





## Monitoring the pythons

**This activity involves looking at measurements and 2 way tables, as well as reading and drawing graphs.**

The students will find out about the use of data in monitoring a python's length and weight to make sure it is growing healthily.

This worksheet comprises an overview of many topics. It will allow students opportunities to use decimals and make conversions between units. The students will also need to take information from the table, read and draw conclusions from graphs, and plot other data on a graph in order to see trends.



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## Curriculum Links

### **MATHEMATICS**

#### **Algebra**

- recognise, sketch and produce graphs of linear and quadratic functions of one variable with appropriate scaling, using equations in  $x$  and  $y$  and the Cartesian plane
- use linear and quadratic graphs to estimate values of  $y$  for given values of  $x$  and vice versa and to find approximate solutions of simultaneous linear equations

## Monitoring the pythons

The Education department at Marwell keeps some animals to use for handling purposes during school workshops.

In 2005, Baobab the royal python laid some eggs. The babies were given the African names of Zulu, Ibos, Bemba, Bobo and Mandinka.

Felicity helped to look after the baby pythons, and measured their weights and lengths to make sure they were healthy.

### Length

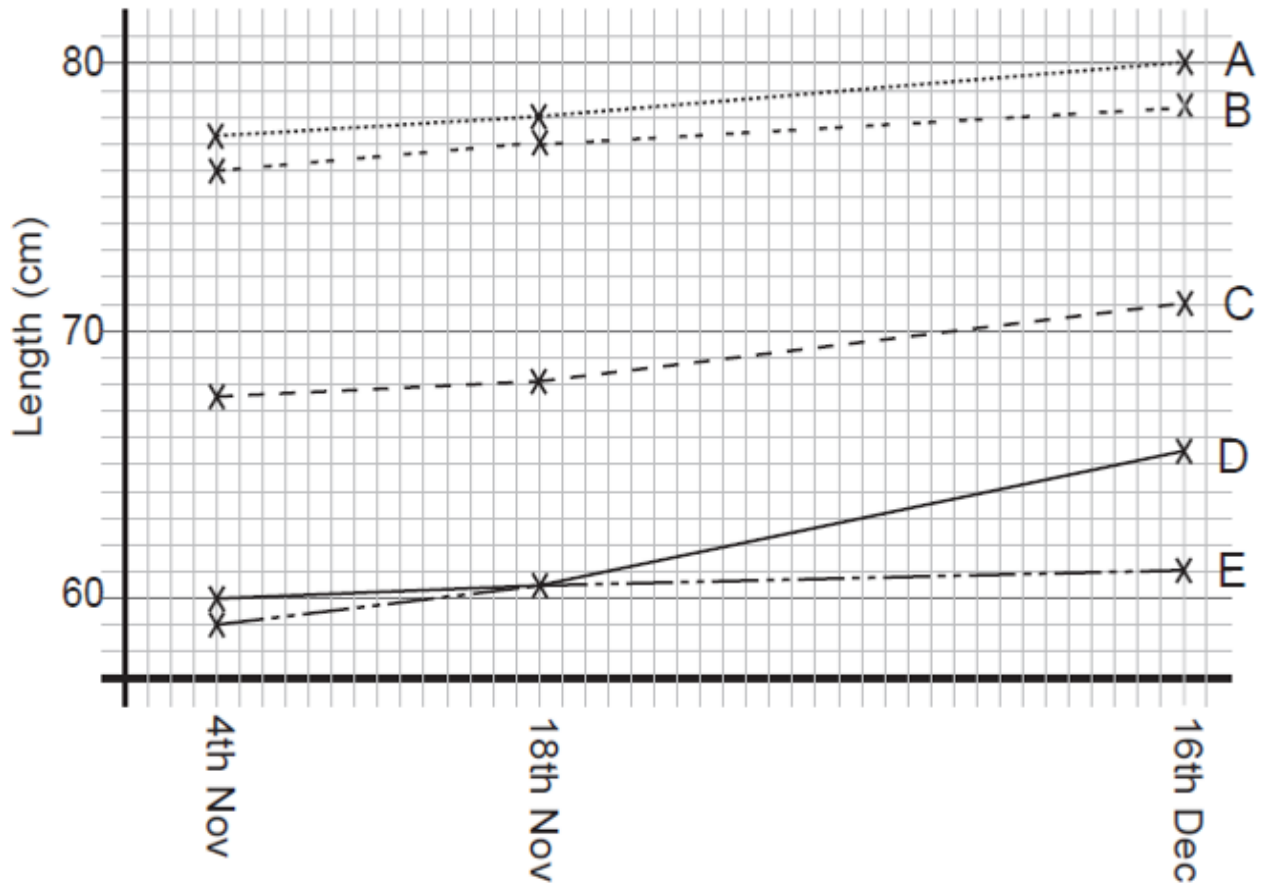
	Royal python length (cm)		
Name	4 <sup>th</sup> November 2005	18 <sup>th</sup> November 2005	16 <sup>th</sup> December 2005
Zulu	76	77	78.3
Ibos	59	60.5	61
Bemba	67.5	68	71
Bobo	60	60.5	65.3
Mandinka	77.2	78	80

- 1) How long was Bemba on 18<sup>th</sup> November?
- 2) Which python was the longest on 4<sup>th</sup> November?
- 3) Look at the pythons' lengths on 16<sup>th</sup> December. Put them in order of length, starting with the shortest python.
- 4) How much did Mandinka grow between 4<sup>th</sup> November and 18<sup>th</sup> November?
- 5) How much did Zulu grow between 18<sup>th</sup> November and 16<sup>th</sup> December?
- 6) How much did Bobo grow between 4<sup>th</sup> November and 16<sup>th</sup> December?



## Star challenge!

Here is a graph of the pythons' growth. Match each line to the correct python.



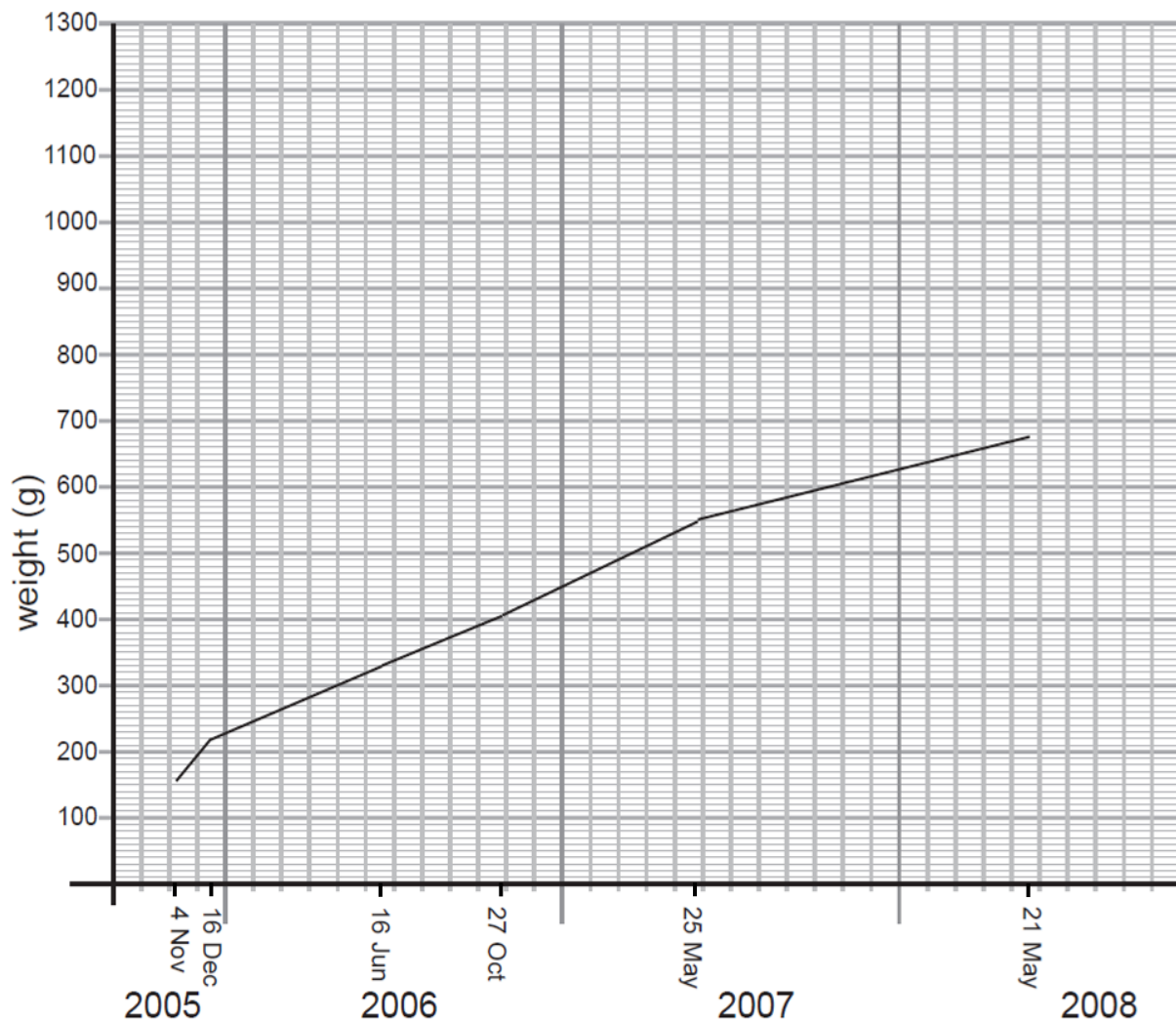
Which python grew the most between 4<sup>th</sup> November and 16<sup>th</sup> December?

How many **mm** did Ibos grow between 4<sup>th</sup> November and 18<sup>th</sup> November?

## Weight

	Royal python weight (g)					
Name	04/11/05	16/12/05	16/06/06	27/10/06	25/05/07	21/05/08
Zulu	262	349	487	611	919	1270
Ibos	150	207	346	475	687	749
Bemba	232	277	373	385	682	867
Bobo	156	220	330	404	548	675
Mandinka	279	330	448	448	636	797

- 1) The graph below shows the weight of one of the pythons. Which python is it?
- 2) On the axes below draw graphs to show the other pythons' weight. Remember to label the lines.



Which python do you think Felicity might have been worried about in October 2006? Why?