

TI workshop Use of technology to assist in learning

IB MYP math/science

1. Active learning
2. Multi-disciplinary
3. Investigative

Finding central tendency

Measure pieces of pasta. Round to the nearest cm. Set up strands from shortest to longest.
Mark the middle, and each quartile.

Enter into TI list each measure

Menu

(4) Lists and spread sheets

Label the list at the top of the column (leaves)

Highlight the column

Menu

Action

Sort

Ascending

Go to new page

Ctrl doc

1. Add calculator
2. Menu
3. 6 statistics
4. 1 stat calculations
5. 1 one variable
6. Number of lists (hit enter)
7. X1 list (leaves)
8. Enter

Get 5 point summary. Write it down : min, max, Q1, Q2, Q3

ATL: Organise and depict information logically, communication

Change FORM

Go to a new page ctrl doc

(5) Data and statistics

Click to add variable on the x axis (leaves)

Menu

- 1 plot type
- 2 box plot
- Move cursor over tracking pad to see the 5 point summary

Create box and whisker graph

I used leaves of different lengths in class.



Use the technology to create parallel box and whisker graphs

Problem solving: taken from Oxford's Concept Based Mathematics text

STATEMENT of INQUIRY: how quantities are represented and be used to establish relationships and trends in a population.

The ages of a sample of subscribers to two German newspapers are shown below.

Süddeutsche Zeitung: 65, 36, 44, 25, 37, 29, 27, 19, 60, 46, 24,
35, 20, 55, 64, 30, 31, 22, 48, 53, 67

Der Tagesspiegel: 46, 18, 35, 20, 27, 25, 40, 24, 31, 29, 20, 63,
18, 30, 19, 28, 21, 34, 54, 22, 27

- a Construct two box-and-whisker diagrams for the two data sets.
- b Compare the ages.

Use the same scale, and draw one box-and-whisker diagram above the other.

Dendroecology and Mathematics (Use power point slides)

Inquiry Question: Can we find the age of a tree by measuring its circumference?

<https://www.youtube.com/watch?v=ERu1WtO3J0k>

<https://www.youtube.com/watch?v=xmZO7aRgcW4>

Investigate: The MYP is an inquiry based curriculum. It should be interdisciplinary, and based on real world problems.

ATL: Organise and depict information logically, communication

You are to measure the circumference of the tree cookie and count the number of tree rings in the cookie.

Is there a relationship between the age of the tree and the circumference?

Enter the data from your table into two columns (x, y)

X = number of rings Y= circumference

Create a scatter plot

Find the line of regression

Find the type and strength of the correlation

Check the one variable stats calculation for the means of each the number or rings and the circumference.

Check to see if this point is on the line of best fit.

Can you predict the circumference of a 100 year old tree from your graph?

Inter- disciplinary areas; factors that affect growth of trees, capillary action in Xylem and Phloem tubules, properties of materials (wood), photosynthesis, cell structure, dating panel paintings and musical instruments, soil conditions, altitude...



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