

Dear Data – Data Science

An introduction to more data



Learning intentions [unit]

- How to ask questions to allow more depth to data collected
- How to uncover the story within the collected data
- Using a visualisation to present the data so that others can discover information

Success criteria [unit]

Have created a data self portrait using:

- Adding depth questions to a data gathering task
- Collecting data to match these questions
- Interpreted the collected data to find the new information
- Created a visulisation to allow fellow students and teachers to discover the information within your data

Asking Questions



Learning intention [lesson]

- What is **Data Science**
- What is data science used for in the real world
- Why do we look for more depth in our data
- How do we get more depth to our data collection

Data science

The collection, interrogation, and presentation of data in such a way that new information can be found within the data.

Data science in the world

- Used to help make predictions based on prior data, for example:
 - Election Results
 - Trading of stocks and shares
- Used to help analyse performance to allow future improvement, for example
 - Sports performance
 - Improve the courses you study in school

Data depth Questions

- By just collecting data to answer one question we limit the information that can be discovered.
- For example collecting how many drinks of water in a week.
- With a simple question of “how many drinks of water?” , the data collected would look something like this:



Adding to data depth with questions

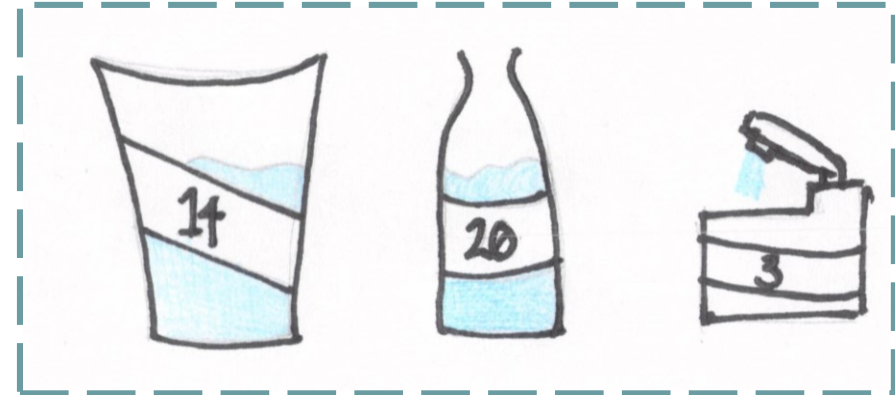
By using some key data gathering questions:

Who, What, Why, When, Where, How

The quantity of data can be increased and allow us to try and find connections

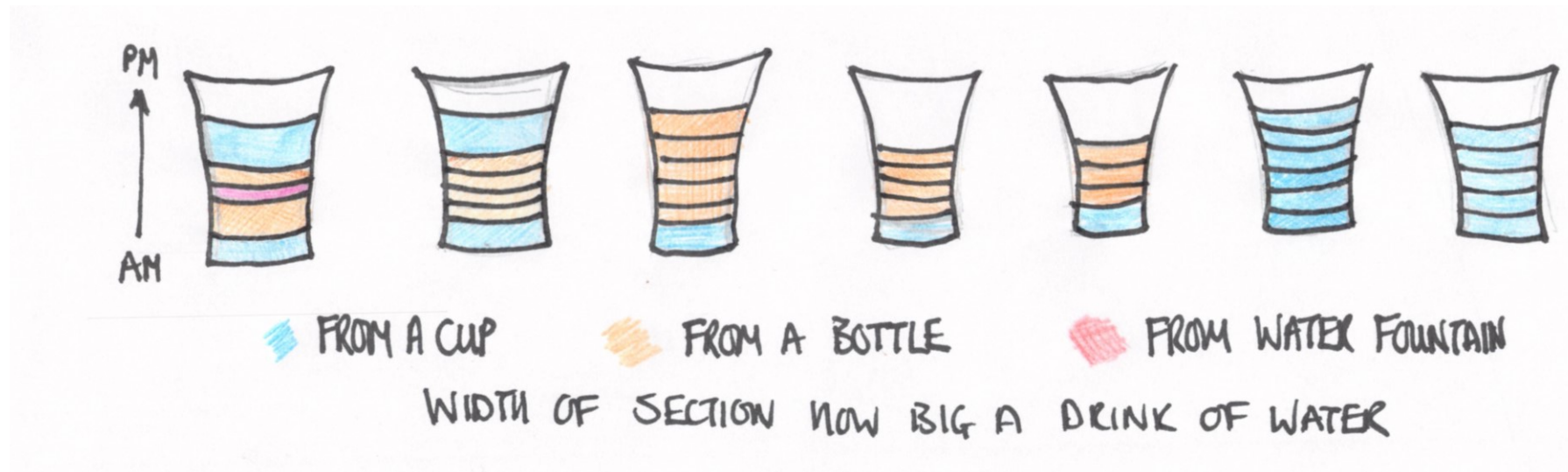
Water Example – more detail

With a slightly more complex
how many drinks of water and
what were the drunk from:



Water Example – EVEN more detail

We can keep adding questions to collect a lot of data to try and see patterns in the data that we might not have noticed: **How** many drinks, **what** was it drunk from, **what** size was the drink, **what** time of the day was the drink



Task 1 – Creating Questions

- Work in groups and write down the extra depth questions your could ask about drinks for the week.

Task 1: Example Answers

- What was drunk?
- What was it drunk from?
- What time was it drunk?
- What day was it drunk on?
- Why was it drunk?

- Where was it drunk?
- How was it drunk?
- How long did it take to drink?
- What was worn while it was drunk?
- What was happening when it was drunk?

Task 2: Questions about media

- Think about using media during the week.
- Work in groups to write down all the questions you could ask to understand someone's media usage in a week.
- What is the main question?
- What are the extra depth questions?

Task 2: Example Answers

- Where was it consumed
- What were you doing
- Why were you consuming it?
- How was the media consumed (listening, watching, reading, etc)
- What was it consumed form (Tv, book, computer, phone etc)
- What day was it?
- What time was it?
- How long did it take

Task 3 – Questions about books

- Think about books.
- Work in groups to write down all the questions you could ask to understand more about a book.
- What is the main question?
- What are the extra depth questions?

Task 3: Example Answers

- Genre of book?
- Size of book?
- Type of book (fiction, non-fiction)?
- Length of book?
- Read the book?
- Author male or female?
- Construction of book (hard or soft back?)
- Topic

Collecting Data



Collecting the data

- These sheets will help you collect your data with depth
- Lvl means Level.
- Each level will add more depth and detail (**you do not need to fill every box with a question**)

Data Science: Depth Questions						
Lvl 1						
Lvl 2						
Lvl 3						
Lvl 4						

Collection Sheet: questions example

- Think about the questions you could ask about how someone uses their phone.
- The table shows example depth questions smartphone usage.

Data Science: Depth Questions						
Lvl 1	App USED					
Lvl 2	How LONG			REASON		
Lvl 3	WHEN		DAY		WHERE	
Lvl 4	I WAS					

Collection Sheet: collected data example

- The table shows an example of some collected data about smartphone usage.
- The answer in Lvl1 corresponds to the question on the previous slide in the Lvl1 box.

Data Science: Depth Questions						
Lvl 1	CHROME					
Lvl 2	SATURDAY			5:30pm		
Lvl 3	5 MINUTES		DINNER RELIEF		KITCHEN	
Lvl 4	STANDING					

Homework [for next week]

1. Choose one of the following categories:

- Media Consumed (Tv, film, books, comics, radio, music, etc)
- What did you drink this week
- Books in your home
- Clothes that you own
- Mobile apps that you used this week

2. Using what we have learned, decide on your depth questions and fill out the “Your Questions” table in the worksheet.

3. Collect data over the course of the next week [starting today]

Your questions						
Lvl 1						
Lvl 2						
Lvl 3						
Lvl 4						

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