

Unit/Topic: Creating a film based on data

Target age: 9+

Topic 3: Collecting data

Recommended Teaching hours: 2-3

Lesson Objective: Be able to understand where data comes from and the importance of scrutinising & organising data that we collect.

Lesson Overview & Outcomes (Please refer to [STATWARS® curriculum mapping document for KS2 Mathematics and Computing National Curriculum outcomes for this topic](#)):

This topic helps pupils understand the importance of collecting, and scrutinising data. They will be able to use the dataset provided and, if needed, the WWW to find relevant data for the project. Pupils will store and organise work effectively and consider the potential for reliability and bias.

Key words: Metadata, Data Source, Database, Sources Table, Accuracy/validity, Reliability, Completeness, Precision, Timeliness, Integrity, Confidentiality/Privacy

Suggested software/Resources: Internet Web Browser (Google Chrome, Internet Explorer etc), Word processing package, Spreadsheet software such as MS Excel.

Please refer to [project overview](#) and [medium term plan](#) for additional support

Lesson Structure:

(Based on 1 hour lesson – you may need more time to allow adequate data collection) - **Guidance notes are provided on lesson PowerPoint where necessary. Please amend resources accordingly to suit your class.**

Introduction:

Time (minutes)	Activities	Challenge/Support (Differentiation)	Assessment Strategies & Outcomes
5	3.1. Slide 2. Recap and refresh. Recap what you have done so far and ensure pupils know what the aims of the project are. Ask pupils to provide teacher with as many “things” we are looking to gather data on and recap the dataset if displayed last lesson. Explain that many of these can be explained as metadata – data/information about data, e.g. the genre, rating, name of a film.	Put definition up on board with examples so that pupils can see what this looks like	Directed questioning to assess pupil engagement with the project thus far

Main Content:

Time	Activities	Challenge/Support (Differentiation)	Assessment Strategies & Outcomes
20	3.1. Slide 3-5. Share the dataset with pupils and give them time to look through it. Ask them to begin to consider the data they will need from this dataset in order to develop their potential solutions. At this point it is okay for them to have different ideas, not just one. Their ideas should be relatively generic. They will refine them when they do their analysis. For example, if the pupils are looking to suggest an animation that scores over 8 rating then they can they should be filtering the data to show those films. Demonstrate this to the pupils using slides 4-5.	Challenge 1: Explain that they can look to find their own meta data and data sources in task 3.3. Challenge 2: 3.4. When considering bias groups should also look to consider the following: <ul style="list-style-type: none">▶ Accuracy/validity▶ Timeliness▶ Completeness▶ Integrity	Pupils can use and store data effectively from a given dataset Pupils can search for and store data effectively. They will be able to search the WWW independently for suitable sources and store them effectively in a sources table
30	3.2. Slide 6. You can choose to not use the internet at all for the data collection and analysis. At this point, if it looks like their idea is not viable, then they have two options; either choose another idea or look for more data to see if it is a good option (it might not have been done before). It is important that pupils are aware of the data they need to search for. Before you ask pupils to search the World Wide Web make sure they appreciate how	Pupils can write a short report on the importance of considering data bias & reliability	They will be aware of the importance of considering data bias & reliability

it works - <https://www.youtube.com/watch?v=BNHR6IQJGZs>. Open up a discussion about the best possible search terms and document them – essentially, they are looking for films that have been/are successful and why – examples provided on slide 7 but are mostly included in dataset.

3.3. You may choose to have pupils use the links provided. Slide 7. Please refer to the project overview (section **3.2**) for relevant external links to use - handout provided in lesson folder also

Slide 8-9. Pupils can collect and store their data whatever way is suitable, but it must be organised in way that will be easy to use during their analysis. Time should be taken to organise the data however you see fit. Show pupils **sources table provided** and ask them to add their sources to it as they progress. Recap project roles from last lesson and show example of collected data

3.4. Slide 10. Explain to them the importance of considering data bias and reliability. So, for example, qualitative data in the form of a critic's review – or quantitative data as a rating out of 10 on IMDb – they are an opinion

Please allow pupils enough time to collect relevant data.

Concluding the lesson:

Time	Activities	Challenge/Support (Differentiation)	Assessment Strategies & Outcomes
5	Ask pupils list the data they have yet to complete and continue their research as a homework task. Share some good examples so far	This entire activity is differentiated by outcome. The level of detail in the research and data collection will vary	Targeted questioning to identify work so far, observe data collection and sources tables as you bring the lesson to a close

Homework:

Slide 11: Have pupils collect data from friends and family about what they watch and like and why. They may set up a suitable scoring system to support that data collection (see overview)

Evaluation:

- ▶ What went well in the lesson?
- ▶ What needs addressing/revisiting?
- ▶ What might you do differently for next time?