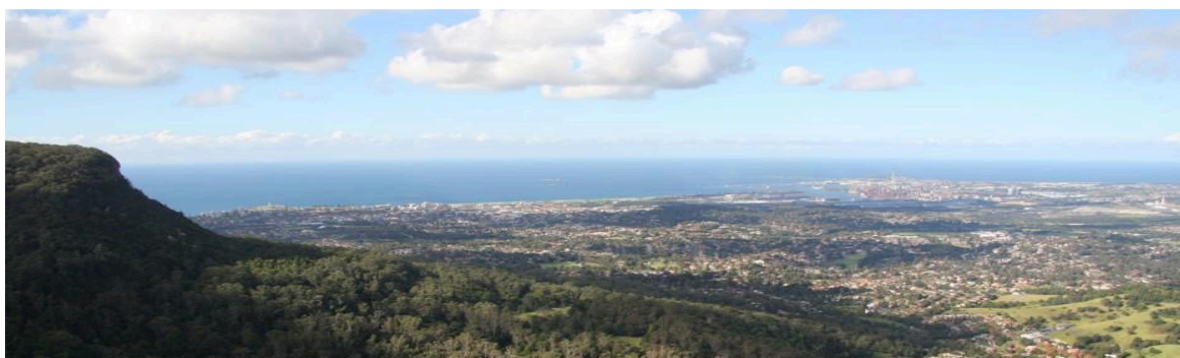


Stage 4 Geography

Landscapes and Landforms

Mt Keira

ANSWERS



Name: _____

Class: _____

Key Inquiry Question – What are the geographical features of this area?

Observe the landscape features of the escarpment and coastal plain and complete the following:



1. Use Eastings and Northings to find **AR0290**. Observe the contour lines in this area and describe the topography (slope):

(steep, flat, gentle slope)

2. Place a marker on the **GR** for Mt Keira Summit Park **GR031911**

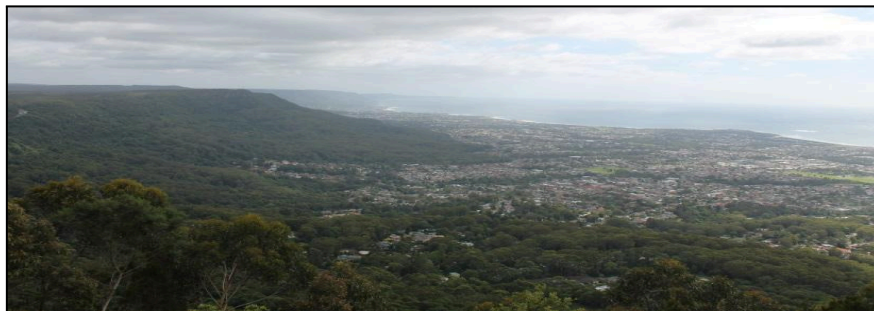
3. Place a marker on the map feature with **GR987866 Mt Kembla**

4. Use the legend to find the land use at **GR079891 Lighthouse**

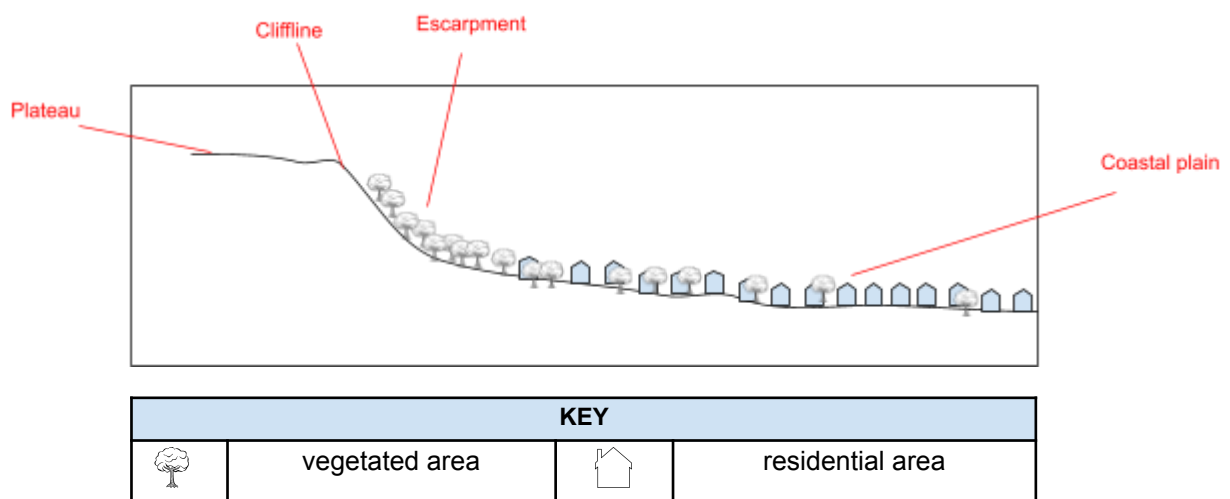
5. Use a compass to find the following bearings:

- a) Lighthouse **110°** b) Broker's Nose **010°**

Key Inquiry Question – What are the geographical features of this area?



Title: Looking north from Mount Keira Summit.



1. Draw a **profile sketch** of the view looking north from Mount Keira Summit.
2. Give your profile sketch a **title**.
3. Label the following landforms on your profile sketch: **plateau, escarpment, coastal plain, cliffline**.
4. Use the key provided to indicate the **vegetated** and **residential** features of the landscape.

Key Inquiry Question – How have people utilised and changed the Wollongong landscape?

Timeline of land use in the Illawarra coastal plain

Pictorial representation	Observations of land use		Description of land use
 1815 (early colonisation, pop. 1000)	Heavily forested Partially cleared Largely cleared	Traditional Agriculture Residential Urban	Fire stick farming for hunting
 1900s (pop. 10,000)	Heavily forested Partially cleared Largely cleared	Traditional Agriculture Residential Urban	More land clearing for dairy farms
 1950s (pop. 74,000)	Heavily forested Partially cleared Largely cleared	Traditional Agriculture Residential Urban	Farms becoming replaced by houses/town
Present day (pop. 300,000) From the lookout facing south, examine the current landscape.	Heavily forested Partially cleared Largely cleared	Traditional Agriculture Residential Urban	Highly urbanised (tall buildings, industrial)

1. **Search for:** hospital, university, CBD, steel works, residential, parkland, lake, Buddhist temple, farmland and natural vegetation.

2. Name 3 changes to the current landscape that have changed since the 1950s.

a) **_more buildings (urbanised)** b) **_less agriculture _** c) **_more trees**

Key Inquiry Question – Why do people value landscapes and landforms?

1. People might value Mount Keira in different ways. From your experience today on the mountain, and from looking at the images above, consider what different stakeholders value about the landscape at Mt Keira and determine which values are **A**esthetic, **C**ultural, **S**piritual or **E**conomic.

Local Dharawal people		Tourists	
	Dreaming Story Women's Country View to Five Islands		Safety features Cafe Views for photo opportunities Bus access with toilets
A	E	S	C
Bushwalkers/ nature lovers		Mt Keira Adventure Park Developers	
	Nature trails Rock climbing Natural environment Views Peaceful		Lookouts and other facilities present Natural environment Views Development potential
A	E	S	C
Yourself			
	What do you value about this place? • • •		
A	E	S	C

1. What value does the **view** from Mt Keira have on the following groups?

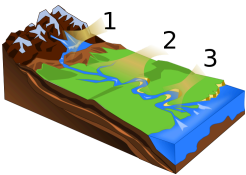
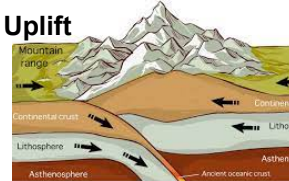
a) Bushwalkers **A** b) Dharawal people **S** c) Developers **E** d) Tourists **A**

2. How do the developers' values impact other user groups, including yourself?

Bushwalkers/nature lovers (upset with crowds/ damage to environment) Dharawal people (loss of respect for spiritual site)

Tourists (better access/ more activities/ fun and entertainment) Yourself (bring your family, something for the holidays)

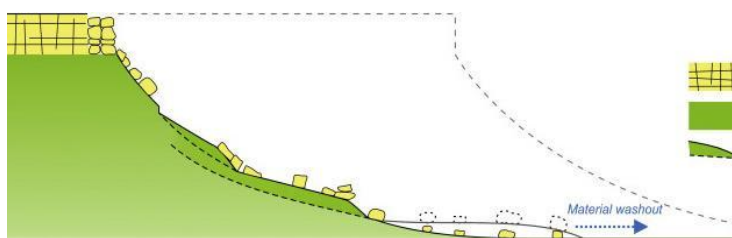
Key Inquiry Question – What environmental processes have created the Illawarra Escarpment?

Ancient Processes (300 - 100 mya)			
What happened?	Effect on the escarpment	-Evidence	
Transport 	Water carried sand, pebbles, and other sediments to the ocean.	Rounded pebbles 	Shows that the pebbles and other sediments were: * transported by water.
Deposition 	Layers of sandy sediment built up under the sea and became concreted together under pressure to form sandstone.	Shell fossils 	Shows that the sediment was: * deposited in the ocean.
		Horizontal bedding 	Shows that the sediments were: * deposited over time
Uplift 	Tectonic forces pushed sandstone upwards from the seafloor to form mountain ranges (100 mya).	Vertical jointing 	Shows that the sandstone was: * forced up unevenly

Current processes			
Process	Image	Effect upon escarpment	Evidence
Weathering (Chemical)		Water seeps through the rock and slowly dissolves the bonds.	Soft rocks - the sandstone can be crushed
Weathering (Physical)		Plant roots break the rocks apart	Plant roots growing in cracks.
Undercutting		Soft rock at base of cliff erodes away, leading to block collapse.	Undercutting (caves) and fallen boulders/ landslides

- Describe how the processes of weathering and erosion will continue to change the Illawarra escarpment landform over time.

Block collapse will continue to erode the escarpment, moving it westward over time



Key Question – *What environmental and human processes form and transform forest landscapes?*

Escarpment Forest		Summit Park	
Biotic (<i>living</i>) Factors			
Vegetation type (eg: shrubs, small trees, large trees)		Vegetation type (eg: shrubs, small trees, large trees)	
Canopy height (meters)		Canopy height (meters)	
Canopy cover (% of sky hidden when looking up)		Canopy cover (% of sky hidden when looking up)	
Leaf litter cover (% of soil hidden when looking down)		Leaf litter cover (% of soil hidden when looking down)	
Habitats (hollows/burrows/nests/shelters)	high / medium / low	Habitats (hollows/burrows/nests/shelters)	high / medium / low
Abiotic (<i>non-living</i>) Factors			
Air Temp. (C)		Air Temp. (C)	
Soil Type (sand/clay/loam/other)		Soil Type (sand/clay/loam/other)	
Soil Surface Temp. (C)		Soil Surface Temp. (C)	
Soil Moisture (%)		Soil Moisture (%)	
Wind Speed (m/s)		Wind Speed (m/s)	
Light (lux)		Light (lux)	
Vegetation Profile Sketch - Mt Keira Escarpment forest and Summit Park			

- Circle on your data sheet, 3 of the largest differences in the data collected in the **Escarpment Forest** compared to the **Summit Park**. eg. In the Summit Park - less canopy, leaf litter, habitats, higher temp, higher wind, and light.
- Identify 3 human processes that have impacted the Mt Keira landscape at the Summit Park.
 - loss of trees
 - added parkland
 - added buildings, lookouts and pathways