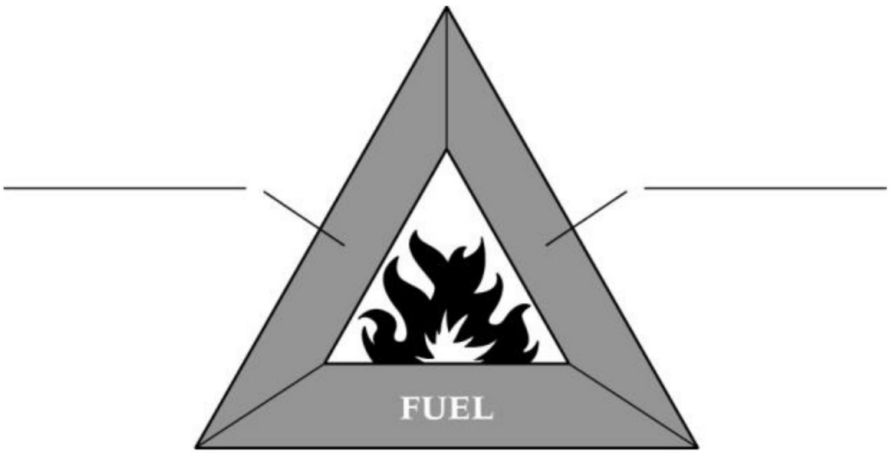
Science and Geography Stage 3 - WNPEEC

Impact of Fire and Living Things Response to Fire

Key inquiry Questions for the day:
• Science - How do the structural and behavioural features of living things support survival?
• Geography - How can the impact of bushfires on people and places be reduced?

PRE-EXCURSION WORK

Woodland Bushfire Introduction:



1. Complete the missing words of the fire triangle

2. What things could provide **heat** to start a bushfire?

• _____	• _____
• _____	• _____

3. What things could provide **fuel** to start a bushfire or keep it going?

- _____
- _____
- _____
- _____

4. Identify where the fire would get oxygen from

_____

5. What climate conditions make it perfect for fire?

- _____
- _____
- _____
- _____

6. Plants have various ways to survive a bushfire. Research or as a class discuss the various adaptations plants have to enable survival during and after a fire.

- _____
- _____
- _____
- _____
- _____
- _____

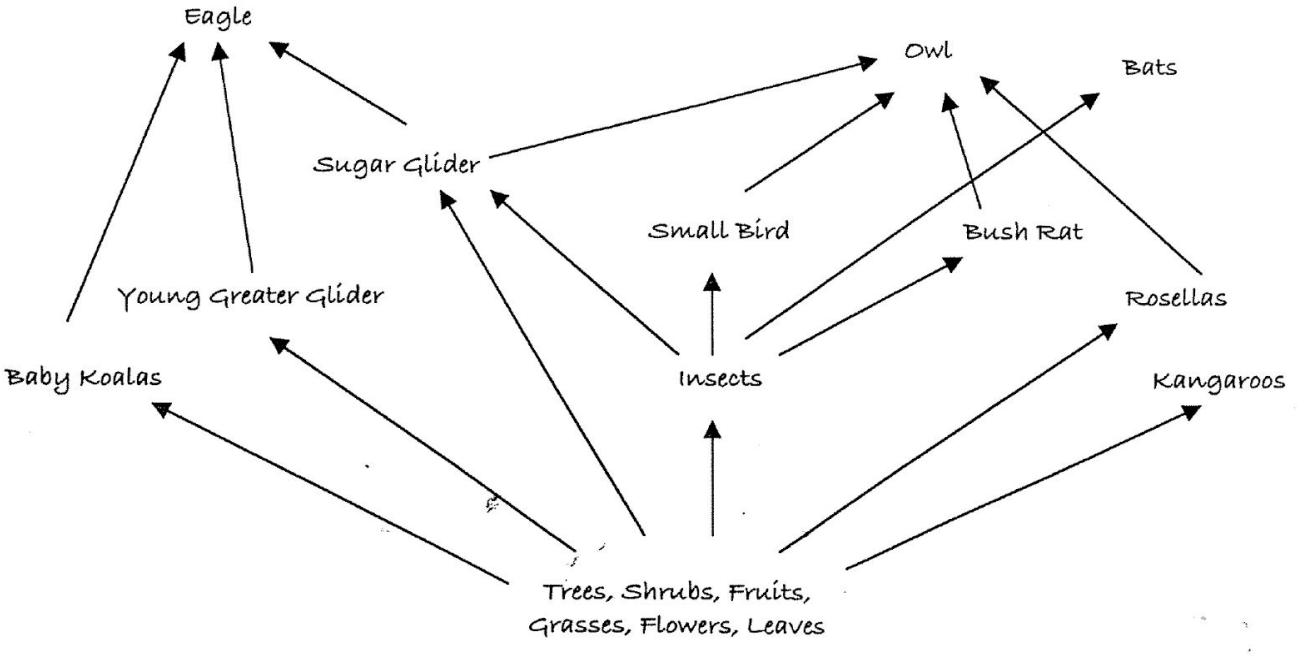
7. As a bushfire advances and passes through an area, some animals have certain strategies that enable them to survive a fire.

For the animals listed below, describe the strategies they may use to survive a bushfire. Explain how the fire will impact upon their food, water and shelter.

Animal	Survival Strategies	Impact of Fire
Koala		
Goanna		
Native Bee		
Antechinus		
Wedge Tail Eagle		
Woodland Bat		

Changes Following Fire - Fire and Fauna

The diagram below shows a typical food web found in a woodland ecosystem



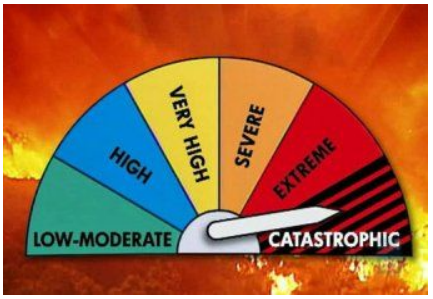
7. An intense bushfire sweeps through the woodland killing some plant species including tall eucalypt trees. List the animals you think could escape the bushfire.	
• _____ • _____ • _____	• _____ • _____ • _____

8. A greater Glider survives the bushfire, why might it not survive in the short term directly after the fire

9. After a fire, animals that live on the ground and under shrubs are more visible as they have nowhere to hide. Which animals in the food web would benefit from these new conditions	
• _____ • _____ • _____	• _____ • _____ • _____

10. Draw your home and label what you can do to reduce the impact of bushfires on people and your place.

11. What is your area fire rating today?



WNPEEC EXCURSION

1. Scientific Instruments/ tools used to measure fire conditions		
Measurements	**Instrument/ tool**	
Date		
Time		
Temperature (℃)		
Wind Speed (km/hr)		
Wind Direction (°)		
Humidity (%)		
Fuel Load kg/Ha		
Gradient (°)		

2. Warrumbungle Fire Rating Investigation		
Measurements	**White Gum Lookout**	**WNPEEC**
Date		
Time		
Temperature (°C)		
Wind Direction (°)		
Wind Speed (km/hr)		
Humidity (%)		
Fuel Load kg/Ha 1.Gross weight (g/0.25m^2) - bag weight = Net weight (g/0.25m^2 2.Net weight X 4 = Net waste (g/m^2) 3.Net weight (g/m^2) ÷ 1000 = Net waste (kg/m^2) 4.Net weight (kg/m^2) X 10,000 = net weight (kg/Ha) 5.Net weight (kg/Ha) ÷ 1000 = net weight (t/Ha)		
Gradient (°)		
YOUR FIRE RATING		

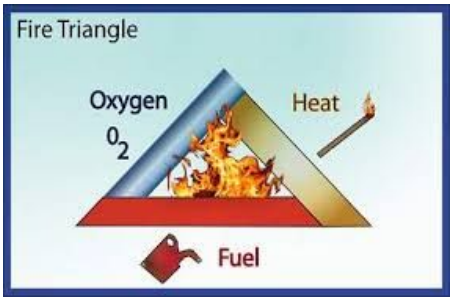
3. What location would offer more favourable conditions for a bushfire today?

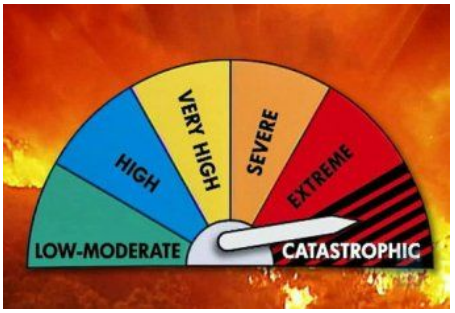
_____

4. Why?

_____

_____





5. Evidence of regeneration of living things in the Warrumbungle N.P. after the 2013 fire (words and drawings)		
	Plant regeneration	**Animal occupation**
Evidence		

6. What does your evidence tell you about the regenerative state of the Warrumbungle National Park?

_____

_____

7. What would else would increase the speed of regeneration?

- _____
- _____
- _____
- _____

8. Gamilaraay Aboriginal people cared for this area for many thousands of years. How may have they used fire here?

- _____
  _____
- _____
  _____
- _____
  _____

9. What could we do to reduce the impact of a bushfire, like the 2013 fire?

- _____
- _____
- _____
- _____