"I need to produce and use data!"

Why do I need to **produce and use data?** What's my **purpose?**

Framing the Question(s) – **What will my question(s) be?**
What purpose do I want the data for?
What question(s) will ensure I get the information I need?

Collecting – **What collecting strategies will I use?**
What tool will I use –observation, experiment, survey, questionnaire, app, software?
What will be most efficient?
Census or sample? If it's a sample, what is a valid sample size?

Sorting and Organising – How can the information I have been collecting be sorted and organised so that I can easily consider what it says. If I have been an efficient "collector" this will be much easier.

For my particular purposes, does the data need to be represented or just interpreted?

Representing – **For what purpose do I need to represent this information and who will be the audience?**
Given this context – which will be the most appropriate form of representation to get the message across?
Using technology can I quickly check out which representations are
– mathematically appropriate (eg: line graphs for continuous data not discrete data)
– most efficient (eg: do I want to show frequency, range or spread or all and if so which forms are best)
– most valid (eq: does the scale I have chosen emphasise or skew the authentic story of the data?)

Interpreting/Reading the Data –**What does my data mean? What story does it tell?**
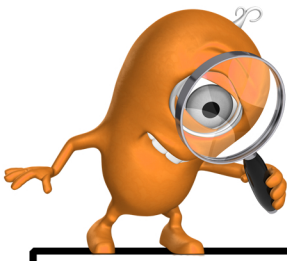For this context am I interested in examining the overall finding, comparisons, mean, mode, median, frequency, range, spread?

Acting – **Did my data help me achieve my purpose?**
Now I know this "story" what **action** should I take?
Data is collected for a purpose so how will I use what I have found out?
What have I learnt about the processes of collecting and using data?

Learning Journeys

I need to produce and use data!

Why do I need to produce and use data? **What is my purpose?**	
Framing the question(s) - What will my question(s) be? What purpose do I want the data for? What question(s) will ensure I get the information I need?	
Collecting - What collecting strategies will I use? Survey/questionnaire/observation(online/paper) app/software? **Who will I collect from?** Do I need a population or a sample?	
Sorting and Organising How can the information I have collected be sorted and organised so that I easily consider what it says? *For my particular purposes, does the data need to be represented or just interpreted?*	
Representing - for what purpose do I need to represent this information? **Who will be the audience?** What is the most appropriate form of representaion to get the message across? Mathematically appropriate/most efficient/most valid?	
Interpreting/Reading the Data What does my data mean? What story does it tell?	
Acting - Did my data help me achieve my purpose? Now I know this "story" what action should I take? Data is collected for a purpose - how will I use what I have found out? What have I learnt about the process of collecting and using data?	

Reading Data Thinking Questions