

# Dear Data

## Lesson 2: What's the story?



Starter Task: From last week, what depth questions could you ask for these topics?

1. The emotions you feel
2. The sounds you hear

# Learning Intentions

- To find a story in the data collected
- To complete a more complex tally chart
- Use a more complex tally chart to explore your data for unusual patterns

# Success Criteria

- Found a story in your data
- Worked on (hopefully completed) your complex tally chart
- Identified any unusual data in your collection

# A simple visualisation



# Finding the question for your visualisation

- What you did
- Where you did it
- The size of books you own
- How much you have drunk
- The clothes you wear (or don't)
- Where you spend your time
- What do you do with your days
- Where you keep your books

The answer to the question will be shown in our visualisation.

To get started we are going to find how many unique answers there are to each of our data depth questions.

# Step 1: Analyse Level 1

- Make a copy of the table on the right.
- The first question was:
  - How did I consume the media?
- Look at the example answers on the next slide. There are 4 possible answers in Level 1.
- Enter the number 4 in your table at Level 1

Data Science: Number of Unique Answers at Each Level						
Lvl1						
Lvl2						
Lvl3						
Lvl4						

# Example Answers – How did I consume the media?

Answers to your questions							Answers to your questions						
<u>Lvl 1</u>	Listening						<u>Lvl 1</u>	Reading					
<u>Lvl 2</u>	Phone			0.5 Hours			<u>Lvl 2</u>	Printed Paper			1 Hour		
<u>Lvl 3</u>	Tuesday		22:15		Bedroom		<u>Lvl 3</u>	Tuesday		19:00		Living Room	
<u>Lvl 4</u>	Bed	Fiction	Entertainment				<u>Lvl 4</u>	Arm Chair	Non-Fiction	Work			
Answers to your questions							Answers to your questions						
<u>Lvl 1</u>	Watching						<u>Lvl 1</u>	Playing					
<u>Lvl 2</u>	Desktop Computer			0.5 Hours			<u>Lvl 2</u>	Desktop Computer			1.5 Hours		
<u>Lvl 3</u>	Tuesday		20:00		Study		<u>Lvl 3</u>	Tuesday		20:30		Study	
<u>Lvl 4</u>	Desk Chair	<u>Youtube</u>	Work				<u>Lvl 4</u>	Desk Chair	Game	Entertainment			



## Step 2 – Analyse Step 2

- The second question was:
  - What did I consume the media on?
- Look at the example answers on the next slide. There are 8 possible answers in Level 2.
- Enter the number 8 in your table at Level 2

# Example Answers – What did I consume the media on?

Answers to your questions					
Lvl 1	Listening				
Lvl 2	Phone		0.5 Hours		
Lvl 3	Tuesday		22:15	Bedroom	
Lvl 4	Bed	Music	Entertainment		
Answers to your questions					
Lvl 1	Watching				
Lvl 2	iPad		0.5 Hours		
Lvl 3	Tuesday		20:00	Study	
Lvl 4	Desk Chair	Youtube	Work		
Answers to your questions					
Lvl 1	Listening				
Lvl 2	TV		0.5 Hours		
Lvl 3	Tuesday		22:15	Bedroom	
Lvl 4	Bed	Netflix	Entertainment		
Answers to your questions					
Lvl 1	Watching				
Lvl 2	Record		0.5 Hours		
Lvl 3	Sunday		10:00	Living Room	
Lvl 4	Dining Table	Music	Entertainment		

Answers to your questions					
Lvl 1	Reading				
Lvl 2	Printed Paper		1 Hour		
Lvl 3	Tuesday		19:00	Living Room	
Lvl 4	Arm Chair	Non-Fiction	Work		
Answers to your questions					
Lvl 1	Playing				
Lvl 2	Cinema Screen		1.5 Hours		
Lvl 3	Tuesday		20:30	Study	
Lvl 4	Seat	Movie	Entertainment		
Answers to your questions					
Lvl 1	Reading				
Lvl 2	Desktop Computer		1 Hour		
Lvl 3	Tuesday		19:00	Living Room	
Lvl 4	Arm Chair	Non-Fiction	Work		
Answers to your questions					
Lvl 1	Playing				
Lvl 2	Electronic Book		1.5 Hours		
Lvl 3	Tuesday		20:30	Study	
Lvl 4	Desk Chair	Fiction	Entertainment		

# Finish your analysis

- Continue the same way through all your questions.
- Sometimes you may want to group data rather than collecting individually for example
  - times(06:15, 15:00, 22:00) to time of day (morning, afternoon, night)
  - Duration into <2hours 2 to 4 hours 5+ hours

- Once you have finished analysing your data you have a simple visualisation like this

Data Science: Number of Unique Answers at Each Level						
Lvl1	4					
Lvl2	8				3	
Lvl3	7		4			7
Lvl4	9	13	4			

# A more complex tally chart



# Our Goal

## What do you think it is telling you?

Our goal is to make one of these for the data you collected in part 1.

[illegible]

# Step 1 – What is our main question?

- The first focus is on the question we are going to create our visual around.
- These are the two areas of the sheet to focus on with this task.
- Lets look at some examples with the sample data

# Main Focus on location

- Look through the answer cards and find the unique answers to the “where” question.
- Put these answers in the main focus column

Main Question: Where do I consume the media?						
Main Focus ↓	Other data					
	Living room					
	Study					
	Bedroom					
	Kitchen					
	Cinema					
	Balcony					
	Outside					

# Main Focus on why

- Another way to look at the data is to change our main focus to answer the question “why did I consume the media”
- Look through the answer cards and find the unique answers to the “why” question.
- Put these answers in the main focus column

Main Question: Why do I consume the media?					
Main Focus ↓	Other data				
Work					
Entertainment					
Waiting					
Background					



## Step 2 – Adding more data

- The next focus is on the answers to the unique answers to the other questions
- The top row of the sheet will be used to add this new information
- Lets look at some examples with the sample data (using the location main focus)

## Step 2 – How I consumed the media

- Start with the example where the main focus is location.
- Add the answers to the “how” question to the top row of the table.

Main Focus ↓	Other data			
	Listening	Watching	Reading	Playing
Living room				
Study				
Bedroom				
Kitchen				
Cinema				
Balcony				
Outside				

## Step 3 – When did I consume the media?

- Now add the answers to the question “When did I consume the media”

Main Focus ↓	Other data				Morning	Afternoon	Evening	Night
	Listening	Watching	Reading	Playing				
Living room								
Study								
Bedroom								
Kitchen								
Cinema								
Balcony								
Outside								

Step 4 – For how long did I consume the media?

- Now add the answers to the question “For how did I consume the media?”
- Carry on adding information to the table until you have the answers to all your remaining questions along the top row

[illegible]



# Step 5 Reviewing answers and adding the data

- Review each set of answers and add the data to your empty table.
- Repeat the steps until you have added answers from all your cards to the tally chart

Main Focus ↓	Other data																			
	Listening	Watching	Reading	Playing	Morning	Afternoon	Evening	Night	<1 hour	1-2 hours	3-5 hours	5-8 hours	>8 hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Living room			1				1			1					1					
Study																				
Bedroom																				
Kitchen																				
Cinema																				
Balcony																				
Outside																				

Answers to your questions						
Lvl 1	Reading					
Lvl 2	Printed Paper			1 Hour		
Lvl 3	Tuesday		19:00		Livingroom	
Lvl 4	Chair	Fiction	Work			

Continue until all your data is in the tally chart!

[illegible]

## TASK: Tallying your homework data

- Using the sheet and the examples we have looked at create a tally of the data you collected for homework



# Missing (or extra) Data, is it important?

During the week that you collected data did anything happen that changed the data you collected?

For example:

- A holiday may increase the amount of media consumed on a day compared to the norm
- A family dinner out may lead to a day when there is less phone usage compared to the norm

These should be noted in our final visualization if they effect the chosen data, the example data has very little for Monday as there was an event attended all day.

## TASK: Unusual Data

- Is there any unusual data in your collected data?
- If there is note it on your sheet somewhere to remind you when you start on your visualizations.
- Finish you tally chart of data

If you require this document in an alternative format, such as large print or a coloured background, please contact Claire Sowton, [data.schools@ed.ac.uk](mailto:data.schools@ed.ac.uk) or Moray House School of Education and Sport, St John's Land, Holyrood Road, Edinburgh, EH8 8AQ

