

STATWARS[®]

A Primary Engineer and Secondary Engineer Production for the Institution of Primary Engineers[®], Institution of Secondary Engineers[®] and Institution of Tertiary Engineers[®].

STATWARS[®] Primary School Scheme of Work

www.statwarscompetition.com www.onedotall.com www.primaryengineer.com

Terms and conditions

The aim of STATWARS® is to help young people develop their data literacy and critical thinking skills by using data to create their own film or TV series concept. We provide a classroom project that engages every pupil with data skills by bringing the enchantment of the entertainment industry to their doorstep!

Pupils work in teams to analyse a large dataset of TV series and films to produce an infographic poster, an advertisement poster and a 60-sec pitch video. The competition's structure encourages pupils to use their own creative spin and personal experiences to find meaning in, interpret and present the data.

Teachers are provided with whole-class resources alongside videos from industry professionals to ensure a real-world, careers driven context is provided for pupils. Teachers can request visits, or internet calls from data professionals to help support the project in school and answer the many questions pupils will have!

The competition requires teams of pupils to produce two posters (each, no larger than A2) one advertising the film or TV series, clearly designed to appeal to its demographic audience, and the other to communicate through infographics, the data used to influence the decisions made. Teams will also be required to produce a 60 second film to 'elevator pitch' their idea to the judging panel.

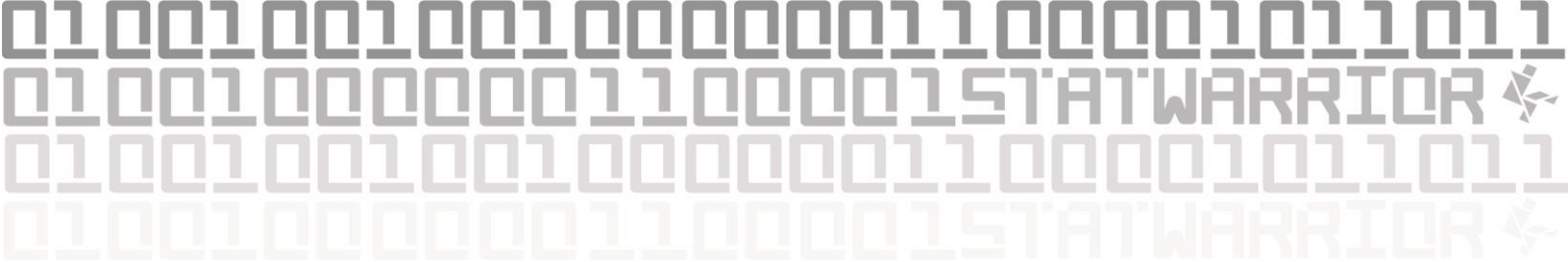
Shortlisted teams will be invited to an awards day to talk through their project with the judges and engage in fun data-related activities. The next awards event will be announced on the www.statwarscompetition.com website.

STATWARS® is an annual competition that has been developed by Primary Engineer Programmes for The Institution of Primary Engineers® and The Institution of Secondary Engineers®.

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For more information on any of our programmes please use the links below:

Links to: www.primaryengineer.com www.secondaryengineer.com www.leadersaward.com
www.onedotall.com



Creating a Successful Film Using Data



Overview

This project will follow 5 of the 6 key stages for managing a data project

1. **Defining** – identifying the question being solved and why it is important
2. **Planning** – formulate a hypothesis to test and identify what data would be required
3. **Collecting** – accurately capturing, storing, securing and categorising the data
4. **Analysing** – pre-processing, exploring, modelling and validating
5. **Concluding** – inferring and communicating findings through reports and visualisations
6. **Implementing** – *real-world delivery and ongoing monitoring (not a requirement of this project)*

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All URL links were correct at time of writing – please ensure this is still the case before using any websites with pupils.

For full terms and conditions of the STATWARS® competition please visit www.statwarscompetition.com for the current competition rules and regulations as they will be subject to change.

The Awards

There are **4 possible awards** to be won as part of the STATWARS® competition:

- **Best Data Analysis**
- **Best Communication**
- **Most Creative Presentation**
- **Overall Winner (based on the 3 requested outcomes of the project; infographic poster, advertising poster, sales pitch)**

You can submit up to 4 entries in total per class, who will be judged by our panel of experts!

Interview an Industry Professional

To support you and the young people completing this project, we will be running a series of online interviews with professionals from the data and entertainment industry!

Please access the **Eventbrite** links at <https://www.eventbrite.co.uk/o/statwars-competition-30258493092> and book yourself on as many of those as you like!

STATWARRIORS only print when they really need to!

The Project

1. Defining

1.1 The problem

Can you design a film based on available data?

Film and TV companies now use data to help them create the best shows and films. STATWARS® are holding a competition to find the next successful film based on statistical analysis of available data. Pupils will be provided with a dataset of hundreds of films to analyse, to help them understand what makes a film successful. The use of this data, alongside what they already know, can help pupils make an educated decision.

For example: What is successful – is it rating, money, awards, originality? why is Avatar the highest grossing film of all time? Why was ET such a hit in the 80's? Would it be a hit now? What made the Harry Potter films so successful? Are animations more exciting than films? Why do certain films win Oscars?

Teacher video - Please watch the following video which highlights the importance of data but also your “gut instinct” in the TV/film industry -

https://www.ted.com/talks/sebastian_wernicke_how_to_use_data_to_make_a_hit_tv_show#t-732291

STATWARS® wants to know, **which option(s) should be taken** for the actor/actress, genre, plot line etc? In other words, what would make the next hit film and why?

They would like the data to be presented in an easy to understand format to support your decision, with an accompanying poster illustration for the potential film. Due to the nature of the competition the poster illustration and the presentation of the data will have to fit on one side only of 2 separate sheets of A2 paper (maximum size).

Assessment will include a scenario where the team find themselves in a lift with Jeff Bezos (Amazon) or Reed Hastings (Netflix) and they have just one minute to tell them about their idea. This will provide pupils with an opportunity to demonstrate their understanding of the data and be persuasive in their suggestions.

To make that decision, pupils will need to find out:

- a) **What do we currently know about the best films?**
- b) **How might that data be displayed to help us decide what is good and bad? (Out of 10, percentages, thumbs up, comments etc.)**
- c) **What might the solution look like?**

Further important questions for them to consider here are:

- ▶ **Will there be enough data to provide a robust answer?**

► How will we store all the data we collect safely and easily?

In order to help you complete the project, pupils will be able to interview data professionals and other industry professionals online, who will share their thoughts and ideas. Please access the Eventbrite links at <https://www.eventbrite.co.uk/o/statwars-competition-30258493092> and book yourself on as many of those as you like. Ideally you would complete Topic 1 prior to these interviews and then move on, after at least 1 interview but this element of the project is entirely up to you.

In preparation for this interview you should discuss with your pupils potential questions they might want to ask and let them come up with their own ideas. If they need help, some examples are:

- What can data tell us about things like how successful something is?
- How would you use data to solve this problem?
- Add in some of your own here

2. Planning

2.1 Data types

Data can be quantitative (numerical; measurements, values) or qualitative (not numerical; text, images, opinion). Pupils will have to consider what type of data they can collect using worksheet provided.

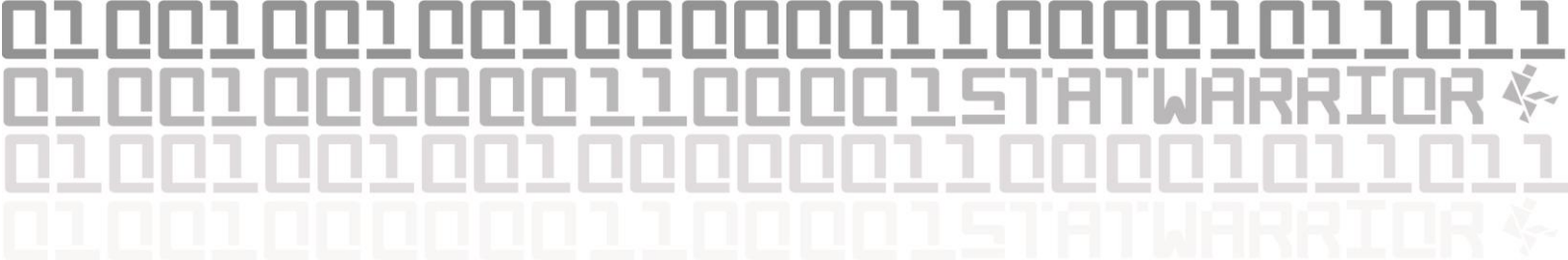
2.2 Project teams

To solve the problem, pupils can be allocated into project teams. These teams would essentially be a group of screenwriters working together and therefore should have a name and perhaps a logo. This planning stage is an important process as it can help them create a meaningful and robust solution to the problem. The age rating of the film will be determined here, by the youngest person in the group but 12A/PG13 would be acceptable also - ***you might consider allocating pupils into groups based on their initial ideas above. Alternatively, you can allocate pupils into project teams first then allow them to come up with a group idea for their solution.***

Consideration should be made for:

- What is being done
- By whom
- When by

Pupils can allocate these tasks themselves or this can be decided for them. This could be in groups of 3 for example:



	Key Responsibilities	Skills
The Translator	Communicates the project purpose Designs the experiment Interprets the findings Develops and manages the plan	Presenting work Keeping everyone working Creative
The Engineer	Collects the data Stores the data safely & securely Checks the data quality	Being organised Good with numbers Good with technology
The Analyst	Organises the data for analysis Carries out the analysis Tests the outputs Summarises the findings	Being organised Good with numbers Can pick out key data

Badge templates are provided if you wish to utilise them. Using lanyards is a great way to formalize the process and give pupils an added feel of responsibility and can create a cohesive team ethic

2.3 Deciding on a potential solution

At this point - in order to create an element of diversity in the outcomes, pupils should be encouraged to consider a range of solutions, for which they will **recommend a solution for just one**.

For example:

- a) How can I design a high grossing blockbuster with a big budget, which also has a high rating
- b) How can I design a highly rated but low budget film
- c) How can I design a film that will win an award
- d) How can I design a film that only has a small budget, but makes lots of money
- e) How can I design a film starring “INSERT ACTOR/ACTRESS” that would be their highest grossing movie
- f) How can I design a film that will make headlines or have a strong message (political/challenging the norm etc.)

This link may help pupils develop some ideas - <https://www.wikihow.com/Come-Up-with-a-Movie-Idea>

2.4 Protecting the data

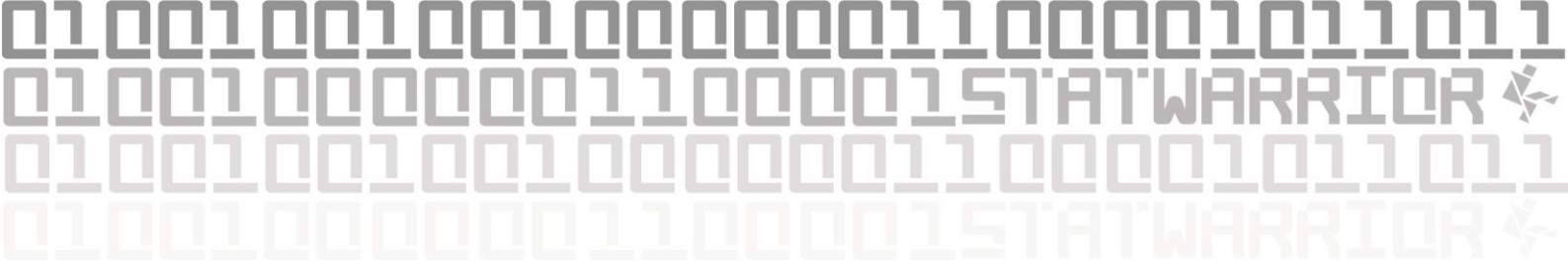
Where and how the data is stored, and what are the risks (for example data or film poster being stolen or lost; and the importance of data security here, such as the use of passwords and how to back up work), their ideas being stolen. Pupils should be asked to consider the following:

Location	Pros	Cons
Laptop/local drive	No personal access issues Easy to limit external access	Could be lost or stolen Hard to share across the team Unlikely to be backed up Limited disk-space
Centralised drive e.g. school fileserver	Easy to share across the team	Limited disk-space Hard to limit access Backup process may not exist
Cloud-based drive e.g. Dropbox, Google drive, AWS	Automatic backups Easy to share and limit access Limitless disk-space, although maybe at a cost	Internet connection required
Removable media	No personal access issues Could share across team, though multiple copies may exist	Easy to corrupt/fail and then data lost Easy to lose Fixed disk-space

3. Collecting

3.1 Collecting useful data from the dataset

This project relies on **metadata** (data about data). So just like on the music player on a mobile phone, it can show the track name, artist, artwork, song length and album. This project requires pupils to be able to understand metadata about successful films, such as main actors involved, money grossed, critic ratings, release dates, genre. They will then analyse it to understand why this may be and argue/present it accordingly. They may also need to collect data about what is not successful, to support their decision.



Pupils will use the dataset provided, and unless they wish to do so, no data searching is required.

However, external links are provided if you wish to use them for challenge and extension tasks. It would be expected at this point, that children start to develop an idea of the data they need to look for in their data set. I.e. what will be valuable data to support their analysis/idea.

NB. Although the dataset provided is age appropriate, you may wish to filter the dataset further before you present it to pupils.

The following criteria are suggestions for what might make a successful/unsuccessful film (and mostly included in the dataset):

- ▶ Based on video game, book, toy, play
- ▶ Original or sequel
- ▶ Rating
- ▶ Name
- ▶ Plot keywords
- ▶ Actors - awards, nominations, gender, age, percentage of these
- ▶ Budget v Gross
- ▶ Director - previous success, age, gender
- ▶ Language
- ▶ Release date
- ▶ Runtime
- ▶ Country made
- ▶ Genre

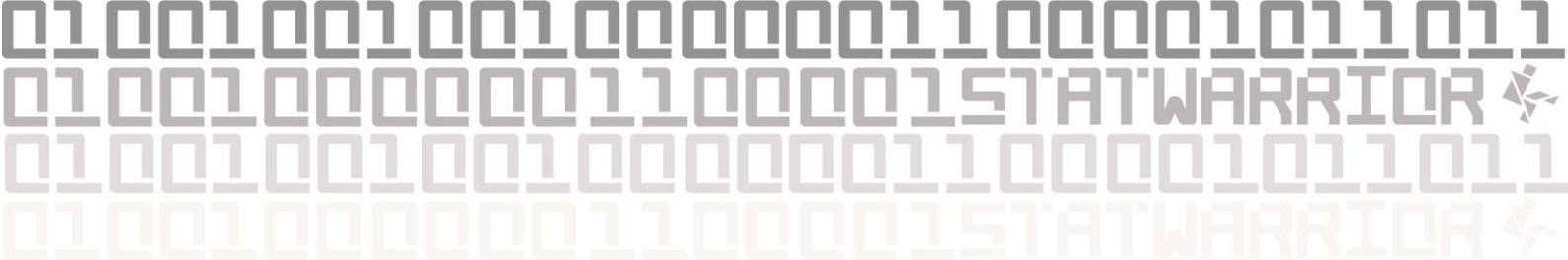
We have provided you with help videos to support you and your pupils in how to collect data using the datasets provided

- Collecting data for Highly Rated Action Films - <https://vimeo.com/420592098>
- Collecting data on Low Budget but Highly Rated Films - <https://vimeo.com/420592448>

3.2 Searching for data on the World Wide Web

Searching the world wide web for data and information can be difficult. This video on Google will help them to understand how web searches work. This can open a discussion in the class about what search terms should be used to help find data on successful films.

<https://www.youtube.com/watch?v=BNHR6IQJGZs> (Other search engines are available)



At this point it will also be important to consider copyright law and the importance of acknowledging your sources/content. Pupils should document the websites they have visited and the sources they have used (see 3.3 a).

3.3 Key links and sources table

Here are some sources of information where pupils can access the above:

Name	Information	Link
IMDb	Probably the most well-known site, which provides lots of data on TV shows, films, actors along with ratings and other useful data.	https://www.imdb.com/
The Open Movie Database	Is an open source website that allows you to search for a film title, year or plot and it will bring you back lots of data from various websites such as rating, director, Oscar nominations even the studio who made it	http://www.omdbapi.com/
Statista	Huge database of statistics about the film industry	https://www.statista.com/topics/964/film/
Guardian	Mixture of articles provided discussion and statistics	https://www.theguardian.com/news/datablog+film/film
Creative Industries	Overview of the creative industries, such as films, providing facts and figures	http://www.thecreativeindustries.co.uk/industries/tv-film/tv-film-facts-and-figures#
British Film Industry	Statistics about the British Film Industry	https://www.bfi.org.uk/education-research/film-industry-statistics-research
British film Industry yearbook	Includes almost everything you would want to know, such as gross by genre, age rating or studio.	https://www.bfi.org.uk/education-research/film-industry-statistics-research/statistical-yearbook
Unesco	Provides excellent coverage of global and cultural information such as amount of international films produced by country	http://uis.unesco.org/en/topic/feature-films-and-cinema-data

UK Government	Statistics for creative industries	https://www.gov.uk/government/statistics/creative-industries-economic-estimates-january-2016
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Source	Data Collected	Date Collected	Used for
www.IMDb.com	Highest grossing films of all time	10/10/2018	To see if there are any trends in the best films

3.4 Reliability of data

It will also be important to help pupils understand that they will only be gathering a selection of data in some instances, which leaves the data subject to **bias & reliability**. The following can also lead to poor quality results:

Accuracy/validity	The data measures what it is intended to measure and does so with a known level of uncertainty where the measurements are numerical in nature – Do numbers tell the whole story?
Timeliness	The data are measured and collected consistently (with the same instrument or question) over time, is it up to date? – Can we rely on data that is only based on a short period of time? E.g. do film ratings change from week 1 of release to week 10?
Completeness	The data contains the maximum amount of information that could be available – Does everyone who watches a film log on to IMDb and rate the film? No...

Integrity

The data does not contain bias or has been manipulated in any way
– Using a dataset provided this should not be an issue, but what if the pupils search for data on the World Wide Web?

Extension/Homework activity - In order to support pupils in understanding the above, and how data collected can be different, they can create a set of criteria to collect data at home from their friends and family for TV shows and films they have watched that week:

For example:

- ▶ How often do you watch...
- ▶ Tell me about a TV show/film you have watched recently - what would you say about it
- ▶ What score would you give it (do not specify out of what, let pupils decide so you can see what they choose and question why - e.g. 5 stars, out of 10, 100%)

3.5 Data preparation

As pupils will be provided with a dataset, the main focus here is to ensure any data extracted remains “tidy” .

A dataset is a collection of values, either numbers or strings (text) and these are arranged in rows and columns. Rows contain the observations and columns contain the variables (or fields). Every value belongs to an observation (row) and a variable (column). Each variable will contain all the measurements (like rating, duration, genre) for every member of the dataset. An observation contains all values measured on the same member (like a film title). When data is structured like this it is referred to as “Tidy data” . Tidy data is easy to analyse, so one of the main goals of data preparation is to prepare the data needed, whilst keeping it tidy.

Characteristics of “Messy data” are:

- ▶ Multiple variables in a single column
- ▶ No column headers
- ▶ A single observation is stored in multiple datasets
- ▶ Rows and columns are confused with variables stored in both

Here is a **messy** film dataset:

	IMDb	Time	
Bob goes to summer camp	5	1 hour 40 mins	Adventure
Strongman Adventures	Seven		Sci-Fi

Princess and the Unicorn	4	65	Fantasy
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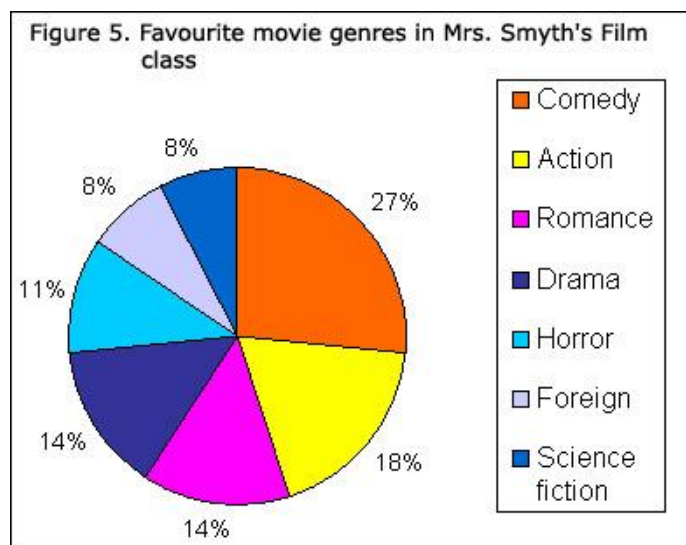
It is important that the data is:

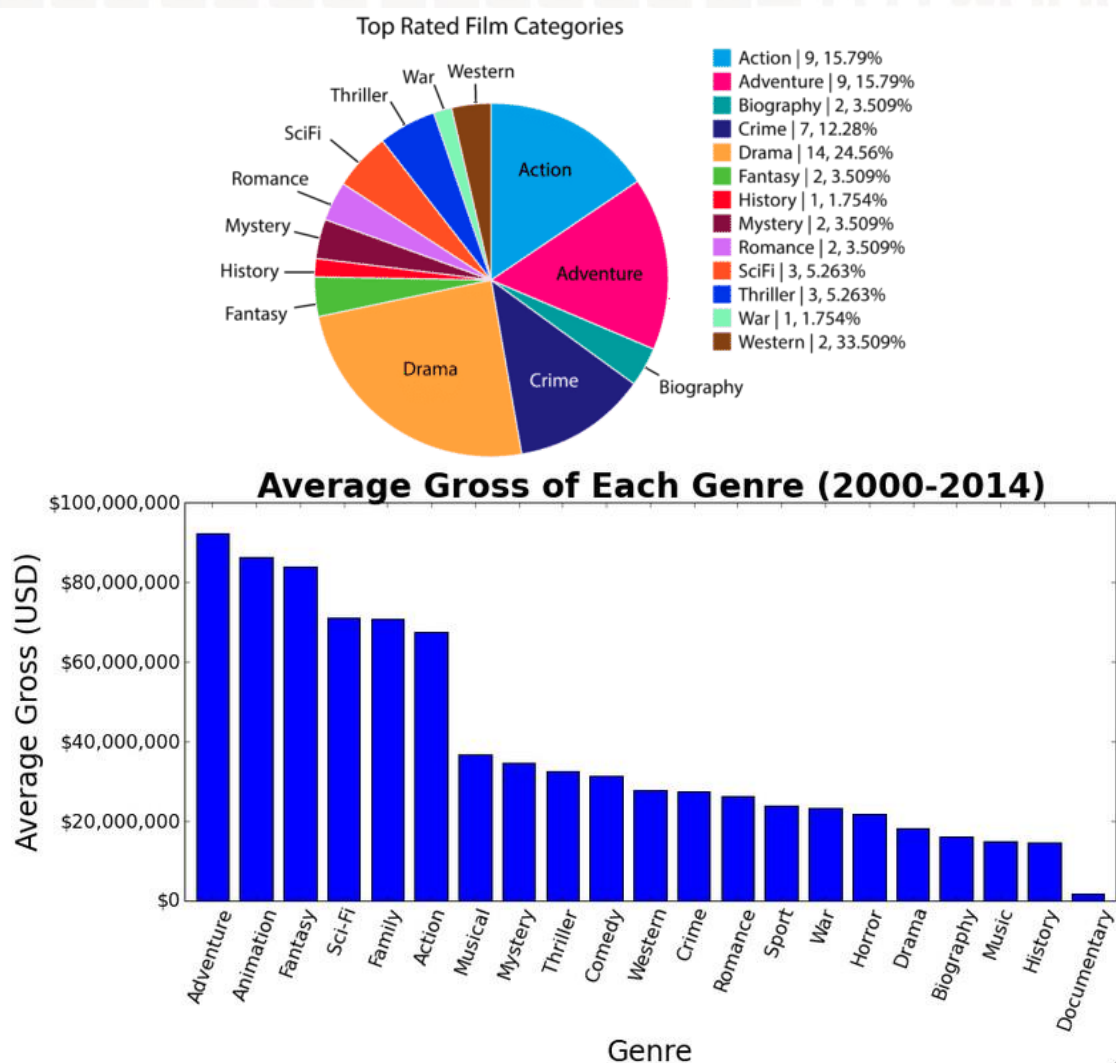
- ▶ **Tidy with only the data needed present**
- ▶ **Has no duplications**
- ▶ **Formatted correctly**

Here is **tidy** film dataset:

Film Title	IMDb Rating	Duration (mins)	Genre 1	Genre 2	Genre 3
Bob goes to summer camp	5	100	Adventure	Action	Comedy
Strongman Adventures 1	7	97	Sci-Fi	Action	Adventure
Strongman Adventures 2	6	102	Sci-Fi	Action	Adventure
Strongman Adventures 3	7	120	Sci-Fi	Action	Adventure
Princess and the Wizard	4	65	Fantasy	Sci-Fi	Romance

But they can be displayed in different ways:





4. Analysis

Once pupils have collected relevant data from the dataset, they can then analyse it to see if there is any patterns or trends in the data.

This part of the project can be controlled by the teacher. There is no “best” tool for analysing data, it is depending on current skills and willingness to learn new skills and tools. Microsoft Excel or Google Sheets are common software tool used in schools for data collection and analysis and will work in conjunction with the format of the dataset. The quality of data analysis will depend on the tools used in this process.

4.2 Analysis

As the dataset provided is tidy, data analysis can begin almost immediately. This can be as simple or as complex as required. The more experienced the pupil, the wider range of techniques that can be applied to the data.

In general, the analysis is split into **two types**: what has happened (**descriptive analytics**) and what will happen (**predictive analytics**).

For example, what films **were successful**, and can you see **why**, in order to predict what might be successful? Can you spot trends and averages in the data? Netflix use this very well. They suggest films that a viewer may not have seen before but are similar to ones they've previously watched.

It is important to understand the objective of the analysis is to align to the original problem statement and ensure that the analysis carried out provides insights that help to answer the question - **what would make the best film and why?**

Several detailed examples, and instructions on how to analyse the dataset have been provided for you in the STATWARS® resource folder. This will help you in understanding how to support the children in their analysis – We strongly recommend that you access the “Analysis support for teachers’ folder”

We have also provided you with help videos to support you and your pupils in how to analyse some example data

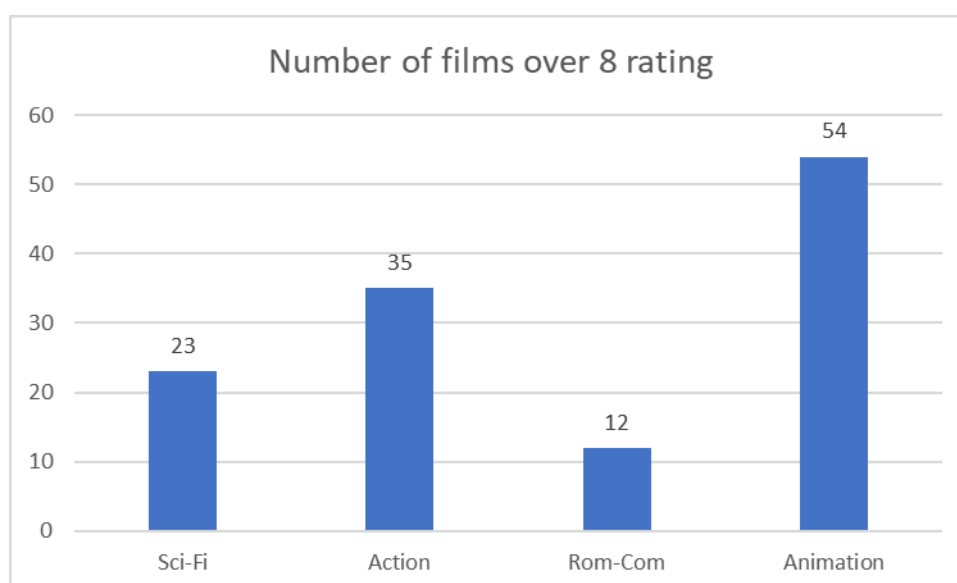
- Basic skills for analysing data and creating graphs - <https://vimeo.com/420592313>
- Advanced skills for analysing data and creating pivot tables - <https://vimeo.com/420591989>
- Creating Word Clouds to Help you Analyse Data - <https://vimeo.com/420592563>

4.2.1 Descriptive analysis

You can decide which of these is suitable or allow your pupils to decide, based on their ability level, skills, knowledge and understanding.

The main techniques that are used are:

- **Counts and frequency distributions** – histograms or bar charts show the numbers of members of each category. *This approach could be used to display the number of films from a certain category, like the example below:*



Pupils may also gather text from web searches on films they are investigating. Text data can also be summarised using a **word cloud**, where the most common words are larger.

These can be created using:

- ▶ <https://wordart.com/create>
- ▶ <http://www.wordle.net>. Wordle is best downloaded now, as it is not accessible through most web browsers.
- ▶ [ABCYa! Word Clouds](#)

(others are available)

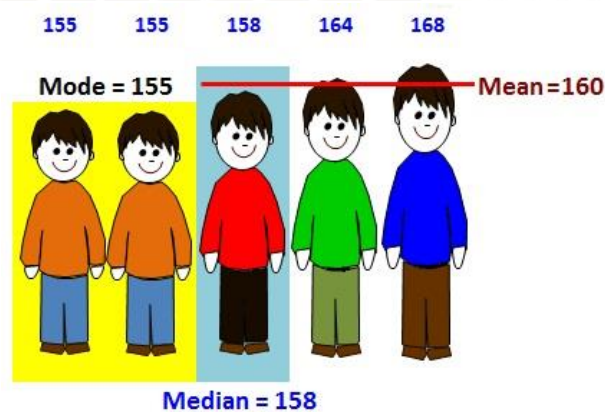
This was created using Wordart.com



▶ Descriptive statistics

Calculate common statistics on variables in the dataset:

- mean/average/arithmetic mean - the sum of all values divided by the total number of values summed
- mode - the most commonly occurring value
- median - the middle value
- range - the difference between the largest and smallest value



They may consider which genre has the most films rated 9 or above or the gap in ratings between certain types of films? What is the most popular genre with scores below or above a certain number?

For example: This table could allow pupils to collect the average score for Sci-Fi films and then focus on which were above average and look for what makes them more successful. The mean was 6.2 but the mode is 7, so should they focus on them films instead?

Genre	Rating
Robot Wars	3
Space Trek	6
Heroes Unite	8
Wizard Tales	7
Strongman Adventures	7
Average	6.2



- **Cross-tabulation** – this is when two variables are compared against each other, allowing initial insights into patterns in the data.

The example below compares pet ownership and gender for a hundred respondents. A pattern can be seen that more men own dogs and more women own cats. However, the sample would need to be checked for bias and statistical significance before this insight could be firmly established.

	Dog	Cat	Total
Male	42	10	52
Female	9	39	48
Total	51	49	100

Pupils could look for successful films that contain certain actors, or genres that scored over 8 on IMDb and when they were released. They will be looking to see what the successful patterns in the data are, and whether they plot in a table or not, this is an important part of the data analysis that informs their decisions. Using this approach may allow pupils to gauge some thoughts from their classmates on combinations of actors, genres and plots etc.

*This could even be in the form of a **class questionnaire** to see what options they prefer, so they are not just relying solely on the dataset, for example:*

Pupils can pick more than one option, which allows you to consider cross genre films as an option.

	Action	Sci-Fi	Rom-Com	Total Votes
Girls	10	5	12	27
Boys	17	10	1	28
Total	27	15	13	55

In this instance, it appears that girls like an Action and/or a Rom-Com whereas boys like an Action and/or a Sci-Fi film. The next thing to do is see if this is true by coming up with your ideas. This leads us on to predictive analysis.

PUPILS SHOULD SAVE ANY WORK/GRAPHS THEY PRODUCE HERE TO DISPLAY ON THEIR POSTER

4.2.2 Predictive analytics

This focuses on **forecasting and hypothesising what will happen**, to allow decisions and changes to be made which would then affect future behaviour and actions. You should be utilising data from your descriptive analysis here - the links should be clear.

- At this point it may be useful for pupils to create a quick survey to gather some data on their potential choices to see what pupils of their film age rating think. This offers some basic validation of

the choices made, as it considers the real-life view on the film, rather than just relying on data and potentially unwanted bias - so in our example above some logical suggestions would be:

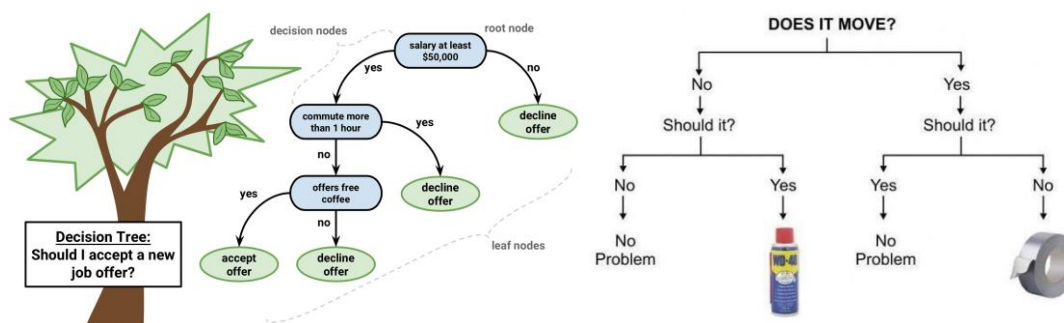
Ideas	Number of thumbs up in class
Idea 1 – an action rom com set in New York starring both a male and female lead	14
Idea 2 – an action film set in space, with a female lead, and a male cyborg as the bad guy	20
Idea 3 – an animation about garden gnomes, who can only come alive when no one is looking at them	7

This also helps us test the validity of the class survey we did earlier.

Using this approach - even with a simple “thumbs up” survey - can help determine whether initial ideas might work or not rather than spend lots of time on uninteresting ideas.

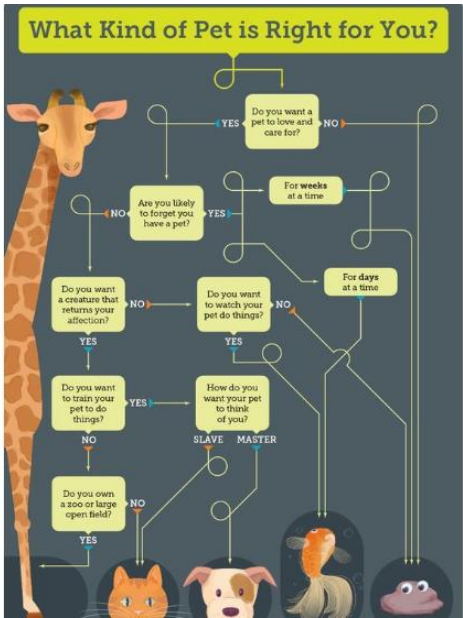
- II. Decision trees are also very helpful if they can help you to answer the question. This can be used as a predictive check-list for a potentially successful film. For example, once they have gathered data on the most successful criteria they can create a decision tree that leads to combinations of those factors. They can then see what the most popular answers are and amend their decisions accordingly.

Decision trees can be used to help us make all kinds of decisions:

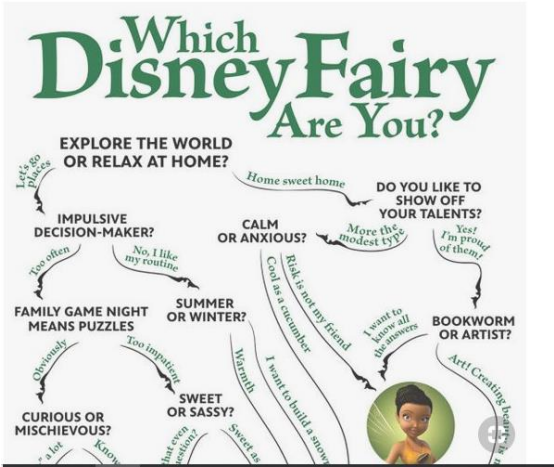


These might be more engaging for pupils to look at.

What kind of pet is right for you? - <https://itstillworks.com/what-kind-of-pet-is-right-for-you-13558224.html>



Which Disney Fairy are you? - <https://ohmy.disney.com/movies/2014/02/15/which-disney-fairy-are-you/?cmp=SMC%7Cblgomd%7COMDFebruary%7CPin%7CFairy-OMD%7CInHouse%7C021514%7C%7C%7Cesocialmedia%7C%7C%7C>

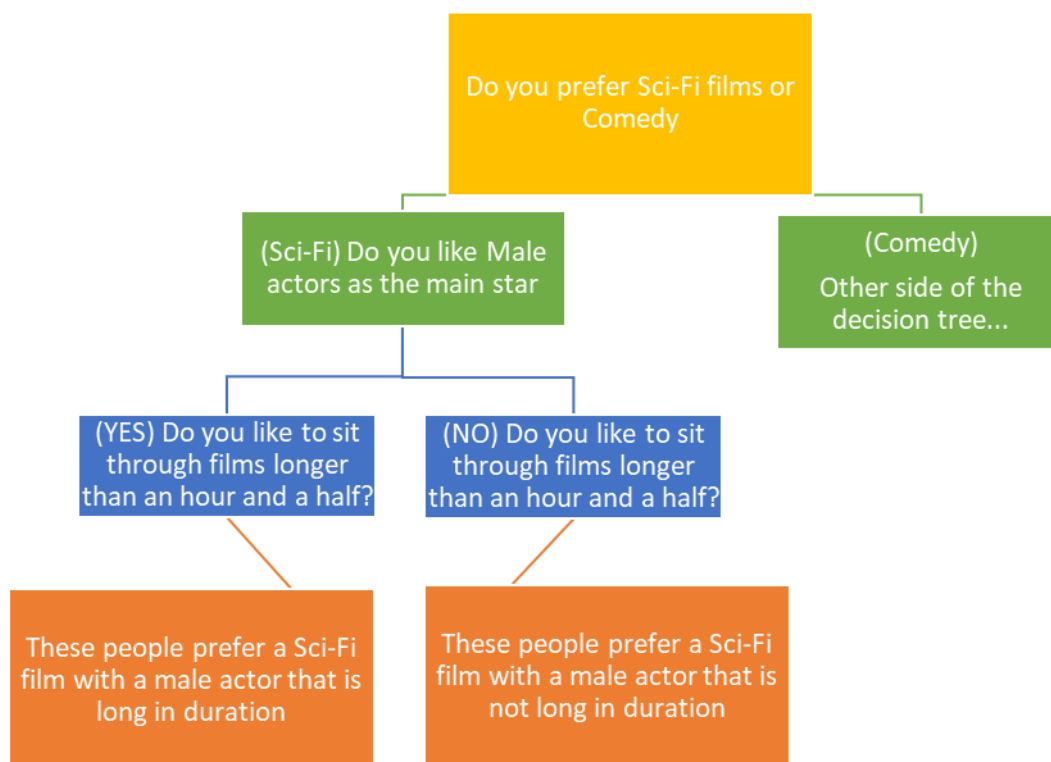


Once they understand the benefit of a decision tree they might use some of the following questions to come up with their own to test out their ideas:

For example:

1. Do you prefer (pick genre) films?
2. Do you like male or female actors as the main star?
3. Do you like to sit through films longer than an hour and a half?

Using these questions, an example could look something like the example below:



**PUPILS SHOULD SAVE ANY WORK/GRAPHS THEY PRODUCE HERE TO
DISPLAY ON THEIR POSTER**

5. Conclusion and delivery

Once pupils have gathered the data and considered its use they need to make a decision on film they want to run with, see link below for some guidance. **Their decision should be based on sound data analysis.**

Pupils then need to report their findings firstly by producing two A2 posters that would be sent to the production companies, and secondly in an elevator pitch to Jeff Bezos or Reed Hastings.

Examples of what pupils could produce for their infographic, advertising poster and pitch are shown below:

From the STATWARS Team, what good looks like

- What Good Looks Like 1 - <https://vimeo.com/425092993>
- What Good Looks Like 2 - <https://vimeo.com/425098231>

Some Pupil Examples

- Brilliant Billboards Example Video - <https://vimeo.com/420592669>
- Comedy Action Kids Example Video - <https://vimeo.com/420592790>
- Cool Cast Example Video - <https://vimeo.com/420592731>
- Stat Squad Example Video - <https://vimeo.com/420593145>

5.1 - Poster 1: The film choice

5.1.1 Displaying the data

This section is all about showing off the data they have collected and analysed in order to produce their recommendation. This poster should summarise the approach, the findings and any decisions made during the project. It should present the **relevant data that supports the answering of the question.**

Groups can choose to use any software here that they find suitable.

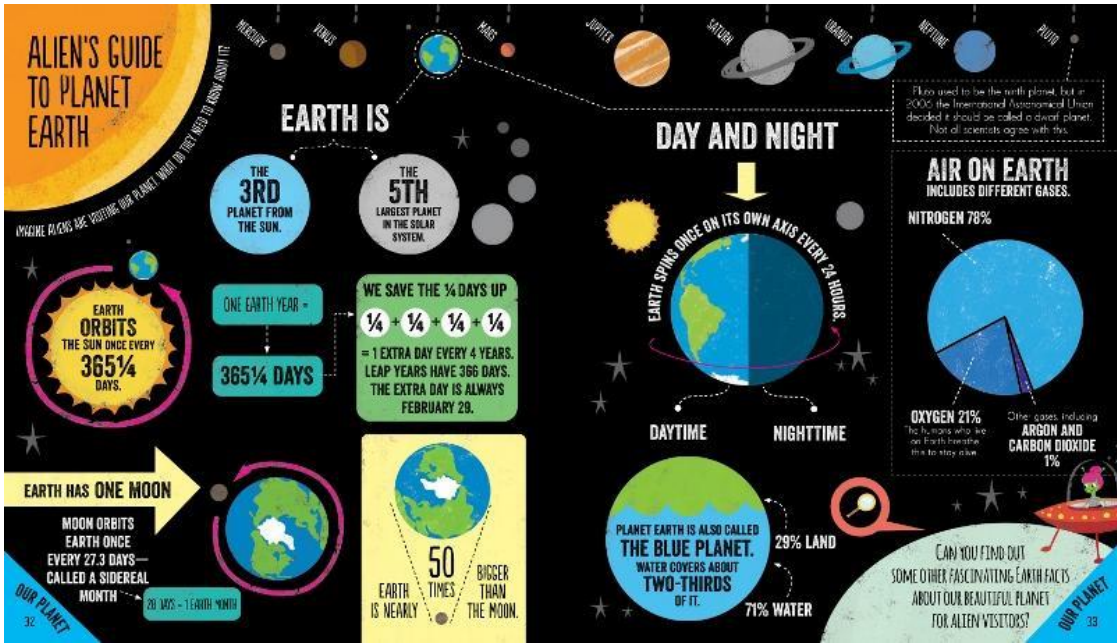
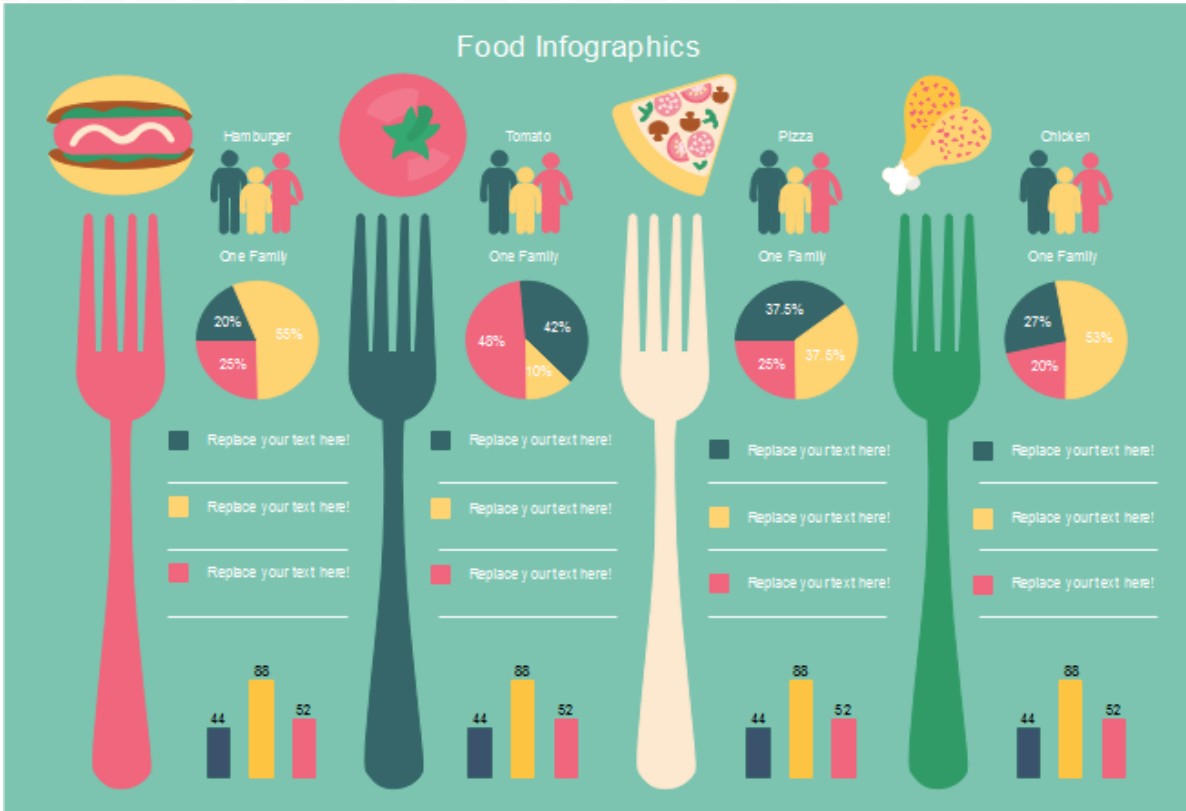
Some simple ideas would be:

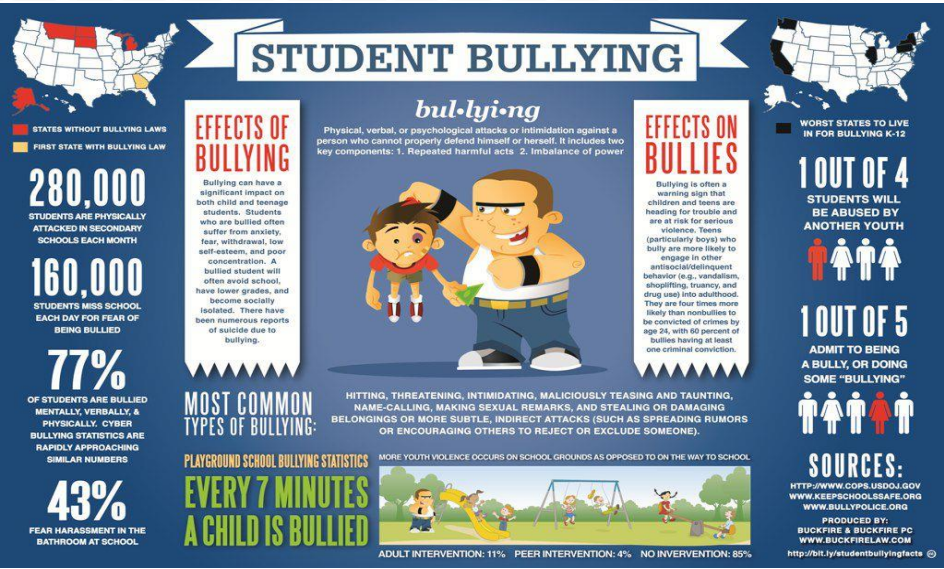
- ▶ Using the graphs created in analysis and put them onto MS Publisher or even Word with some supporting text explaining the data. You can do the same using Google Docs or Slides

Another way of displaying the data is using Infographics

Infographics are simply another way of visually representing the data, instead of just using a regular chart/graph.

Using infographics allows us to simplify complex information, for example:





a) MS PowerPoint has a template option for making Infographics.

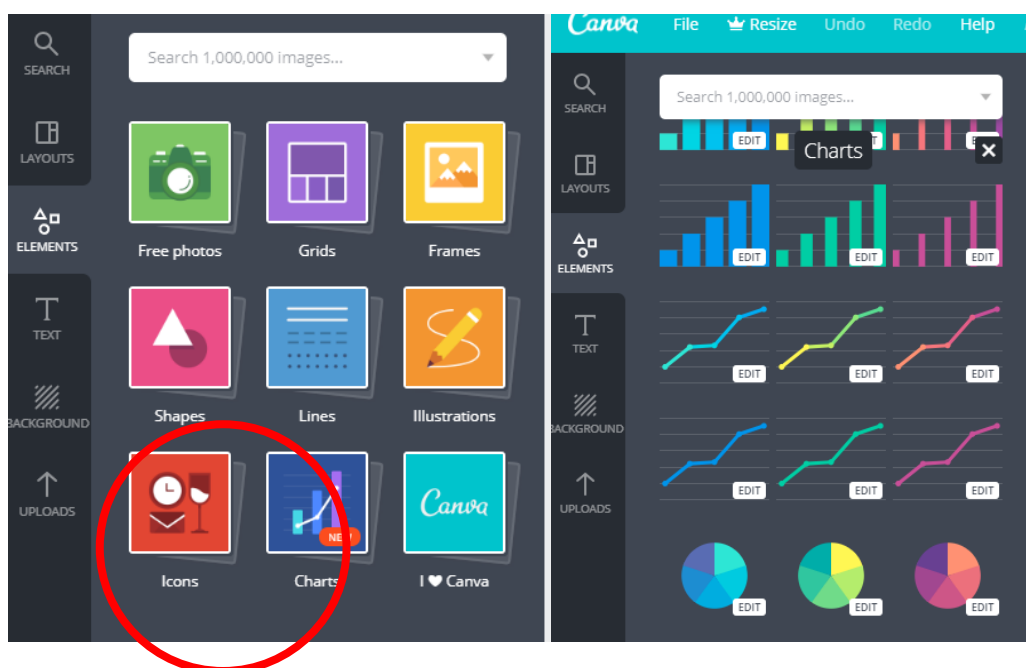


b) If you do not have this option in PowerPoint, then you may choose to use Canva (see below).

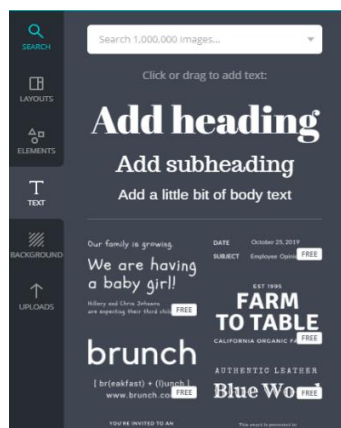
There are other creative options available online:

- **Canva** – is simple to use, allows you to use interesting templates, as well as add in your own charts and graphs. It is free to download your finished poster

Click on <https://www.canva.com/design/DADJgz4TMBM/DMAUIMe-y3FPqZrjxO2fkQ/edit?category=tACFahzNhT4> - pick an infographic template (no need to start from scratch) then once you have started you can edit everything including the existing graphs by double clicking on them **OR** click on **elements**, then **charts** (pick one that says “edit” on it) and enter your data, it is that simple.

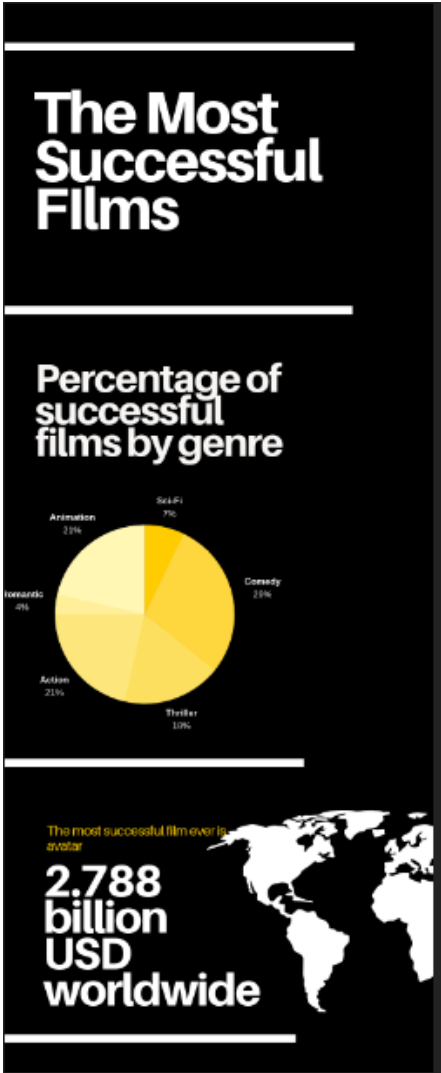


You can add in other creative elements like images and text to make it more eye catching.



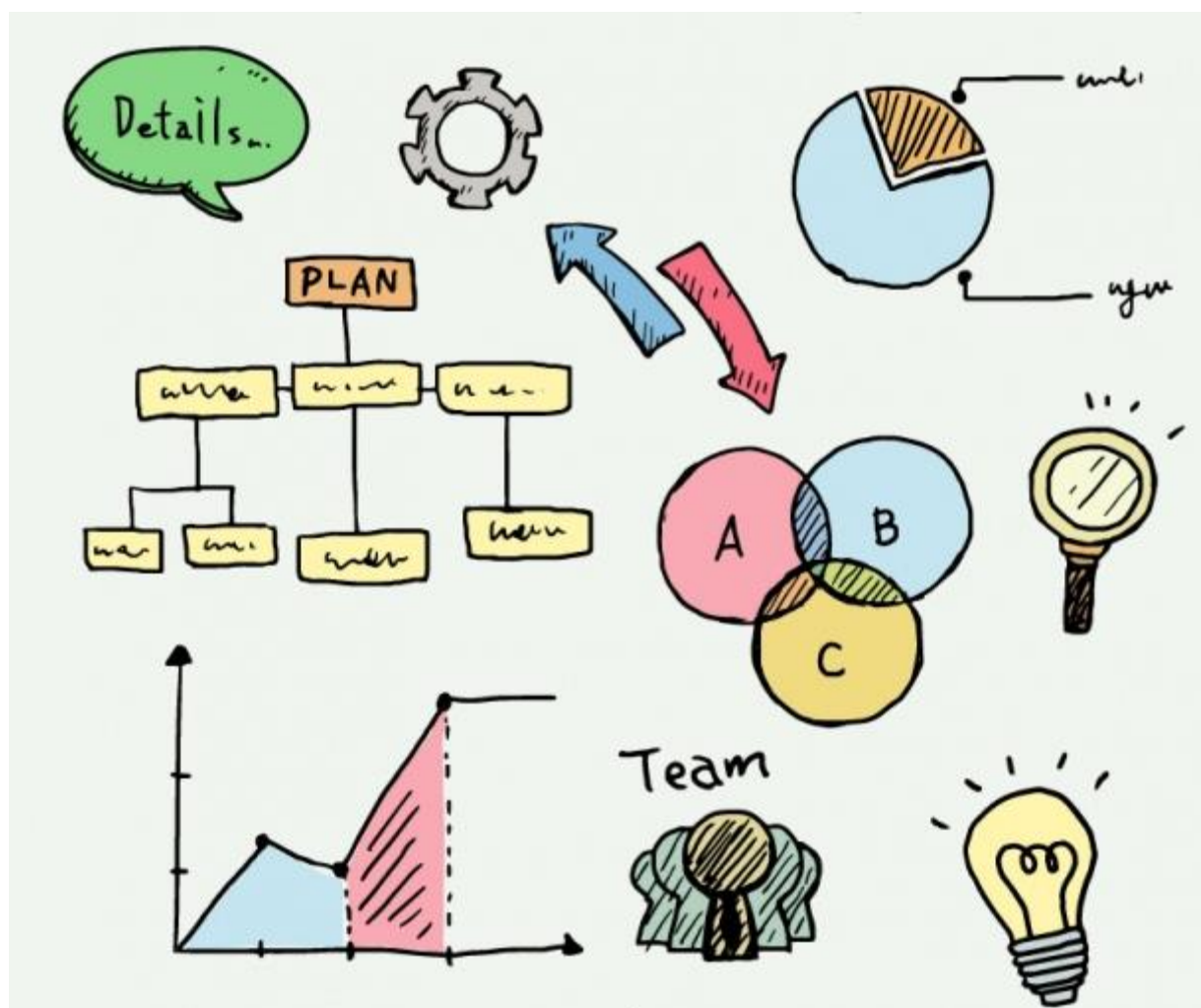
► There are Canva guides to support you - <https://www.canva.com/learn/tutorials/>

You will aim to produce something like this:



c) **Hand drawn display** - You may choose to have pupils print off graphs produced on the computer or incorporate some hand drawn graphs and create a handmade data poster.

You can make this look like an infographic too if you wish



When diagrams or graphs are presented, ensure that they are **clearly explained** and are not open to misinterpretation.

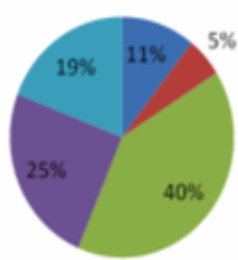
It is often said that “a picture paints a thousand words”. This is very true, especially with data, where visualisations are often the only way to communicate data. They show straight away whether data are grouped together, spread out, have high or low values or are clustered together in the centre. They can highlight outliers and explain findings.

Be clear to pupils that different graphs and charts serve different purposes. Pie charts are good at showing relative proportions, however so are bar charts, and the labels and colours for bar charts make them look cleaner.

Below is some data captured from pupils at the beginning (PRE) and end (POST) of a programme designed to improve the perception of science in schools. This data is displayed using pie and bar charts. The choice of colours and the use of bars in the bar chart versions allows the reader to much more clearly see the message in the data.

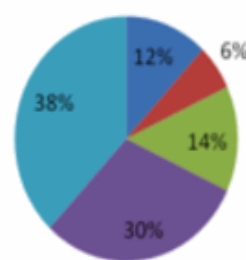
PRE: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



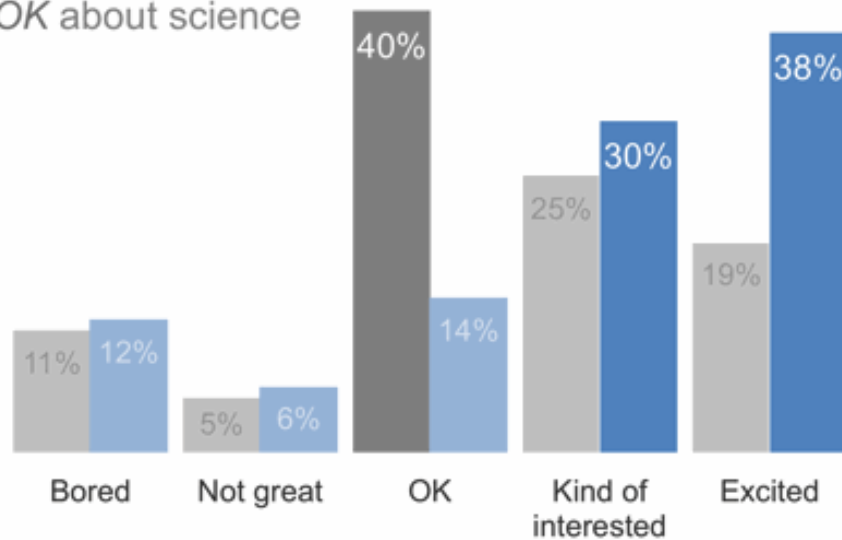
POST: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



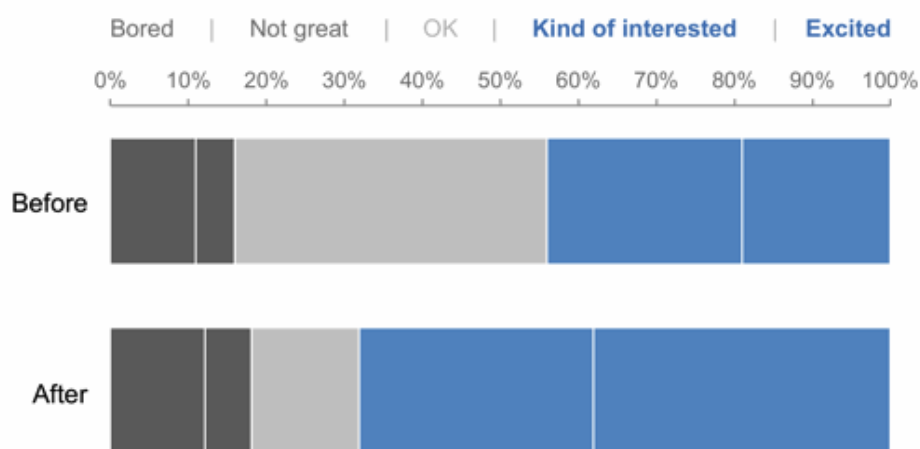
How do you feel about science?

BEFORE program, the majority of children felt just OK about science



AFTER program, more children were *Kind of interested & Excited* about science.

How do you feel about science?



Here the pie charts show the relative proportions but are difficult to compare directly side by side.

In both the simple bar chart and the horizontal stacked bar chart it is much easier to see the change in relative proportions. Like the pie chart, the stacked bar chart helps to see the numbers in relation to the whole. However, the bar chart also has annotation, so the message it is aiming to convey is clear to the reader. The use of bold and muted colours also helps to bring out the key message.

When visualising data, it is very important to get into the mind of the viewer. Make sure the message that is portrayed is clear and unambiguous. Help the viewer to extract the message with colours and text.

Want to show something different?

Below is a link to a recent New York Times article with beautiful animated interactive visualisations, demonstrating income inequality in America across gender, class and race.

<https://www.nytimes.com/interactive/2018/03/27/upshot/make-your-own-mobility-animation.html>

Extension and Challenge:

If groups wish to enhance the presentation of their findings, they can produce a written report or presentation alongside their poster. This allows some additional challenge and differentiation.

5.1.2 Reviewing the poster

Before pupils present their findings, they should be review their work, making sure it explicitly **answers the following questions**:

- ▶ **How does the data answer the original problem statement?** *E.g. Does it present a convincing argument for a successful film with supporting data? Is the data presented in a way that makes it easy to understand/interpret?*
- ▶ **How does the data help defend against any objections?** *E.g. Does it help rationalise the solution, by suggesting why that choice is the most suitable?*
- ▶ **What are the conclusions, and does it have any limitations?** *E.g. What led you to this point? Can we categorically say that this film would be successful? Are there potentially other solutions? Does your solution support what you originally thought?*

Further possible questions that might be considered are:

- ▶ **What could be done differently next time?**
- ▶ **What additional data would have been helpful?**
- ▶ **What should happen next?** *Could we use this data to propose a sequel, or spin-off to the film? How might the data you have influence the decisions on things like budget, actors, plot line for this? Does this data allow us to tap into other markets?*
- ▶ **Where else could this type of analysis of data be useful?**

5.2 - Poster 2: Marketing the Idea

5.2.1 What makes a good poster?

This will support the advertisement of the chosen film. What they include on the poster must support the choices they have made above.


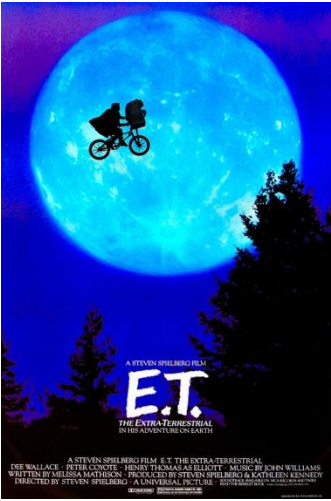
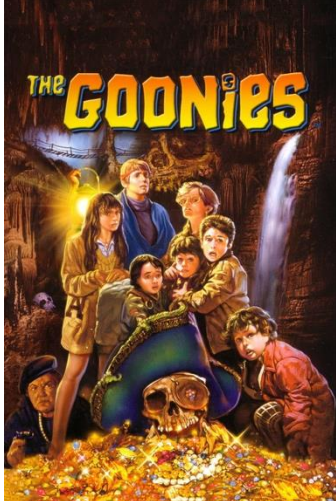

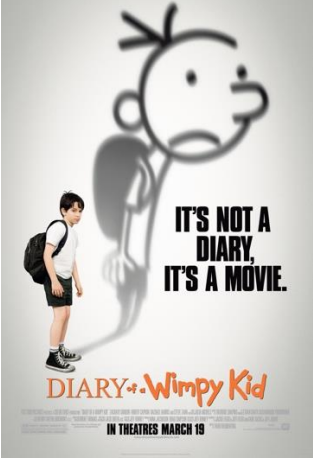

A good film poster should:

1. **Grab your attention, evoke an emotional response, e.g. fear, love, laughter, suspense**
2. **Show you the film without telling you too much**
3. **Create interest and incentive to go see the film**
4. **Appeal to fans and non-fans alike**
5. **Styling that would be consistent with the films content/audience**
6. **Suit other formats - such as billboard, DVD, sides of public transport**
7. **Be recognisable if you were to make a sequel**

Here are some examples of effective film posters in the modern era. Click on the link below to see how they have changed through the decades, what has changed? For example, hand drawn to computer generated. Many people still believe that the posters of films such as Metropolis (1927), Gone with the Wind (1968), Jaws (1975), Jurassic Park (1993) are more memorable than modern day efforts.

<https://www.shortlist.com/entertainment/films/the-40-coolest-movie-posters-ever/103777>

NB. Whilst posters are publicly viewable and therefore age appropriate, you may wish to be selective in the ones you show to your class.

<p>Harry Potter Deathly Hallows part 2 (2011)</p> 	<p>ET (1982)</p> 	<p>Goonies (1985)</p> 
<p>Incredibles (2004)</p> 	<p>Dairy of a Wimpy Kid (2010)</p> 	<p>Home Alone (1992)</p> 

Pick some examples yourself if you want

More examples here - <https://stg.empireonline.com/movies/features/best-posters>. Please be aware that some of the films will be for children older than the age of the pupils in the class, so use discretion.

5.2.2 Creating the poster:

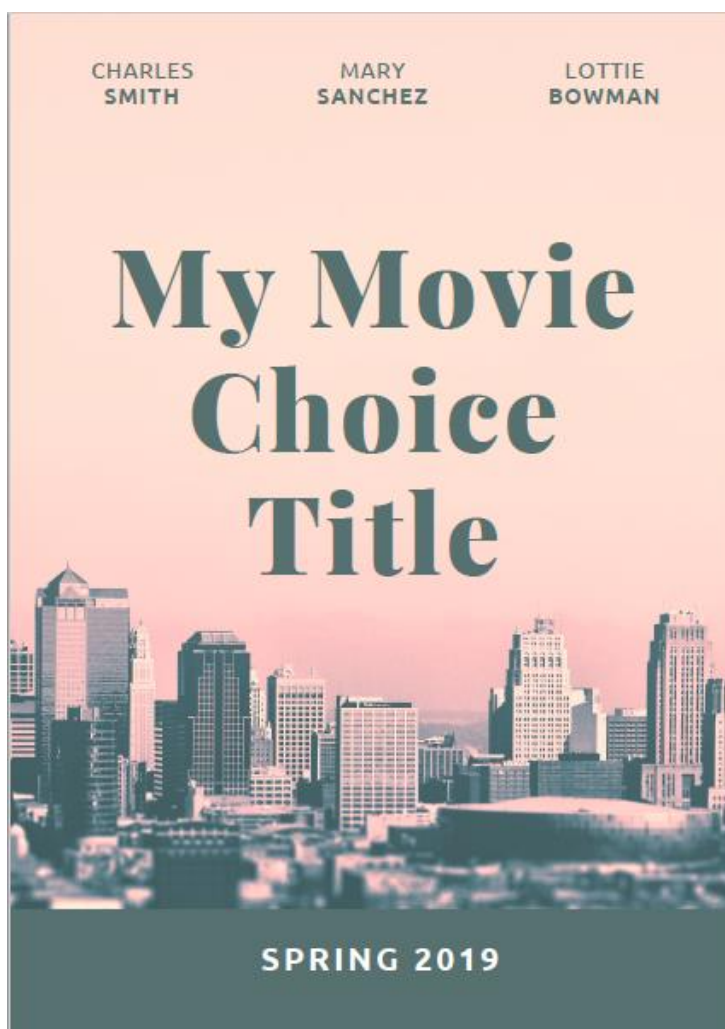
a) Digital Poster

Groups can again choose to use any software here that they find suitable, such as PowerPoint, Publisher, Fireworks, Photoshop, or an online poster builder such as:

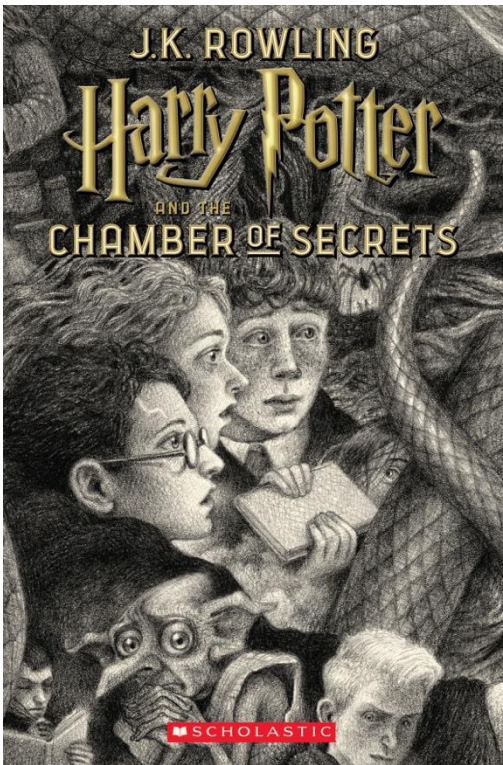
Canva - <https://www.canva.com/create/posters/>

Please refer to the Canva guides to support you - <https://www.canva.com/learn/tutorials/>

The example below was produced using Canva in less than 2 minutes, using one of the templates. So hopefully all pupils can produce something at least this simple with minimum fuss.



b) A hand drawn poster design, like the Goonies poster above, or:



c) Pop culture style <http://www.popculturemonster.com/movies/alternative-movie-posters>. Many modern films are taking this approach so it as an acceptable approach for this project.



d) **Saul Bass style** <http://www.saulbassposterarchive.com/> popular in the 50' s & 60' s - again this could be hand drawn, done using coloured paper or on the computer.



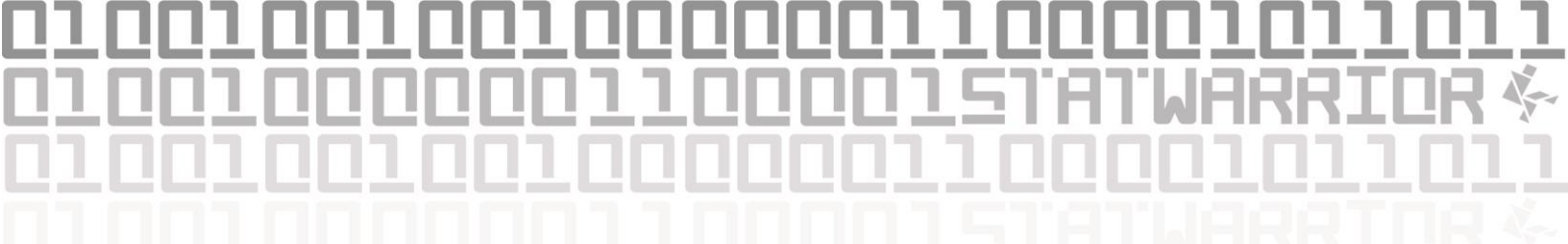
Play around with combination's and be creative

The Pitch

The final task is to allow pupils to develop a 60 second pitch or similar that will convince a film or TV company that their idea is a good one. They should aim to explain **WHY** they should make your movie/TV show, **using the 2 posters they have created**, which highlight the supporting data and concept design.

This can be produced as:

- A piece to camera (smart phone/tablet)
- A still of their two posters with narration (recorded using a phone/microphone)

- 
- News style report using green screen
 - An animation

There is no correct way of doing this, as the aim is for pupils to deliver their message in whatever way they see fit in just 60 seconds!

There is plenty of help online on how to go about speaking to camera. Some simple tips for pupils are:

- Practice with a camera
- Pretend they are talking to a friend
- Write down their speech and learn it
- Enunciate properly (don't mumble)
- Speak slowly
- Use short, clear sentences
- Look at the camera and not the floor
- Use body language
- Use a suitable background – for example, your posters or a green screen to edit on the computer

There is much more to this than simply recording what they think. Ask pupils to take a look at the link below (or share parts of it with them, such as the example pitches) to help them pitch the best they can!



<https://www.scriptreaderpro.com/how-to-pitch-a-movie-idea/>

Once you have finished make sure all work is saved, organised and ready to submit through your STATWARS dashboard

6 Good Career Guidance – Gatsby Benchmarks

Number	Benchmark	Description
1	A stable careers programme	Every school and college should have an embedded programme of career education and guidance that is known and understood by pupils, parents, teachers and employers.
2	Learning from career and labour market information	Every pupil, and their parents, should have access to good-quality information about future study options and labour market opportunities. They will need the support of an informed adviser to make best use of available information.
3	Addressing the needs of each pupil	Pupils have different career guidance needs at different stages. Opportunities for advice and support need to be tailored to the needs of each pupil. A school's careers programme should embed equality and diversity considerations throughout.
4	Linking curriculum learning to careers	All teachers should link curriculum learning with careers. For example, STEM subject teachers should highlight the relevance of STEM subjects for a wide range of future career paths.
5	Encounters with employers and employees	Every pupil should have multiple opportunities to learn from employers about work, employment and the skills that are valued in the workplace. This can be through a range of enrichment activities including visiting speakers, mentoring and enterprise schemes.
6	Experiences of workplaces	Every pupil should have first-hand experiences* of the workplace through work visits, work shadowing and/or work experience to help their exploration of career opportunities, and expand their networks.
7	Encounters with further and higher education	All pupils should understand the full range of learning opportunities that are available to them. This includes both academic and vocational routes and learning in schools, colleges, universities and in the workplace.
8	Personal guidance	Every pupil should have opportunities for guidance interviews with a careers adviser, who could be internal (a member of school staff) or external, provided they are trained to an appropriate level. These should be available whenever significant study or career choices are being made. They should be expected for all pupils but should be timed to meet their individual needs.

STATWARS® promotes engagement of all pupils in a project that has curriculum links to many subject areas, including those under the STEM or STEAM umbrella. The project highlights the relevance of STEM subjects for a wide range of future career paths which are explored throughout STATWARS® such as Data Scientists! The engagement with existing Data Scientists allows pupils multiple opportunities to learn from employers about work, employment and the skills that are valued in the workplace, such as collecting, analysing and presenting data, and this in turn supports them in completing the project. As part of the [Institution of Primary and Secondary Engineers](#), the STATWARS® competition potentially allows pupils to expand their networks and further develop their understanding of the workplace, in a relevant, but enjoyable and engaging manner.



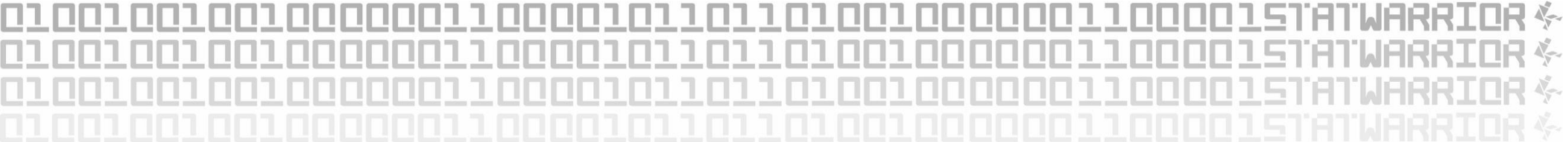
7. Curriculum Links

Please access the STATWARS® English National Curriculum Mapping document for detailed information on how the project maps to Mathematics and Computing subject areas.

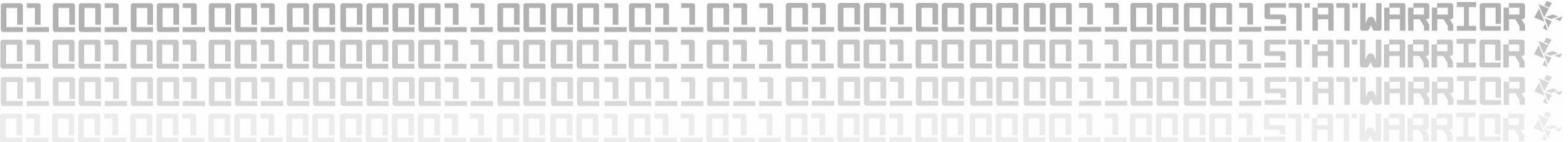
8. Medium Term Plan

The recommended teaching time to STATWARS® is 1 term, based on a minimum of 1 hour a week.

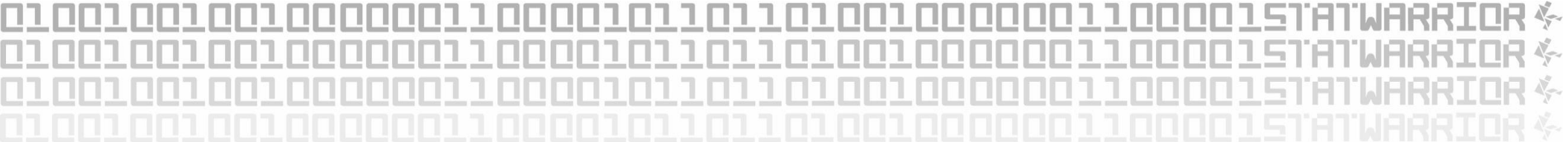
Task number	Topic	Lesson content (this is the minimum content to be covered to support the success of the project) See relevant project overview section for more details.	Challenge - (to extend the learning process beyond the minimum content and create a more in depth solution)	Recommended Teaching time	Outcome and assessment
1	Defining the problem - This topic is aimed at providing context to the project and helping pupils understand what needs to be done to provide a solution to the problem. They will be able to do some initial data gathering and planning here.	<p>STATWARS® are holding a competition to find the next best film based on statistical analysis of available data.</p> <p>1.1 The problem: At the end of the project they would like the data to be presented in an easy to understand format to support the pupils' decision, with an accompanying poster illustration for the potential film - see overview.</p> <p>Pupils should be asked to think/write/discuss their ideas on what makes a successful film individually then as a group to feed back to the class. For example, what is successful – is it rating, money, awards, originality? why was Harry Potter so successful? Why is Avatar the highest grossing film of all time? Are animations more exciting than films? Why do certain films win Oscars?</p> <p>Some possible questions to ask are below:</p> <ul style="list-style-type: none"> a) What do we currently know about the best films? This will require pupils to consider the plot, genre, actors, release dates, age ratings etc. of the most successful films. b) How might that data be displayed to help us decide what is good and bad? Pupils should begin to discuss numerical ratings, reviews, surveys. At this point a series of good and poorly performing film posters can be shown and pupils can discuss this in more detail. Pupils should begin to write down the main headings for the data they 	<p>Further important questions for them to consider here are:</p> <p>How will we store all our data that we collect? Can we store it easily? How could we share our data? Are there any privacy or security issues if we do share our data?</p>	1-2 hours	<p>Lesson objective: Be able to develop ideas on what makes a successful TV show or film and understand what data we could collect to investigate those ideas Pupils should have documented information on successful films and begun to make preliminary decisions about what categories they need to gather data for.</p> <p>They should be able to discuss what a</p>



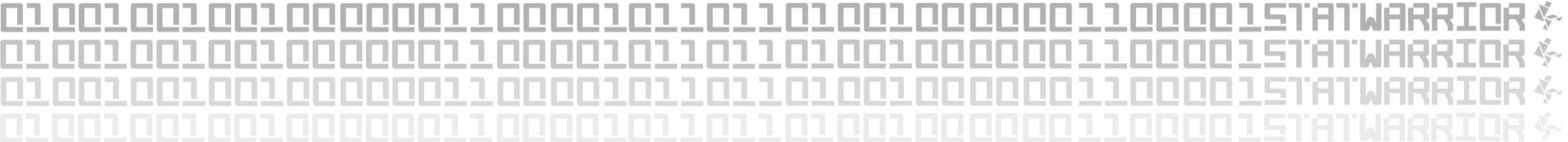
		<p>wish to gather, such as top grossing actors, most successful film genres etc.</p> <p>c) What might some of your ideas look like? This will require some discussion and initial data gathering from the class, this gauges opinion and is useful for comparison with the final decisions made. What do the most successful films have in common? Does earning a lot of money make it a good film? Does spending a lot of money make a good film? Does the age of the actor matter or the genre matter?</p> <p>Optional activity: Technology plays a huge part here, helping companies collect and analyse data to develop their products. The following video may be used to help contextualise the discussion, and help them think if it is just data or gut feeling as well that makes a good idea become a successful product... https://www.ted.com/talks/sebastian_wernicke_how_to_use_data_to_make_a_hit_tv_show#t-732291 At this point pupils can consider some of the extension questions and begin to search the internet for some initial data on “successful films” which can lead to another discussion.</p> <p>In order to help you complete the project, pupils will be able to interview data professionals and other industry professionals online, who will share their thoughts and ideas. Please access the Eventbrite links at https://www.eventbrite.co.uk/o/statwars-competition-30258493092 and book yourself on as many of those as you like</p>			potential solution might need to consider.
2	Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what	<p>2.1 Data types: Help pupils understand the difference between data and information (data with meaning) and that data can be quantitative (numerical; measurements, values) or qualitative (not numerical; text, images, opinion). Pupils will have to consider what type of data they can collect.</p> <p>2.2 Project teams: In order to solve the problem pupils can be allocated into project teams. This is an important process as it can help them create a meaningful and robust solution to the</p>	The level of sophistication for the planning and job allocation will allow for independent challenge and differentiation. For example: The Translator - Communicates the project purpose, designs the experiment, Interprets the	1-2 hours	Lesson Objective: Understand that data can take many forms and how that data can help you create a suitable, data driven solution



	<p>data is and the varying forms it can take.</p>	<p>problem. The age rating of the film solution will be determined here, by the youngest person in the group.</p> <p>Consideration should be made for:</p> <p>What is being done - this can be things like collecting the data, storing the data, the design of the solution, data quality checks, implementing the solution.</p> <p>By whom - Each job can be completed individually or shared.</p> <p>When by - This will be determined by the time-frame for the delivery of the project</p> <p>Pupils can allocate these tasks themselves or this can be decided for them.</p> <p>2.3 Deciding on a potential solution: Encourage pupils to consider different outcomes not just the highest grossing films: For example (see overview for more): How can I design a high grossing blockbuster with a big budget, which also has a high rating? How can I design a highly rated but low budget film?</p> <p>2.4 Protecting the data: Pupils should be asked to consider how to keep data safe and secure, for example: Data or a film poster design being stolen or lost; and the importance of data security, such as the use of passwords and how to back up work, their ideas being stolen. (See overview section 2.4)</p> <p>At this point pupils can decide how they want to set out their work and start to consider possible solutions and hypothesis. This will inform their data collection decisions. Examples can be provided here to support pupils. For example, headings on a spreadsheet which they can find data for: Genre, Rating, Total Gross, Budget, IMDb score etc. Remember at this point they will not have seen the dataset, this will help them determine what they will need to search for if it is not available in the given dataset.</p> <p>It might be helpful to get pupils to sign a project contract, accepting responsibility for their roles in the project. You may also want them to start considering a sources table here rather than in topic 3 (see below).</p>	<p>findings, develops and manages the plan.</p> <p>The Engineer- Collects the data, stores the data safely & securely, checks the data quality</p> <p>The Analyst - Organises the data for analysis, carries out the analysis, tests the outputs, summarises the findings</p> <p>See overview for suitable skills for each role</p>		<p>Pupils will produce a design of their table that will be used to collect data, it will include suitable headings that can be populated. This can be hand drawn or computer based.</p> <p>Pupils will create a checklist for jobs that they need to carry out during the project and accept responsibility for their completion</p>
3	Collecting - This topic helps pupils	<p>3.1 Collecting useful data from the dataset: Recap data that might be important in the project, and using the dataset explain</p>	The natural challenge for this part of the project is how	1-3 hours	Lesson Objective: Be able to

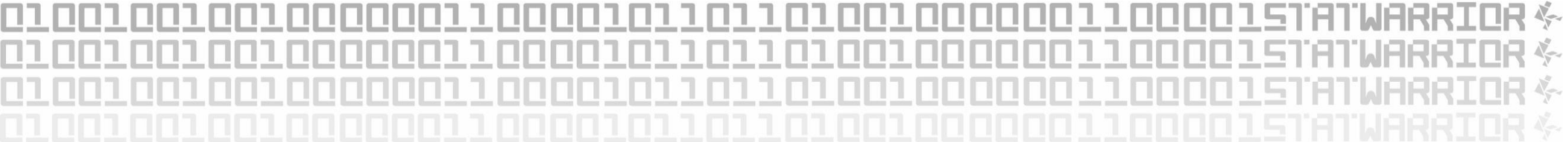


	<p>understand the importance of collecting, and scrutinising data. They will be able to a given dataset and use the WWW to find relevant data for the project and organise it accordingly.</p>	<p>the importance of metadata. Pupils will use the dataset provided, and unless they wish to do so, no data searching is required. NB. Although the dataset provided is age appropriate, you may wish to filter the dataset further before you present it to pupils. 3.2 Searching for data on the World Wide Web: If you want pupils to find the information themselves, you may wish to do this task first: How do search engines work: https://www.youtube.com/watch?v=BNHR6IQGZs Open up a discussion about the best possible search terms and document them. 3.3 Key links and sources table: They may search for the more data not in the dataset, and the more they use, the greater depth their analysis will have. This is a natural way to differentiate the data collection, for example:</p> <ul style="list-style-type: none"> ▶ Based on video game, book, toy, play ▶ Original or sequel ▶ Plot keywords <p>Please refer to the project overview (section 3.3) for relevant external links to use if you do not want the pupils to search the WWW freely. Once pupils begin to collect information you may want to get them to set up a sources table (Source, Data Collected, Date Collected, Used for) to keep their data collection tidy. A sources table is provided in the lesson resources. 3.4 Reliability of data: It will also be important to help pupils understand that they will only be gathering a selection of data in some instances, which leaves the data subject to bias & reliability. The following can also lead to poor quality results. They must be aware of:</p> <ul style="list-style-type: none"> ▶ Accuracy/validity ▶ Timeliness ▶ Completeness 	<p>reliant they are on the dataset provided or whether they independently seek out further data. The depth of data collected will also be very open ended here so this session can be run over one or multiple lessons. Pupils can write a short report on the importance of considering data bias & reliability</p>		<p>understand where data comes from and the importance of scrutinising & organising data that we collect Pupils can use and store data effectively from a given dataset</p> <p>They will be able to search the WWW independently for suitable sources and store them effectively in a sources table.</p> <p>They will be aware of the importance of considering data bias & reliability</p>
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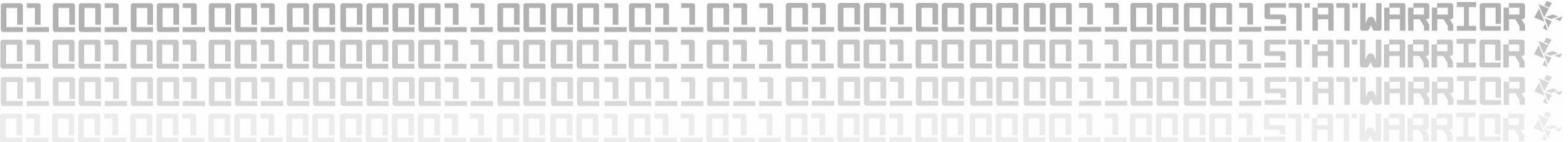


		<p>► Integrity</p> <p>Extension/Homework activity - have pupils collect data from friends and family about what they watch and like and why. They may set up a suitable scoring system to support that data collection (see overview)</p>			
4	Analysing - This topic asks pupils to consider the data they have gathered and make informed decisions as a result. They will be able to use more than one form of analysis.	<p>Several detailed examples, and instructions on how to analyse the dataset have been provided for you in the STATWARS resource folder. This will help you in understanding how to support the children in their analysis – We strongly recommend that you access the “Analysis support for teachers” folder if support needed</p> <p>This can be as simple or as complex as required depending on what you want to achieve. You will be able to analyse the dataset in software such as Microsoft Excel or Google Sheets (web based, allows collaboration online).</p> <p>4.1 Data preparation: Using the resources provided, you should explain to them why “tidy” data is important for when they are organising and presenting their own analysis. You may choose to show them the messy data set in the overview compared to the tidy dataset and ask them to spot the differences.</p> <p>4.2 Analysis: This can be split into two types: what has happened (descriptive analytics) and what will happen (predictive analytics). Explain to pupils that we will need to analyse data, so that we can make an informed decision.</p> <p>4.2.1 Descriptive analysis: Pupils will analyse the data in multiple ways here:</p> <ul style="list-style-type: none"> ► Counts and frequency distributions – histograms or bar charts to display the number of films from a certain category. As well as charts, frequency word clouds could be created using sites like Word Art - https://wordart.com/create ► Descriptive statistics - Such as the mean score for a genre of film or the (mode) genre for films over 9/10, trends over time ► Cross-tabulation/contingency table - You are looking for patterns here. So for example <i>Pupils can look for successful films that contain certain actors, or genres that scored over 8 on IMDb and when they were released. Are there any</i> 	Again, the level of sophistication will add natural challenge here. pupils can choose to produce simple bar charts and graphs, but some may look to do further analysis using different ways to display the data and create a survey to support their analysis.	1-3 hours	<p>Lesson Objective: Understand that we can analyse data in different ways and how this can help us make informed decisions Pupils will be able to use at least one form of data analysis to support their decision.</p>

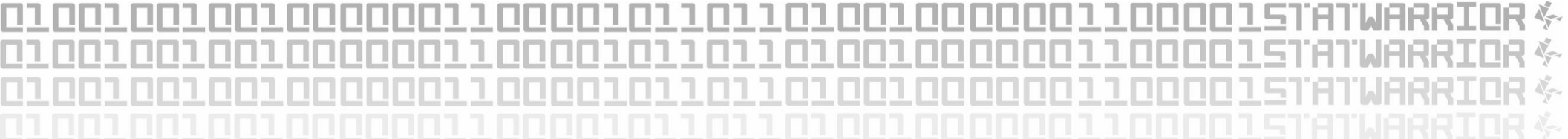
		<p><i>inconsistencies in the patterns? This could even be in the form of a class questionnaire to see what options they prefer</i></p> <p>4.2.2 Predictive analysis: This focuses on forecasting and hypothesising what will happen. What you want pupils to be able to do here is discuss what they think worked and why, and then utilise this information to inform their own decision, taking into account their own experiences and gut feelings. See link below for some guidance. https://www.wikihow.com/Come-Up-with-a-Movie-Idea This could take the form of a hypothesis or forecast.</p> <ul style="list-style-type: none"> ▶ They could create a basic survey to gauge “audience” feedback on their potential choices, or a decision tree that helps them determine if it would be successful or not, based on the data they have (see overview section 4.2.2). It is important here that you emphasise the decisions taken here should be logical and based on sound data analysis. ▶ The use of a decision tree will help pupils filter their ideas and gauge class preferences <p>Be sure to save any graphs or diagrams produced here, ready to present on their poster.</p>			
5.1	Conclusion and Delivery 1: The film choice. This topic allows pupils to develop their analysis into a visual representation of the data and communicate it effectively using suitable software.	<p>PLEASE NOTE: Conclusion and Delivery topics 5.1 & 5.2 are interchangeable or can run alongside each other through allocated group tasks.</p> <p>Once pupils have gathered the data and considered its use, they should have decided on what film they want to run with. They will create 2 posters (A2 size maximum). Show them the provided examples of what good looks like if you wish.</p> <p>5.1 - Poster 1: The film choice</p> <p>5.1.1 Displaying the data</p> <p>Their first poster should summarise the approach, the findings and any decisions made during the course of the project. It should present the relevant data that supports the answering of the question. They will have to pitch their idea using this poster to Jeff Bezos or Reed Hastings.</p>	<p>If groups wish to enhance the presentation of their findings, they can produce a written report or presentation alongside their poster. This allows some additional challenge and differentiation. Further possible questions that might be considered are:</p> <p>What could be done differently next time? What additional data would have been helpful?</p>	1-2 hours	<p>Lesson Objective: To be able to present data in a way that is suitable for your target audience and appropriate for your chosen solution Pupils will produce a visual representation of the data they have analysed to communicate their</p>



		<p>Software choice here is up to you. Some ideas are provided to you in the overview:</p> <ul style="list-style-type: none"> ▶ Using PowerPoint, Publisher, Google Docs/Slides to display the data (graphs/images) with some supporting text. ▶ Using infographics via <ul style="list-style-type: none"> d) PowerPoint infographics template (if available) e) Canva: https://www.canva.com/ f) Hand Drawn Display <p>When diagrams or graphs are presented, ensure that they are clearly explained and are not open to misinterpretation. Special consideration should be taken for the types of charts used as outlined in the project overview.</p> <p>5.1.2 Reviewing the poster Before pupils present their findings, they should make sure it explicitly answers the following questions (which can be reworded if required – see lesson plan):</p> <p>How does the data answer the original problem statement? <i>E.g. Does it present a convincing argument for a successful film with supporting data? Is the data presented in a way that makes it easy to understand/interpret?</i></p> <p>How does the data help defend against any objections? <i>E.g. Is it supported by relevant data?</i></p> <p>What are the conclusions and does it have any limitations? <i>E.g. What led you to this point? Can we categorically say that this film would be successful? Are there potentially other solutions? Does your solution support what you originally thought?</i></p> <p>Once they have completed both topic 5/6 tasks, they can then pitch their idea</p>	<p>What should happen next? <i>Could we use this data to propose a sequel, or ‘spinoff’ to the film? How might the data you have influence the decisions on things like budget, actors, plot line for this? Does this data allow us to tap into other markets?</i></p> <p>Where else could this type of analysis of data be useful?</p> <p>Pupils can consider a more eco-friendly way of advertising, i.e. alternatives to printed posters that would be more sustainable.</p>		<p>decision and answer the question posed at the beginning of the project.</p> <p>They will select/use suitable software.</p> <p>They will be able to discuss & justify their findings coherently and succinctly in an elevator pitch scenario.</p>
5.2	Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the	<p>PLEASE NOTE: Conclusion and Delivery topics 5.1 & 5.2 are interchangeable or can run alongside each other through allocated group tasks.</p> <p>5.2 - Poster 2: Marketing the Idea Once pupils have created their idea for a successful film they need to consider how they would sell it.</p>	Consideration should be given to posters that ‘fronted’ poorly reviewed films that were initially box office hits – did the poster influence choice? This could be a good survey for the pupils to make	1-2 hours	Lesson Objective: Consider the importance of including relevant data when advertising products, in order



	<p>creative aspects their finished product and how they could market it. It allows them to consider the real world applications of creating a product and then trying to make it successful.</p>	<p>A key step is to advertise it effectively and appreciate the impact advertising has on the success of a film.</p> <p>5.2.1 What makes a good poster?</p> <p>Show the pupils examples of good posters and what they think makes an effective film poster? (See overview section 5 for more information and examples provided to show)</p> <p>https://www.shortlist.com/entertainment/films/the-40-coolest-movie-posters-ever/103777 Please be aware that some of the films will be for children older than the age of the pupils in the class, so use discretion.</p> <ul style="list-style-type: none"> ▶ Get pupils to write a checklist for what they want to include on their poster, consider the hints and tips below on what a good film poster should do and discuss with the class: ▶ Grab your attention, evoke an emotional response, e.g. fear, love, laughter, suspense ▶ Show you the film without telling you too much ▶ Create interest and incentive to go see the film ▶ Appeal to fans and non-fans alike ▶ Styling and data shown that would be consistent with the films content/audience. E.g. rating, date, colours ▶ Suit other formats - such as billboard, DVD, sides of public transport ▶ Be recognisable if you were to make a sequel ▶ Display relevant data <p>5.2.2 Creating the poster:</p> <p>a) Digital poster</p> <p>Ask pupils to create the poster. Groups can present their poster in numerous ways:</p> <ul style="list-style-type: none"> a) Simple approach using PowerPoint, Publisher, even Word or Canva b) Hand Drawn Design c) Pop Culture Style d) Saul Bass Style 	<p>– did the film poster persuade them to go to the film? What elements of that poster enticed you the most? How would you ‘rate’ the film out of 5 stars?</p> <p>Come up with a checklist of what to avoid when making a poster.</p> <p>Pupils can consider a more eco-friendly way of advertising, i.e. alternatives to printed posters that would be more sustainable.</p>		<p>to communicate your message effectively</p> <p>Pupils will create a suitable and effective poster that highlights key aspects of their film.</p> <p>They will select/use suitable software.</p> <p>They will be able to discuss & justify their findings coherently and succinctly in an elevator pitch scenario.</p>
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		<p>Examples/support links are on overview, pupils may access the WWW for images etc they wish to use.</p> <p>Once completed pupils can update their progress using the “Checklist for completed work” document</p> <p>Once they have completed both topic 5/6 tasks, they can then pitch their idea</p> <p>You may need to allocate extra time here for pupils to present and pitch their ideas/work. You will need to pick a class winner and decide which entries to put forward for the competition (you can submit all if you wish) Shortlisted teams will be invited to an awards day to talk through their project with the judges and engage in fun data related activities</p>			
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9. Appendix

All URL’s correct at time of writing; however they will need to be checked ahead of use with pupils.

<https://www.skillsdevelopmentscotland.co.uk/media/43306/scotlands-digital-technologies-summary-report.pdf>

<https://education.gov.scot/parentzone/Documents/TechnologiesImpactReport.pdf>

