

Team names: _____

Application Exercise 1

Look at the photo.

What questions do you have?



A guess-the-number-of-lollies-in-the-jar competition was recently held at Crusoe College. Shown above is the grand prize.

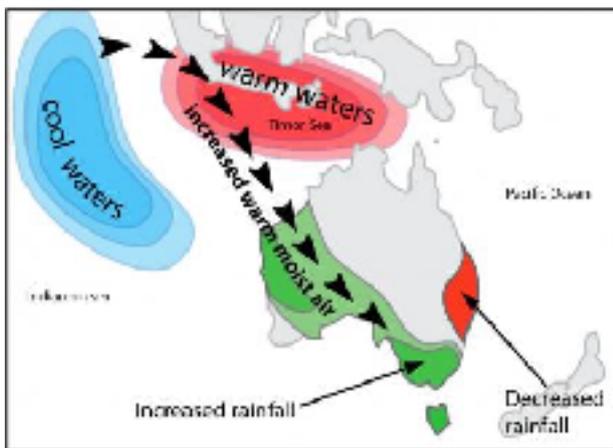
What are your estimates for the number of lollies in the jar?

What numbers would be too high?

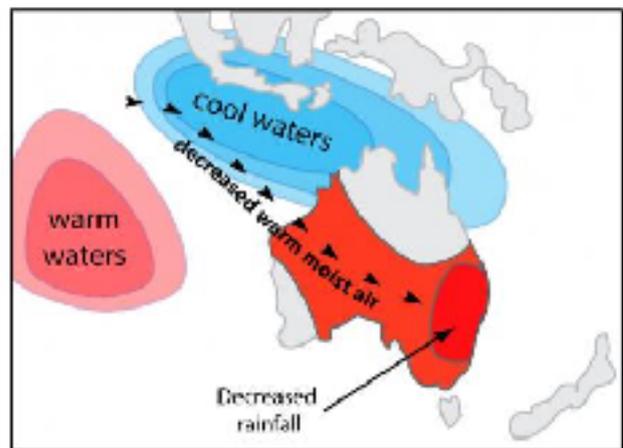
Too low?

Application Exercise 2

You may have noticed that this spring has been colder and wetter than usual. What you may not know is that it has to do with the temperature of the Indian Ocean: at the moment, the water is warmer on the east side of the ocean. When the opposite occurs, the weather is dry and bushfire risk increases. This measurement of temperature difference is called the Indian Ocean Dipole (IOD).



Negative phase: cool Indian Ocean water drives moist warm air and brings normal rainfall.



Positive phase: warm Indian Ocean water leads to weaker, drier winds and less rainfall.

Before 2016, the most recent negative IOD event was in 2010.

Which of the following years had the rainiest spring?

- (A) 1992
- (B) 2000
- (C) 2010
- (D) 2016

Bendigo Daily Rainfall (mm)

	1992			2000			2010			2016		
	Sep	Oct	Nov	Sep	Oct	Nov	Sep	Oct	Nov	Sep	Oct	Nov
1st	0.4	0	6.4	0.2	2.8	6.2	1.6	0	1.2	1.0	3.4	
2nd	0.8	0	0	4.4	0	28.6	2.0	0	0	0	0	
3rd	6.6	0	0	0.8	0	0	0	0	0	0	20.4	
4th	3.2	0.4	8.2	0	0	0	50.6	0	0	2.8	6.2	
5th	0.4	9.4	2.0	0	0	0	31.0	0	0	0	8.6	
6th	0.3	0	0	0.2	0	0	0.2	0	0	0	0	
7th	0.5	2.2	0	0.2	0	0	0	8.0	0	0	0	
8th	1.4	1.4	0	27.6	0.6	0	0	0	1.6	0	0	
9th	0	34.8	0.6	2.4	0	0	2.4	0	0	22.6	0	
10th	0	0.4	1.2	5.0	0	13.0	0.6	0	0	5.0	0	
11th	0.2	4.0	4.4	8.4	0.2	7.6	0.8	0	0	0	0.2	
12th	9.0	0	2.6	0.6	0	1.8	0.2	0	0	0	1.6	
13th	0.3	0	0	0	0	0	4.8	18.6	11.8	20.0	0.6	
14th	0	0	0	0.2	0	0	0	11.8	13.8	43.8	0	
15th	18.2	0	0	0	1.8	7.4	0	20.2	0	12.8	0	
16th	4.2	9.0	0	0	0	8.4	0	12.8	0	0	0	
17th	0	16.6	0	0	0	7.0	0	0.2	0.2	0	8.0	
18th	0	11.8	15.4	0	1.4	0.2	0	0.2	0	3.2	1.2	
19th	1.4	0	2.0	0	24.8	0	0.2	0	0	1.6	2.4	
20th	0	1.0	0	0	0.2	0	0	0	0	0	0	
21st	0	0	9.4	0	0.2	0.6	0	0	0	1.4	0	
22nd	15.8	0	9.0	0	0	0	0	0	0	0.4	4.8	
23rd	8.4	0	0	0	3.4	0	0	10.2	0	0	0.8	
24th	0	0	10.4	0	54.8	0	0	0.2	0	0.2	0	
25th	17.2	0.8	0.4	5.6	6.2	0	0	0	20.2	7.0	0	
26th	2.0	0	9.2	5.4	0.4	0	0	0	3.8	0	0	
27th	0	0	0	0.2	0	0	0	0	24.0	2.6		
28th	0	0	1.6	0	0.2	0	1.4	0	38.2	0		
29th	15.6	0	0	1.6	0	0	0.2	0	0	15.2		
30th	1.0	4.4	2.8	0	0	0	0.2	1.6	0.4	13.8		
31st		15.0			0			53.8				