

STATWARS[®]

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

STATWARS[®] Film and TV Curriculum for Excellence Mapping Document

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

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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:

Linksto:

www.onedotall.com

www.primaryengineer.com

www.secondaryengineer.com

www.leadersaward.com

What is STATWARS?

The STATWARS vision is to provide a classroom project that delivers meaningful and engaging mathematics, numeracy and data literacy to pupils, by bringing the enchantment of the entertainment industry to their doorstep.

STATWARS allows pupils to make rich cross curricular connections between mathematics, the world of work and their own learning, as they work through a topic that is meaningful, relevant and contemporary. Pupils work in teams to analyse a large dataset of TV shows and films to produce an infographic poster, an advertisement poster and a 60-sec pitch.

The competition's structure encourages pupils to apply mathematics not just creatively, but logically, to collect, analyse and present data, whilst drawing on their own personal experiences of what makes great entertainment! The nature of the project therefore encourages teamwork, leadership, curiosity, critical thinking and resilience, as teams are asked to consider indeterminate problems and develop data driven hypotheses.

Teachers are provided with whole-class differentiated 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.

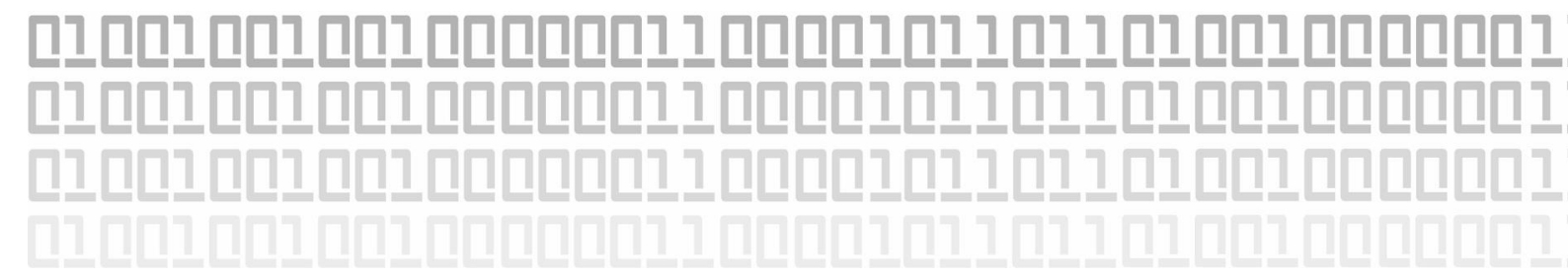
Shortlisted teams will be invited to an awards day to talk through their project with the judges and engage in fun data related activities.

For more information and how to enter, please visit <https://www.statwarscompetition.com/>

Developing pupils across the curriculum

STATWARS has clear links to the National Curriculum of Excellence, such as **Numeracy & Mathematics** and **Technologies Second, Third and Fourth Level, preparing students for Senior phase studies** and further education in these areas. These links draw on the need to offer a problem based platform to deliver meaningful and engaging mathematics, which allows the cross curricular application of skills, knowledge and understanding. A main aim of STATWARS is to promote an understanding of real world use of mathematics, allowing pupils to follow simple or complex lines of enquiry from start to finish, conjecture relationships and generalisations in order to develop coherent, justified arguments that are based on thorough data analysis. STATWARS also encourages the real world application and use of technology, such as the internet to search and collect data, as well as data mining and analysis software, which allow the conceptualisation, manipulation and presentation of data.

Mathematics is a highly creative and interconnected discipline, providing solutions to the most intriguing problems. STATWARS allows pupils to make rich connections between different subjects, the world of work and their own learning, as they work through a topic that is meaningful, relevant and contemporary. This creates a sense of curiosity and enjoyment of mathematics as pupils are required to consider the importance of numerical ratings, monetary values and other statistical measurements and their impact on the entertainment industry, in the past, present and future. Pupils can begin to see mathematics as a wholly



relevant skillset, which can be applied throughout their whole life, thus potentially leading to multiple industry and societal benefits.

Pupils are also challenged to apply their mathematics creatively, but logically to solve the problem, which involves breaking it down into a series of steps, each of which offer themselves to an increasing level of sophistication. The nature of the project encourages curiosity, criticality and resilience, as pupils are asked to consider indeterminate problems and develop data driven hypotheses. The competition is differentiated to allow pupils to work in groups, or independently as part of a team to solve those problems, through the support of a scaffolded project, as well as their peers.

Pupils are required to understand, use and justify their use of quantitative and qualitative data, by seeking out and explaining patterns and relationships. STATWARS challenges pupils to reason mathematically throughout their analysis and presentation of data and information collected, so that they can justify their film or TV show choices. Pupils then deliver this information via a sales pitch, using two posters; one for advertisement, and one as an infographic. These creative elements of the competition allow pupils to present their data in numerous ways, with the goal of providing justification of decision. This use of mathematics focused spoken language develops pupils across the whole curriculum, cognitively, socially and linguistically. This contextualised development and application of mathematics leads to the increase in ability to apply those skills to other subjects and the wider world.

Many other Curriculum for Excellence areas are developed through STATWARS, such as expressive arts; creating and expressing themselves through presenting to audiences and Languages; reading, writing, and spoken language, discussion, making formal presentations and participating in debate

The following tables show how STATWARS can be mapped to the Numeracy & Mathematics and Technologies curriculum across levels 2, 3 and 4.



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Level 2 Numeracy & Mathematics

Topic	Description	Name	Subject	Category	Sub Category
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.	I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.	MNU 2-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages including ratio and proportion
	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.	MNU 2-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages including ratio and proportion
	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
	I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.	MNU 2-20b	Numeracy and Mathematics	Information handling	Data and analysis
Collecting - This topic helps pupils understand the importance of collecting, and scrutinising data. They will be able to a given dataset and use the WWW to find relevant	I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.	MNU 2-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others.	MNU 2-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes

Topic	Description	Name	Subject	Category	Sub Category
data for the project and organise it accordingly.	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
	I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions.	MTH 2-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
	I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.	MNU 2-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 2-21a	Numeracy and Mathematics	Information handling	Data and analysis
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.	I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.	MNU 2-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others.	MNU 2-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
	I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions.	MTH 2-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future

Topic	Description	Name	Subject	Category	Sub Category
	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
	I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.	MNU 2-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 2-21a	Numeracy and Mathematics	Information handling	Data and analysis
	I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability.	MNU 2-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
	Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment.	MTH 2-16a	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
	I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources.	MTH 2-16c	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
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.	I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method.	MNU 2-07b	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages including ratio and proportion
	I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
	I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions.	MTH 2-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future

Topic	Description	Name	Subject	Category	Sub Category
	I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources.	MTH 2-16c	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
	Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 2-21a	Numeracy and Mathematics	Information handling	Data and analysis
	I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability.	MNU 2-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.	MNU 2-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 2-21a	Numeracy and Mathematics	Information handling	Data and analysis

Summaries of Level 2 Numeracy & Mathematics skills developed through STATWARS

Description	Name	Subject	Category	Sub Category
I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.	MNU 2-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others.	MNU 2-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.	MNU 2-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages including ratio and proportion
I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method.	MNU 2-07b	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages including ratio and proportion
I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.	MNU 2-09c	Numeracy and Mathematics	Number, money and measure	Money
I have worked with others to explore, and present our findings on, how mathematics impacts on the world and the important part it has played in advances and inventions.	MTH 2-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment.	MTH 2-16a	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects

Description	Name	Subject	Category	Sub Category
I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources.	MTH 2-16c	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.	MNU 2-20a	Numeracy and Mathematics	Information handling	Data and analysis
I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.	MNU 2-20b	Numeracy and Mathematics	Information handling	Data and analysis
I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 2-21a	Numeracy and Mathematics	Information handling	Data and analysis
I can conduct simple experiments involving chance and communicate my predictions and findings using the vocabulary of probability.	MNU 2-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty

Level 2 Technologies

Topic	Description	Name	Subject	Category
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.	I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to search, access and retrieve information and am aware that not all of this information will be credible.	TCH 2-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure.	TCH 2-03a	Digital Literacy	Cyber resilience and internet safety
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to search, access and retrieve information and am aware that not all of this information will be credible.	TCH 2-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure.	TCH 2-03a	Digital Literacy	Cyber resilience and internet safety
Collecting - This topic helps pupils 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.	I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to search, access and retrieve information and am aware that not all of this information will be credible.	TCH 2-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure.	TCH 2-03a	Digital Literacy	Cyber resilience and internet safety

Topic	Description	Name	Subject	Category
	I can investigate how product design and development have been influenced by changing lifestyles.	TCH 2-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I understand the operation of a process and its outcome. I can structure related items of information.	TCH 2-13a	Computing Science	Understanding the world through computational thinking
	I can create, develop and evaluate computing solutions in response to a design challenge.	TCH 2-15a	Computing Science	Designing, building and testing computing solutions
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.	I can investigate how product design and development have been influenced by changing lifestyles.	TCH 2-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can analyse how lifestyles can impact on the environment and Earth's resources and can make suggestions about how to live in a more sustainable way.	TCH 2-06a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I understand the operation of a process and its outcome. I can structure related items of information.	TCH 2-13a	Computing Science	Understanding the world through computational thinking
	I can create, develop and evaluate computing solutions in response to a design challenge.	TCH 2-15a	Computing Science	Designing, building and testing computing solutions
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.	I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can investigate how product design and development have been influenced by changing lifestyles.	TCH 2-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can analyse how lifestyles can impact on the environment and Earth's resources and can make suggestions about how to live in a more sustainable way.	TCH 2-06a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.

Topic	Description	Name	Subject	Category
	I can make suggestions as to how individuals and organisations may use technologies to support sustainability and reduce the impact on our environment.	TCH 2-07a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can extend and enhance my design skills to solve problems and can construct models.	TCH 2-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can use a range of graphic techniques, manually and digitally, to communicate ideas, concepts or products, experimenting with the use of shape, colour and texture to enhance my work.	TCH 2-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can investigate how product design and development have been influenced by changing lifestyles.	TCH 2-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can analyse how lifestyles can impact on the environment and Earth's resources and can make suggestions about how to live in a more sustainable way.	TCH 2-06a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can make suggestions as to how individuals and organisations may use technologies to support sustainability and reduce the impact on our environment.	TCH 2-07a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can extend and enhance my design skills to solve problems and can construct models.	TCH 2-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can use a range of graphic techniques, manually and digitally, to communicate ideas, concepts or products, experimenting with the use of shape, colour and texture to enhance my work.	TCH 2-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media

Summaries of Level 2 Technologies skills developed through STATWARS

Description	Name	Subject	Category
I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way.	TCH 2-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
I can use digital technologies to search, access and retrieve information and am aware that not all of this information will be credible.	TCH 2-02a	Digital Literacy	Searching, processing and managing information responsibly
I can explore online communities demonstrating an understanding of responsible digital behaviour and I'm aware of how to keep myself safe and secure.	TCH 2-03a	Digital Literacy	Cyber resilience and internet safety
I can investigate how product design and development have been influenced by changing lifestyles.	TCH 2-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
I understand the operation of a process and its outcome. I can structure related items of information.	TCH 2-13a	Computing Science	Understanding the world through computational thinking
I can create, develop and evaluate computing solutions in response to a design challenge.	TCH 2-15a	Computing Science	Designing, building and testing computing solutions
I can analyse how lifestyles can impact on the environment and Earth's resources and can make suggestions about how to live in a more sustainable way.	TCH 2-06a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
I can make suggestions as to how individuals and organisations may use technologies to support sustainability and reduce the impact on our environment.	TCH 2-07a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
I can extend and enhance my design skills to solve problems and can construct models.	TCH 2-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
I can use a range of graphic techniques, manually and digitally, to communicate ideas, concepts or products, experimenting with the use of shape, colour and texture to enhance my work.	TCH 2-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media

Level 3 Numeracy & Mathematics

Topic	Description	Name	Subject	Category	Sub Category
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.	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.	MNU 3-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	I can continue to recall number facts quickly and use them accurately when making calculations.	MNU 3-03b	Numeracy and Mathematics	Number, money and measure	Number and number processes
	Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations.	MTH 3-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
	When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn.	MTH 3-20b	Numeracy and Mathematics	Information handling	Data and analysis
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I can continue to recall number facts quickly and use them accurately when making calculations.	MNU 3-03b	Numeracy and Mathematics	Number, money and measure	Number and number processes
	Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations.	MTH 3-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
	When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn.	MTH 3-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.	MNU 3-20a	Numeracy and Mathematics	Information handling	Data and analysis
Collecting - This topic helps pupils understand the importance of collecting, and scrutinising data. They will be able to a given dataset and use the WWW to find relevant	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.	MNU 3-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	I can continue to recall number facts quickly and use them accurately when making calculations.	MNU 3-03b	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations.	MNU 3-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages

Topic	Description	Name	Subject	Category	Sub Category
data for the project and organise it accordingly	I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.	MNU 3-20a	Numeracy and Mathematics	Information handling	Data and analysis
	When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn.	MTH 3-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 3-21a	Numeracy and Mathematics	Information handling	Data and analysis
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.	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.	MNU 3-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.	MNU 3-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations.	MNU 3-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
	I can budget effectively, making use of technology and other methods, to manage money and plan for future expenses.	MNU 3-09b	Numeracy and Mathematics	Number, money and measure	Money
	Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations.	MTH 3-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
	Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods.	MTH 3-16a	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
	I can apply my understanding of scale when enlarging or reducing pictures and shapes, using different methods, including technology.	MTH 3-17c	Numeracy and Mathematics	Shape, position and movement	Angle, symmetry and transformation
	I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.	MNU 3-20a	Numeracy and Mathematics	Information handling	Data and analysis
	When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can	MTH 3-20b	Numeracy and Mathematics	Information handling	Data and analysis

Topic	Description	Name	Subject	Category	Sub Category
	affect precision, to ensure that the data allows for fair conclusions to be drawn.				
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 3-21a	Numeracy and Mathematics	Information handling	Data and analysis
	I can find the probability of a simple event happening and explain why the consequences of the event, as well as its probability, should be considered when making choices.	MNU 3-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
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.	I can continue to recall number facts quickly and use them accurately when making calculations.	MNU 3-03b	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 3-21a	Numeracy and Mathematics	Information handling	Data and analysis
	I can find the probability of a simple event happening and explain why the consequences of the event, as well as its probability, should be considered when making choices.	MNU 3-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I can apply my understanding of scale when enlarging or reducing pictures and shapes, using different methods, including technology.	MTH 3-17c	Numeracy and Mathematics	Shape, position and movement	Angle, symmetry and transformation
	I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns.	MTH 3-19a	Numeracy and Mathematics	Shape, position and movement	Angle, symmetry and transformation
	I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.	MNU 3-20a	Numeracy and Mathematics	Information handling	Data and analysis
	I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 3-21a	Numeracy and Mathematics	Information handling	Data and analysis

Summaries of Level 3 Numeracy & Mathematics skills developed through STATWARS

Description	Name	Subject	Category	Sub Category
I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.	MNU 3-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.	MNU 3-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
I can continue to recall number facts quickly and use them accurately when making calculations.	MNU 3-03b	Numeracy and Mathematics	Number, money and measure	Number and number processes
I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations.	MNU 3-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
I can budget effectively, making use of technology and other methods, to manage money and plan for future expenses.	MNU 3-09b	Numeracy and Mathematics	Number, money and measure	Money
I can work collaboratively, making appropriate use of technology, to source information presented in a range of ways, interpret what it conveys and discuss whether I believe the information to be robust, vague or misleading.	MNU 3-20a	Numeracy and Mathematics	Information handling	Data and analysis
I can find the probability of a simple event happening and explain why the consequences of the event, as well as its probability, should be considered when making choices.	MNU 3-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations.	MTH 3-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
Having investigated a range of methods, I can accurately draw 2D shapes using appropriate mathematical instruments and methods.	MTH 3-16a	Numeracy and Mathematics	Shape, position and movement	Properties of 2D shapes and 3D objects
I can apply my understanding of scale when enlarging or reducing pictures and shapes, using different methods, including technology.	MTH 3-17c	Numeracy and Mathematics	Shape, position and movement	Angle, symmetry and transformation

Description	Name	Subject	Category	Sub Category
I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns.	MTH 3-19a	Numeracy and Mathematics	Shape, position and movement	Angle, symmetry and transformation
When analysing information or collecting data of my own, I can use my understanding of how bias may arise and how sample size can affect precision, to ensure that the data allows for fair conclusions to be drawn.	MTH 3-20b	Numeracy and Mathematics	Information handling	Data and analysis
I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.	MTH 3-21a	Numeracy and Mathematics	Information handling	Data and analysis

Level 3 Technologies

Topic	Description	Name	Subject	Category
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.	I can keep myself safe and secure in online environments and I am aware of the importance and consequences of doing this for myself and others.	TCH 3-03a	Digital Literacy	Cyber resilience and internet safety
	I understand how scientific and technological developments have contributed to changes in everyday products.	TCH 3-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems.	TCH 3-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	Having used digital technologies to search, access and retrieve information I can justify my selection in terms of validity, reliability and have an awareness of plagiarism.	TCH 3-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can keep myself safe and secure in online environments and I am aware of the importance and consequences of doing this for myself and others.	TCH 3-03a	Digital Literacy	Cyber resilience and internet safety
	I understand how scientific and technological developments have contributed to changes in everyday products.	TCH 3-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments	Impact, contribution, and relationship of technologies on

Topic	Description	Name	Subject	Category
			in Society and Business	business, the economy, politics, and the environment.
Collecting - This topic helps pupils 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.	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems.	TCH 3-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	Having used digital technologies to search, access and retrieve information I can justify my selection in terms of validity, reliability and have an awareness of plagiarism.	TCH 3-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can keep myself safe and secure in online environments and I am aware of the importance and consequences of doing this for myself and others.	TCH 3-03a	Digital Literacy	Cyber resilience and internet safety
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.	I understand how scientific and technological developments have contributed to changes in everyday products.	TCH 3-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
	I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I am developing my understanding of information and can use an information model to describe particular aspects of a real world system.	TCH 3-13b	Computing Science	Understanding the world through computational thinking
	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements.	TCH 3-15a	Computing Science	Designing, building and testing computing solutions
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.	I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can create solutions in 3D and 2D and can justify the construction/graphic methods and the design features.	TCH 3-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can apply a range of graphic techniques and standards when producing images using sketching, drawing and software.	TCH 3-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media
	I am developing my understanding of information and can use an information model to describe particular aspects of a real world system.	TCH 3-13b	Computing Science	Understanding the world through computational thinking

Topic	Description	Name	Subject	Category
	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements.	TCH 3-15a	Computing Science	Designing, building and testing computing solutions
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems.	TCH 3-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can create solutions in 3D and 2D and can justify the construction/graphic methods and the design features.	TCH 3-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can apply a range of graphic techniques and standards when producing images using sketching, drawing and software.	TCH 3-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media
	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements.	TCH 3-15a	Computing Science	Designing, building and testing computing solutions

Summaries of Level 3 Technologies skills developed through STATWARS

Description	Name	Subject	Category
I can keep myself safe and secure in online environments and I am aware of the importance and consequences of doing this for myself and others.	TCH 3-03a	Digital Literacy	Cyber resilience and internet safety
I understand how scientific and technological developments have contributed to changes in everyday products.	TCH 3-05a	Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work
I can explore the impact, contribution and use of various software applications and emerging hardware in business.	TCH 3-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems.	TCH 3-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
Having used digital technologies to search, access and retrieve information I can justify my selection in terms of validity, reliability and have an awareness of plagiarism.	TCH 3-02a	Digital Literacy	Searching, processing and managing information responsibly
I am developing my understanding of information and can use an information model to describe particular aspects of a real world system.	TCH 3-13b	Computing Science	Understanding the world through computational thinking
I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements.	TCH 3-15a	Computing Science	Designing, building and testing computing solutions
I can create solutions in 3D and 2D and can justify the construction/graphic methods and the design features.	TCH 3-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
I can apply a range of graphic techniques and standards when producing images using sketching, drawing and software.	TCH 3-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media

Level 4 Numeracy & Mathematics

Topic	Description	Name	Subject	Category	Sub Category
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.	Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts.	MNU 4-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I can source information on earnings and deductions and use it when making calculations to determine net income.	MNU 4-09b	Numeracy and Mathematics	Number, money and measure	Money
	I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace.	MTH 4-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
	In order to compare numerical information in real life contexts, I can find the mean, median, mode and range of sets of numbers, decide which type of average is most appropriate to use and discuss how using an alternative type of average could be misleading.	MTH 4-20b	Numeracy and Mathematics	Information handling	Data and analysis
Collecting - This topic helps pupils 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.	Having investigated the practical impact of inaccuracy and error, I can use my knowledge of tolerance when choosing the required degree of accuracy to make real-life calculations.	MNU 4-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
	Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts.	MNU 4-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices.	MNU 4-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
	I can solve problems involving fractions and mixed numbers in context, using addition, subtraction or multiplication.	MTH 4-07b	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages

Topic	Description	Name	Subject	Category	Sub Category
	I can source information on earnings and deductions and use it when making calculations to determine net income.	MNU 4-09b	Numeracy and Mathematics	Number, money and measure	Money
	I can evaluate and interpret raw and graphical data using a variety of methods, comment on relationships I observe within the data and communicate my findings to others.	MNU 4-20a	Numeracy and Mathematics	Information handling	Data and analysis
	In order to compare numerical information in real-life contexts, I can find the mean, median, mode and range of sets of numbers, decide which type of average is most appropriate to use and discuss how using an alternative type of average could be misleading.	MTH 4-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data.	MTH 4-21a	Numeracy and Mathematics	Information handling	Data and analysis
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.	Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts.	MNU 4-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
	I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices.	MNU 4-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
	I can solve problems involving fractions and mixed numbers in context, using addition, subtraction or multiplication.	MTH 4-07b	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
	Having explored how real-life situations can be modelled by number patterns, I can establish a number sequence to represent a physical or pictorial pattern, determine a general formula to describe the sequence, then use it to make evaluations and solve related problems.	MTH 4-13a	Numeracy and Mathematics	Number, money and measure	Patterns and relationships
	I can use a given formula to generate points lying on a straight line, plot them to create a graphical representation then use this to answer related questions.	MTH 4-13d	Numeracy and Mathematics	Number, money and measure	Patterns and relationships

Topic	Description	Name	Subject	Category	Sub Category
	Having discussed the benefits of using mathematics to model real-life situations, I can construct and solve inequalities and an extended range of equations.	MTH 4-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
	I can evaluate and interpret raw and graphical data using a variety of methods, comment on relationships I observe within the data and communicate my findings to others.	MNU 4-20a	Numeracy and Mathematics	Information handling	Data and analysis
	In order to compare numerical information in real-life contexts, I can find the mean, median, mode and range of sets of numbers, decide which type of average is most appropriate to use and discuss how using an alternative type of average could be misleading.	MTH 4-20b	Numeracy and Mathematics	Information handling	Data and analysis
	I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data.	MTH 4-21a	Numeracy and Mathematics	Information handling	Data and analysis
	By applying my understanding of probability, I can determine how many times I expect an event to occur, and use this information to make predictions, risk assessment, informed choices and decisions.	MNU 4-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty
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.	I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices.	MNU 4-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
	I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace.	MTH 4-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
	I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data.	MTH 4-21a	Numeracy and Mathematics	Information handling	Data and analysis
	By applying my understanding of probability, I can determine how many times I expect an event to occur, and use this information to make predictions, risk assessment, informed choices and decisions.	MNU 4-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty

Topic	Description	Name	Subject	Category	Sub Category
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace.	MTH 4-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
	I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data.	MTH 4-21a	Numeracy and Mathematics	Information handling	Data and analysis

Summaries of Level 4 Numeracy & Mathematics skills developed through STATWARS

Description	Name	Subject	Category	Sub Category
Having recognised similarities between new problems and problems I have solved before, I can carry out the necessary calculations to solve problems set in unfamiliar contexts.	MNU 4-03a	Numeracy and Mathematics	Number, money and measure	Number and number processes
I can source information on earnings and deductions and use it when making calculations to determine net income.	MNU 4-09b	Numeracy and Mathematics	Number, money and measure	Money
I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace.	MTH 4-12a	Numeracy and Mathematics	Number, money and measure	Mathematics – its impact on the world, past, present and future
In order to compare numerical information in real life contexts, I can find the mean, median, mode and range of sets of numbers, decide which type of average is most appropriate to use and discuss how using an alternative type of average could be misleading.	MTH 4-20b	Numeracy and Mathematics	Information handling	Data and analysis
Having investigated the practical impact of inaccuracy and error, I can use my knowledge of tolerance when choosing the required degree of accuracy to make real-life calculations.	MNU 4-01a	Numeracy and Mathematics	Number, money and measure	Estimation and rounding
I can choose the most appropriate form of fractions, decimal fractions and percentages to use when making calculations mentally, in written form or using technology, then use my solutions to make comparisons, decisions and choices.	MNU 4-07a	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
I can solve problems involving fractions and mixed numbers in context, using addition, subtraction or multiplication.	MTH 4-07b	Numeracy and Mathematics	Number, money and measure	Fractions, decimal fractions and percentages
I can evaluate and interpret raw and graphical data using a variety of methods, comment on relationships I observe within the data and communicate my findings to others.	MNU 4-20a	Numeracy and Mathematics	Information handling	Data and analysis
I can select appropriately from a wide range of tables, charts, diagrams and graphs when displaying discrete, continuous or grouped data, clearly communicating the significant features of the data.	MTH 4-21a	Numeracy and Mathematics	Information handling	Data and analysis
Having explored how real-life situations can be modelled by number patterns, I can establish a number sequence to represent a physical or pictorial pattern, determine a general formula to describe the sequence, then use it to make evaluations and solve related problems.	MTH 4-13a	Numeracy and Mathematics	Number, money and measure	Patterns and relationships
I can use a given formula to generate points lying on a straight line, plot them to create a graphical representation then use this to answer related questions.	MTH 4-13d	Numeracy and Mathematics	Number, money and measure	Patterns and relationships

Description	Name	Subject	Category	Sub Category
Having discussed the benefits of using mathematics to model real-life situations, I can construct and solve inequalities and an extended range of equations.	MTH 4-15a	Numeracy and Mathematics	Number, money and measure	Expressions and equations
By applying my understanding of probability, I can determine how many times I expect an event to occur, and use this information to make predictions, risk assessment, informed choices and decisions.	MNU 4-22a	Numeracy and Mathematics	Information handling	Ideas of chance and uncertainty

Level 4 Technologies

Topic	Description	Name	Subject	Category
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.	I can use digital technologies to process and manage information responsibly and can reference sources accordingly.	TCH 4-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can apply skills of critical thinking when evaluating the quality and effectiveness of my own or others' products.	TCH 4-04d	Food and Textile Technology	N/A
Planning - This topic allows pupils to work in project teams to determine the best approach to their solution. They will understand what data is and the varying forms it can take.	I can select and use digital technologies to access, select relevant information and solve real world problems.	TCH 4-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to process and manage information responsibly and can reference sources accordingly.	TCH 4-02a	Digital Literacy	Searching, processing and managing information responsibly
Collecting - This topic helps pupils 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.	I can select and use digital technologies to access, select relevant information and solve real world problems.	TCH 4-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to process and manage information responsibly and can reference sources accordingly.	TCH 4-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can select and use appropriate hardware and software which supports evolving business activities.	TCH 4-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
Analysing - This topic asks pupils to consider the data they have gathered	I can present conclusions about the impact of technologies on the economy, politics and the environment.	TCH 4-07a	Technological Developments	Impact, contribution, and relationship of technologies on business, the economy,

Topic	Description	Name	Subject	Category
and make informed decisions as a result. They will be able to use more than one form of analysis.			in Society and Business	politics, and the environment.
	I can select and use appropriate hardware and software which supports evolving business activities.	TCH 4-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can apply design thinking skills when designing and manufacturing models/products which satisfy the user or client.	TCH 4-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can describe in detail the processes used in real world solutions, compare these processes against alternative solutions and justify which is the most appropriate.	TCH 4-13a	Computing Science	Understanding the world through computational thinking
	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions.	TCH 4-15a	Computing Science	Designing, building and testing computing solutions
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.	I can select and use digital technologies to access, select relevant information and solve real world problems.	TCH 4-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can use digital technologies to process and manage information responsibly and can reference sources accordingly.	TCH 4-02a	Digital Literacy	Searching, processing and managing information responsibly
	I can select and use appropriate hardware and software which supports evolving business activities.	TCH 4-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can apply design thinking skills when designing and manufacturing models/products which satisfy the user or client.	TCH 4-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can extend my use of manual and digital graphic techniques to realise ideas, concepts and products and recognise the importance of real world standards.	TCH 4-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media

Topic	Description	Name	Subject	Category
	I can describe in detail the processes used in real world solutions, compare these processes against alternative solutions and justify which is the most appropriate.	TCH 4-13a	Computing Science	Understanding the world through computational thinking
	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions.	TCH 4-15a	Computing Science	Designing, building and testing computing solutions
Conclusion and Delivery 2: Marketing the idea - This topic allows pupils to consider the 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.	I can select and use digital technologies to access, select relevant information and solve real world problems.	TCH 4-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	I can select and use appropriate hardware and software which supports evolving business activities.	TCH 4-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
	I can apply design thinking skills when designing and manufacturing models/products which satisfy the user or client.	TCH 4-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
	I can extend my use of manual and digital graphic techniques to realise ideas, concepts and products and recognise the importance of real world standards.	TCH 4-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media
	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions.	TCH 4-15a	Computing Science	Designing, building and testing computing solutions

Summaries of Level 4 Technologies skills developed through STATWARS

Description	Name	Subject	Category
I can use digital technologies to process and manage information responsibly and can reference sources accordingly.	TCH 4-02a	Digital Literacy	Searching, processing and managing information responsibly
I can apply skills of critical thinking when evaluating the quality and effectiveness of my own or others' products.	TCH 4-04d	Food and Textile Technology	N/A
I can select and use digital technologies to access, select relevant information and solve real world problems.	TCH 4-01a	Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
I can select and use appropriate hardware and software which supports evolving business activities.	TCH 4-08a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
I can present conclusions about the impact of technologies on the economy, politics and the environment.	TCH 4-07a	Technological Developments in Society and Business	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
I can apply design thinking skills when designing and manufacturing models/products which satisfy the user or client.	TCH 4-09a	Craft, Design, Engineering and Graphics	Design and construct models/product
I can describe in detail the processes used in real world solutions, compare these processes against alternative solutions and justify which is the most appropriate.	TCH 4-13a	Computing Science	Understanding the world through computational thinking
I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions.	TCH 4-15a	Computing Science	Designing, building and testing computing solutions
I can extend my use of manual and digital graphic techniques to realise ideas, concepts and products and recognise the importance of real world standards.	TCH 4-11a	Craft, Design, Engineering and Graphics	Representing ideas, concepts and products through a variety of graphic media

