

## Skill 1 – Location and Features of Hawkesbury-Nepean Catchment

### Syllabus

#### *Water Resources*

- investigate the characteristics and spatial distribution of global water resources (ACHGK037)

### Outcomes

- GE4-1** locates and describes the diverse features and characteristics of a range of places and environments
- GE4-7** acquires and processes geographical information by selecting and using geographical tools

### Geographical Tools

MAPS – identifying direction and using political maps

### Introduction

The Hawkesbury-Nepean Catchment covers around 22 000km<sup>2</sup>. That is the same size as the country of Belize in Central America and twice the size of the Pacific Island country, Vanuatu.

A number of major towns, dams and rivers are located within the Hawkesbury-Nepean Catchment area. This lesson will explore the location of major towns and rivers and develop students' understanding of the geographical skill of direction.

## Activity 1 – Location

Use Map 1 to complete this activity

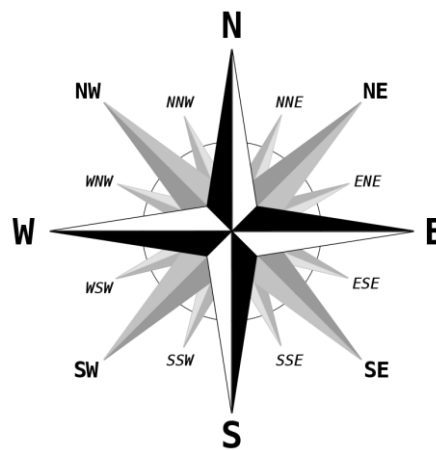
1. Name six (6) towns/cities located within the Hawkesbury-Nepean Catchment area.

## Activity 2 – Direction

### Direction

Definition: direction is the position of one location relative to another.

For example, what is the direction of Penrith from Sydney. The answer is west.



*A 16-point compass*

### Features of Compass

- There are 4 main points on a compass (north, south, east and west)
- North is always at the top of the map and south is always opposite direction to north
- East is always to the right of north and west is directly opposite east.
- An easy way to remember the order, going clockwise from the top, is never eat soggy Weetbix.
- An eight (8) point compass uses points half-way between the four main points (north, east, south, west). They are shown on the compass above: northeast, southeast, southwest and northwest.
- A sixteen (16) point compass uses points half-way between these 8 points, to create eight extra points on the compass. These locations are shown on the compass above: north-northeast, east-northeast, east-southeast, south-southeast, south-southwest, west-southwest, west-northwest, north-northwest.

### Skill Steps

1. Identify the HOME point from the question. The HOME point is the place the direction is **from** in the question. In the example below the HOME point is Sydney.  
(Example: What is the direction of Penrith **from** Sydney?)
2. Draw a 4 point compass with the centre point of the compass over the home location. (This acts as a guide to identify the correct direction.)
3. Draw a line from the home point to the location to identify the direction.
4. Identify the direction using a 16 point compass

## Direction Questions

Use **Map 1** to complete this activity

1. What is the direction of Windsor from Penrith?
2. What is the direction of Wallacia from Penrith?
3. What is the direction of Lithgow from Penrith?
4. What is the direction of Goulburn from Penrith?
5. What is the direction of Wollongong from Penrith?
6. What is the direction of Sydney from Penrith?
7. What is the direction of Hornsby from Penrith?
8. What is the direction of Gosford from Penrith?
9. What is the direction Sydney from Lithgow?
10. What is the direction of Goulburn from Wollongong?

## **Hawkesbury-Nepean Catchment: Rivers and their Main Tributaries**

The Hawkesbury-Nepean Catchment area is made up of major rivers and their tributaries.

A **tributary** is defined as a river or stream flowing into a larger river or lake. For example, South Creek is a tributary of the Hawkesbury River (smaller creek flowing into larger river).

This activity is aimed at developing students' understanding of the river system of the Hawkesbury-Nepean Catchment and further developing their direction skills. It also introduces some key geographical terminology (tributary and confluence) relevant to river catchments.

### **Activity 3 – Rivers and Tributaries**

Use Map 1 and other maps from the ESRI website to complete this activity.

1. Name the tributary that flows into the Hawkesbury River from the west between Penrith and Windsor.
2. What is the name of the river that flows into Lake Burragorang from the south?
3. Name the river that flows into Warragamba Dam.
4. Name the creek that flows into Windsor from a southerly direction.
5. Identify the TWO rivers that flow into the Hawkesbury from the west.
6. What is the name of the river that flows into the Hawkesbury through Wisemans Ferry?
7. Name the river that flows into Lake Burragorang from the north.
8. What is the general direction of the flow of the Nepean River?

#### **Geographical Term**

Confluence – The point where two rivers meet to merge as one

9. What is the name of the town located near the confluence of the Grose and Nepean rivers?
10. Name all the main tributaries shown on the map that make up the catchment system from Goulburn to Windsor.

#### **Extension Activity**

Using the information from Question 10, explain what problems could occur at Windsor if there was a lot of rainfall in the catchment area to the south?