au/proflearn/areas/plp/mypl/princdeliver.html).

## Preparation required

* Prior to delivering the course, set aside some time to familiarise yourself with the content contained in each tab.
* Download and print the activity booklet which contains all the activities.
* Email the Program builder [geographical inquiry template link](https://pb.bos.nsw.edu.au/templates/80760/s/CF2860ED-8A98-48C2-B21667849CDC4C3B) to participants with instructions on saving it to their templates so they can work directly into it during the course. If an alternative template is to be used, distribute this to participants.
* Photocopy multiple copies of the school’s geography scope and sequence and / or the deliverable from the course Planning to teach geography K–10. In the first four steps of the inquiry participants refer to the these documents.
* Have some printed sets of the geography teaching and learning frameworks available for reference, or provide an electronic link.

## Group organisation

This course is best delivered with participants in small groups, preferably stage groups*.* Alternatively, participants may view the course on their own electronic device, such as a tablet or laptop. However, the pace can be better controlled if the presenter can deliver the course on an interactive whiteboard.

Discussion and collaboration between participants will enrich the delivery of this course.

# Overview

Indicative time: 5 minutes

### What is this tab about?

This tab provides a rationale and context for participants to engage in the Programming for Geographical Inquiry K–10 course. It also includes:

* pre-requisites
* objectives
* content
* advice
* accreditation
* course materials.

### Delivery

Click on each of the drop down headings.

Course prerequisites – play the video [Geography: What is it for?](https://youtu.be/sgGb8BM2TBk) if participants haven’t undertaken either of the courses Your school and the Geography K–10 syllabus or Planning to teach geography K–10.

**Notes**

# Why program

Indicative time: 10 minutes

### What is this tab about?

In this tab participants consider the importance of programming and its place in the teaching and learning cycle. The use of the Geography K–10 Syllabus to guide programming is highlighted. There is no set participant activity for this tab.

### Delivery

* 1. **Purpose** – reflect on the reasons for programming in regard to teaching and learning and the broader school context.
  2. **Teaching and learning cycle** – emphasise the cyclical nature of programming for teaching and learning.
  3. **Quality teaching** – state the rationale for the study of geography. Highlight the four essential questions that guide programming.

Questions to reflect on:

* In the light of the rational for studying geography, why does geography learning matter?
* What are the implications of using the four questions to guide programming?
  1. **Program builder** – introduce Program builder as a programming tool for the creating the programmed geographical inquiry. If preferred, an alternative programming template can be used, for example, a school-based template, or overwriting the geography teaching and learning frameworks attached the course in Inquiry design tab.

# Geographical inquiry process

Indicative time: 15 mins

### What is this tab about?

This tab briefly guides participants through the geographical inquiry process. This process underpins all teaching and learning in geography and reflects real world geographical inquiry practices. Each step as it relates to programming is explained in the Inquiry design tab. Participants will complete Activity 1, which is accessed by clicking on the ‘process’ section of the interactive image.

Two recommendations:

* The geographical inquiry process is subject specific so geographical inquiries need to be framed entirely with a geography focus.
* Schools should use the Geography K–10 Syllabus to create units of learning based around the geographical inquiry process rather than adapting existing units.

### Delivery

1. **Question** – introduce participants to the nature of geographical questions using the What is where? Why there? Why care? model. This is unpacked in greater detail in the Inquiry design tab.
2. **Acquire** – introduce participants to ways of collecting geographical data and information. The tools will be explained in more detail in the Geographical tools tab. Highlight the importance of students going outside the classroom and collecting primary data.
3. **Process** – outline the reasons geographers process their collected data and information. Highlight the core elements of processing geographical information. As shown in the diagram, stress that processing is cyclical and not a linear process.

**Activity 1** asks participants why the processing step in a geographical inquiry is necessary.

1. **Communicate** –explain ‘communicating and responding’ as the final step in the geographical inquiry process. Highlight the response step as an opportunity to empower students to propose or take individual or group action that contributes to a sustainable future.

# Geographical tools

Indicative time: 10 minutes (overview of tab and geographical tools resource)

### What is this tab about?

This tab explains the Geographical tools. The link to the [geographical tools](https://schoolsequella.det.nsw.edu.au/file/01fd8130-124e-4dc1-adf4-2763e8747a44/1/geo-tools.zip/index.htm) resource provides examples of each tool. The activities in this tab are optional. To cover this tab and the geographical tools resource in full, is an additional 60 minutes to the allocated course time.

**Delivery of geographical tools teacher information and optional activities**

1. **Maps** – Activity 2: Mapping quiz.
2. **Fieldwork** - Ask participants to read the information for their stage. Activity 3: Local fieldwork sites.
3. **Graphs and statistics** - Note the tip about cross-refencing the mathematics syllabus. Activity 4: Using ABS statistics.
4. **Spatial technologies** - If time explore a few of the examples of GIS maps and tools. Activity 5: GIS maps and tools.
5. **Visual representations** - Look at the example of a field sketch in [GeogSpace: Photo sketching](http://www.geogspace.edu.au/verve/_resources/2.1.2.3_2_photo_sketching.pdf). Download the list of picture books for future reference. Activity 6: Visual Representations

### Delivery of geographical tools resource

**Maps**

* Map types – stress the importance of using the correct terminology with students
* Map scale – be aware that scale can be confusing: A large scale map shows a small area for a small scale investigation (personal and local). A small scale map shows a large area for a large scale investigation (national and global)
* Mapping basics ­– stress BOLTS in mapmaking

**Fieldwork**

* Purpose – stress the importance of students going outside and collecting primary data.
* Sites ­– encourage the regular use of the school grounds and local areas
* Tools – note the use of a range of fieldwork tools and techniques

**Graphs and statistics**

* + Statistics – note the importance of analysing statistics

**Spatial technologies**

* Virtual maps – note the use of Google Maps in our daily lives
* GPS and GIS – note the difference between GPS and GIS: GPS is a system and GIS is a product.
* Augmented reality – ask participants for examples, for example, Aurasma

**Visual representations**

* Graphic organisers – highlight the use of these in organising, representing and analysing data and information

# Inquiry design

Indicative time: 135 minutes

### What is this tab about?

In this tab, participants are guided step-by-step through the completion of the course deliverable: a programmed geographical inquiry for one content description of the Geography K–10 Syllabus.

**Preparation:**

* Email the Program builder [geographical inquiry template link](https://pb.bos.nsw.edu.au/templates/80760/s/CF2860ED-8A98-48C2-B21667849CDC4C3B) to participants with instructions on saving it to their templates so they can work directly into it during the course. If an alternative template is to be used, distribute this to participants.
* Photocopy multiple copies of the school’s geography scope and sequence and / or the deliverable from the course Planning to teach geography K–10. In the first four steps of the inquiry participants refer to the these documents.
* Have some printed sets of the geography teaching and learning frameworks available for reference, or provide an electronic link.

### Delivery

1. **Course deliverable** – explain that participants will create a programmed geographical inquiry for one content area of the Geography K–10 Syllabus.
2. **Inquiry design process** – work through each step of the process, working through each tab in each ‘pop-up’. Participants complete the activity in each step of the process directly into the Program builder template, or alternative template.
3. **Select focus area and content heading** – refer to the school’s geography scope and sequence and/or the deliverable from the course Planning to teach geography K–10*.*
4. **Select syllabus outcomes, content and key inquiry questions** – particularly note the points on selecting content.
5. **Decide on a case study and geographical question** – highlight the benefits of a case study approach in geography teaching and learning. Ensure participants understand the questioning hierarchy.
6. **List geographical concepts, skills and tools** – recommend that participants paste all concepts, skills and tools into their template. Later they can highlight those that are the focus (or ‘grey out’ those are not the focus).
7. **Consider assessment strategies** – highlight the notion of assessment for, as and of learning. Stress the importance of participants being clear on what they want the students to learn.
8. **Plan teaching and learning strategies** – highlight the value of programming teaching and learning activities for each step of the geographical inquiry process:

* **Stimulus** – stress the value of this engagement step
* **Question** – highlight the nature of geographical questions
* **Acquire** – state the importance of specifying Geographical tools in data and information acquisition
* **Process** – reflect on the importance of the processing step. Highlight the importance of specifying processing tools
* **Communicate** – note the use of the communication step as assessment of learning. Highlight the importance of the final response step in geographical inquiries.

1. **Adjust content, process, product or learning environment** – highlight the importance of differentiation.
2. **Plan evaluation and reflection strategies** – state the importance of students reflecting on both the process and content in their learning.

# Wrap up

Indicative time: 5 minutes

### What is this tab about?

This tab provides information about how to complete the course for accreditation.

### Delivery

1. Remind participants that the deliverable has to be signed off by the principal or supervisor using the Course completion checklist.
2. Guide participants to complete the Reflect on your learning activity in their activity booklet.
3. Participants complete the online evaluation forms in [My PL@Edu](http://www.google.com.au/url?q=https://www.det.nsw.edu.au/proflearn/areas/plp/mypl/index.htm&sa=U&ei=oqkwT7mgMOmWiQeIwajzBA&ved=0CBEQFjAA&usg=AFQjCNFfiYcfyekX5Rps0MchLc5HOpmAqQ).
4. Participants should complete the online evaluation forms from BOSTES (if applicable) to ensure appropriate accreditation.

### Notes