

GREENSIDE FILM FACTORY
Year 4 - Who am I?
Who, Where, Why?
Past > Present

STAR Day Planning: Spring 1 - 2019

Y4 Class Teacher: Georgina Webber

Class Film Text: *Magic Numbers - The Mysterious World of Maths*

Class Book/ Text: *A Wrinkle in Time by Madeleine L'Engle*

WEEK 1 THEME/ Greenside Film immersion day - *The Time Tree*

Thursday 3rd January

Learning Experiences:

Our Greenside Film Immersion Day will be focused around our new theme - Past > Present - Who Am I? We will come together to watch *The Time Tree* and take part in a range of linked learning experiences including:

- What do you think are the main 3 biggest ideas explored in the film?
- Three girls from different times in time - similarities and differences
- A Character's Story: The 3 girls in the film have an interesting story to tell – your assignment is to tell the story from Anne, Jo or Rachel's point of view – what would the girls think were the important points to tell people.
- Write a poem *The Time Tree* - Students can be given a format or just free verse: the film should inspire the poem.
- Travelling through time: If you could travel to any time in the past when would you travel to? Why did you choose that time? What would you most like to see or do?
- Trees: Why do you think the short film uses the tree as an important idea and image? Make a piece of Tree Art - Students can use a specific medium of material.
- The Time Tree - Alternative Big Ideas. You are invited to use the same title: *The Time Tree* and the idea of children meeting from different time periods. You can then create a different story line for your own Short Film Script or Story-Board.
- The Film & the Book: Why do the people in Ann's time treat her so badly and call her a witch? Assignment: design your own book

Skills:



Reading Tree Skills: (Ongoing selection through the half term)

- continuing to read and discuss an increasingly wide range of books
- reading books that are structured in different ways and reading for a range of purposes
- increasing their familiarity with a wide range of books
- recommending books that they have read to their peers, giving reasons for their choices
- identifying and discussing themes and conventions in and across a wide range of writing
- making comparisons within and across books
- learning a wider range of poetry by heart
- preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience
- understand what they read by:
 - checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
 - asking questions to improve their understanding
 - drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
 - predicting what might happen from details stated and implied
 - summarizing the main ideas drawn from more than one paragraph, identifying key details that support the main ideas

cover or film poster to promote the 'big ideas' that you think are important in the story. Meeting someone from 1596: Imagine you met a girl or boy the same age as you who lived in 1596 - MDXCVI. Assignment: What questions would you want to ask her/ him about life at that time?



- identifying how language, structure and presentation contribute to meaning
- discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
- distinguish between statements of fact and opinion
- retrieve, record and present information from non-fiction
- participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
- explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary provide reasoned justifications for their views
- use a variety of statements, questions, exclamations and commands
- multiply by 10, 100 and 1000.
- divide by 10, 100 and 1000
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms

Friday 4th January

Learning Experiences:

Friday Big Write: This will be based on the *Time Tree*

Messy Maths: We will all take part in a STEM challenge linked to our learning on the *Time Tree*.

PE/ Sports: (Activities, key skills / techniques)

This week we will be undertaking our first rotations of gymnastics with our gymnastics coach. This will run alongside personal training stations and dodgeball, where we will be able to build up our general fitness and focus on the muscles of the body.

Skills:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- multiply by 10, 100 and 1000.
- divide by 10, 100 and 1000
- Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics skills using a range of movement patterns.

WEEK 2 THEME/ Hook: Magic Numbers - The Mysterious World of Maths

Monday 7th January – Wednesday 9th January

Learning Experiences:

Immersion in the text/genre. We will introduce our theme and ask our big questions about Magic Numbers.

Knowledge Harvest – what do we know already?

Big questions for our display – what do we want to find out?

Skills:

We will watch the film and pick out the main themes and ideas that we notice. We will make creative items for our class display based on the film during the afternoon.

On Tuesday we will be going on a trip to Central London to explore the Maths we find out there in our city.

World Thinking: Big, Critical Curious Questions

What is Maths? Is Maths invented/ Or is it discovered? Where do numbers live? Where does Maths come from?

Learning about & through Film: Film Analysis/ Film Making

English: (Including any experiences for inspiration)

This week is all about immersing ourselves in the world of Maths. We will begin to discover how Maths lies at the heart of our universe and to see why Maths rules and patterns infiltrate all areas of our lives. We will carry out a piece of research on the Fibonacci sequence to discover how this is found in natural objects all around us and why it came about - when you copy patterns you get things of great beauty. Students will find out who Fibonacci was, what he discovered and why his discovery is impacting our lives today This piece of research will generate lots of big questions and will be the jumping off point for our writing for the rest of the term as well as allowing us to think critically about where Maths comes from.

This will set us up for our trip on Wednesday where we will be discovering all the Maths around us.

GPS: asking questions, writing statements, exclamations and commands about our first impressions of the film.

Reading Tree: We will introduce our class book.

Maths in the Movies / STEM:

Maths is all around us - but we just need to know where to look. To start off our learning this week we will think about where our fascination with numbers as human beings began. Is there perhaps a parallel universe where Maths lives or did we invent it? We will look at what numbers are and what they represent. If we have three objects and describe them with the word 3, then take them away the objects have gone but the concept of 3 still exists. We will further explore the sequence that Fibonacci discovered and link this to our learning on number patterns and skip counting. When you repeat the rule, you create the pattern and you copy patterns to get things of great beauty. These patterns will create displays for our classroom.

Arithmetic Focus: round any number to the nearest 10, 100 or 1000.



ARGUMENT FORMATION



INFORMATION LITERACY



LEADERSHIP SKILLS



ORGANIZATION



ACTION PLANNING



RESEARCH AND WRITING



CRITICAL THINKING

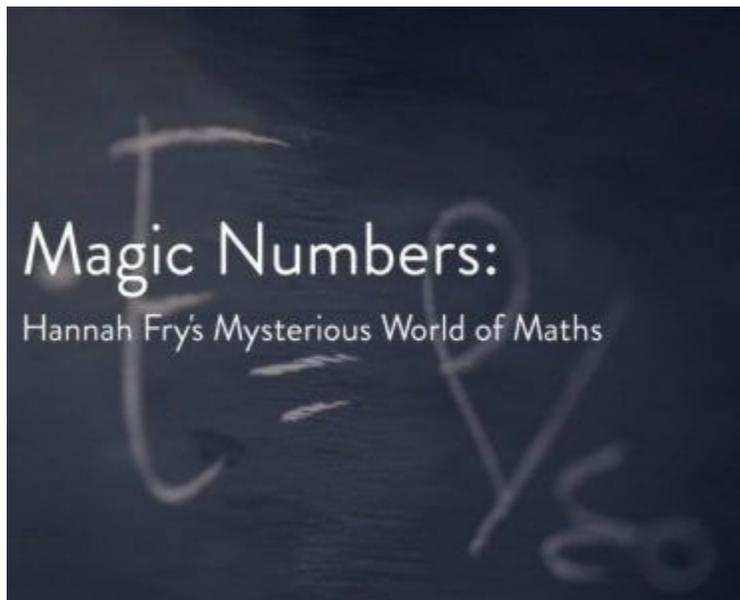


REFLECTION

Reading Tree Skills: (Ongoing selection through the half term)

- continuing to read and discuss an increasingly wide range of books
- reading books that are structured in different ways and reading for a range of purposes
- increasing their familiarity with a wide range of books
- recommending books that they have read to their peers, giving reasons for their choices
- identifying and discussing themes and conventions in and across a wide range of writing
- making comparisons within and across books
- learning a wider range of poetry by heart
- preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience
- understand what they read by:
 - checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
 - asking questions to improve their understanding
 - drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
 - predicting what might happen from details stated and implied
 - summarizing the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
 - identifying how language, structure and presentation contribute to meaning
- discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
- distinguish between statements of fact and opinion
- retrieve, record and present information from non-fiction
- participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
- explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary provide reasoned justifications for their views
- use a variety of statements, questions, exclamations and commands
- count in multiples of 6, 7, 9, 25 and 1000.
- find 1000 more/less than a number.
- count backwards through zero to include negative numbers.
- recognise place value in 4 digit numbers.
- recognise place value in 1 decimal place.

* All class and corridor displays to be completed by the end of this week



- order/compare numbers beyond 1000.
- identify, represent and estimate numbers using different representations.
- round any number to the nearest 10, 100 or 1000.
- solve number and practical problems that involve all of the above with increasingly larger numbers.
- recognise and describe increasingly harder sequences – decimals, fractions.
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms

Friday 11th January

Learning Experiences:

Friday Big Write: This week we will use our trip as inspiration for our writing. We will write a piece on the discovery of Maths in our city - where the patterns are found, how Maths is used to create buildings that are structurally complex as well as beautiful.

Messy Maths: number patterns and sequences

PE/ Sports: (Activities, key skills / techniques)

This week we will be undertaking our rotations of gymnastics with our gymnastics coach. This will run alongside personal training stations and dodgeball, where we will be able to build up our general fitness and focus on the muscles of the body.

Skills:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- recognise and describe increasingly harder sequences – decimals, fractions.
- Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics skills using a range of movement patterns.

WEEK 3 THEME/ Hook: Is Maths discovered?

Monday 14th January – Wednesday 16th January

Learning Experiences:

This week we will consider the argument for Maths as a concept that exists at the heart of our universe. It is and always has been all around us - but we just need to know where to look to discover it. We will uncover famous thinkers and mathematicians throughout history who began to unlock the mysteries of Maths and put forward the idea that there are still concepts out there waiting to be discovered. Perhaps our inventive brains are just waiting to take us on a new journey of discovery.

World Thinking: Big, Critical Curious Questions

Is there a parallel Maths world? Does Maths exist solely in our minds? Do we invent the baggage but discover the concept? How far can our inventive brains take us?

Learning about & through Film: Film Analysis/ Film Making

English: (Including any experiences for inspiration)

Over the course of this term we will carry out a piece of research that explores our big question: is Maths discovered or invented? This week we will explore the argument for Maths being discovered by humans. We will use evidence from great thinkers from history to help us delve deeper into the world of Maths and set out our evidence. These great thinkers include Fibonacci, Pythagoras, Euclid and Plato. We will learn how to set out our argument as a piece of formal research - structured with an introduction then paragraphs and subheadings. A key part of our writing will be the use of formal and subject specific language.

GPS: using simple organisational devices [for example, headings and sub-headings] and indicating possession by using the possessive apostrophe with plural nouns

Reading Tree: comprehension based on a section of the text with a focus on reading domain 2b – retrieving and recording information/identify key details from the text.

Maths in the Movies / STEM:

What happens when our regular number system is not enough? We will explore the world of decimals this week as we find out what happens when we need to describe numbers and amounts that lie outside of our whole number system. This learning will take in place value, addition, subtraction, multiplication and division. One of our thinkers from history this week is Plato. We will find out who he was and what his impact on the world of Maths has been as we explore the concept of the platonic solids and geometry. Plato believed that everything in the cosmos could be represented by these platonic solids - providing good evidence for our argument. We will create and describe these shapes as we produce our own interpretation of Plato's shapes and see how they link to the buildings we saw on our trip.

Skills:



ARGUMENT FORMATION



INFORMATION LITERACY



LEADERSHIP SKILLS



ORGANIZATION



ACTION PLANNING



RESEARCH AND WRITING



CRITICAL THINKING



REFLECTION

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- In non-narrative material using simple organisational devices [for example, headings and sub-headings]
- how to organise paragraphs around a theme
- using simple organisational devices [for example, headings and sub-headings]
- retrieving and recording information/identify key details from the text.
- reading skills also as outlined above
- compare and classify geometric shapes including – quadrilaterals and triangles.
- identify lines of symmetry in 2D shapes presented in different orientations.
- complete a simple symmetric figure with respect to a specific line of symmetry
- plot specified points and draw sides to complete a given polygon.
- count up and down in hundredths.
- know that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- recognise and write decimal equivalents of any number of tenths or hundredths.
- recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
- place simple decimals in the correct place on a number line.
- find the effect of dividing a one digit number by 10 and 100, identifying the digit values.
- find the effect of dividing a two digit number by 10 and 100, identifying the digit values.
- round decimals with one decimal place to the nearest whole number.
- compare numbers with the same number of decimal places up to two decimal places.
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms

Arithmetic Focus: decimals in the four operations	
Friday 18th January	
<p>Learning Experiences:</p> <p>Friday Big Write: Adventures in a mathematical wonderland - chapter 1. We will write our own adventure in a fantasy world of Maths. This week we will begin the journey and go through the portal.</p> <p>Messy Maths: We will apply our learning from the week on decimal numbering and the four operations to solve a range of problems.</p> <p>PE/ Sports: (Activities, key skills / techniques) This week we continue to build on our gymnastics, personal training and ball skills. We will start to look at the game of Dodgeball and how we can start to use tactics in this game in order to enhance our performance.</p>	<p>Skills:</p> <ul style="list-style-type: none"> identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own noting and developing initial ideas, drawing on reading and research where necessary in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning can solve a range of problems involving decimals to two decimal places. Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics skills using a range of movement patterns. Use a range of attacking and defending skills in order to enhance performance in a game

WEEK 4 THEME/ Hook: Is Maths invented?	
Monday 21st January – Wednesday 23rd January	
<p>Learning Experiences: This week we turn our attention to the argument that Maths is not something that naturally exists all around us - it is something that human beings have invented to help define our world and fit our own purposes. We will examine those thinkers who believe that reason, experience and logic are the key factors in the evolution of Maths.</p> <p>World Thinking: Big, Critical Curious Questions How have humans used their own experiences to describe the Maths world? How important are logic and reason to our world? What happens when we need a better number system? Is zero a number? What does the concept of zero mean to our number system?</p> <p>Learning about & through Film: Film Analysis/ Film Making</p> <p>English: (Including any experiences for inspiration) Our writing develops this week as we explore the argument for Maths being something that humans have invented. By the seventeenth century great thinkers began to challenge the idea that Maths is something that humans discovered. These thinkers - including Descartes, challenged mathematical society and stated that reason and logic were key. They looked to history and how humans have had to adapt their number system when something better was needed. This included the invention of the concept of zero. Our writing will set out evidence from thinkers and history and provide the balance in our argument. We will continue to develop our use of language and subject specific vocabulary.</p>	<p>Skills:</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;"> ARGUMENT FORMATION</div> <div style="text-align: center;"> INFORMATION LITERACY</div> <div style="text-align: center;"> LEADERSHIP SKILLS</div> <div style="text-align: center;"> ORGANIZATION</div> <div style="text-align: center;"> ACTION PLANNING</div> <div style="text-align: center;"> RESEARCH AND WRITING</div> <div style="text-align: center;"> CRITICAL THINKING</div> <div style="text-align: center;"> REFLECTION</div> </div> <ul style="list-style-type: none"> identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own noting and developing initial ideas, drawing on reading and research where necessary in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed In non-narrative material using simple organisational devices [for example, headings and sub-headings how to organise paragraphs around a theme assessing the effectiveness of their own and others' writing extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although, until, even though, therefore, despite, due to the fact that. Using conjunctions, adverbs and prepositions to express time and cause (when, so, before, after, while, because) make inferences from the text, explain and justify evidence from the text. other reading skills as above read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

GPS: extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although, until, even though, therefore, despite, due to the fact that. Using conjunctions, adverbs and prepositions to express time and cause (when, so, before, after, while, because)

Reading Tree: comprehension based on a section of the text with a focus on reading domain 2d – make inferences from the text, explain and justify evidence from the text.

Maths in the Movies / STEM:

Humans have always needed to use a number system to describe the Maths necessary for their context and setting. As these contexts have changed, so has the number system. We will look at different number systems - including Roman numerals and look at how the system that we use has evolved. Our number system takes in negative numbers but we are having to think about new systems to use in developing wireless technology. We will also explore the concept of zero - it's history, where it came from, when it was first used, why it was necessary and how it changes the value of the numbers around it.

This week will also see the beginning of our STEM project: Maths World - A Mathematical Theme Park. We will harness the power of Maths as we plan, design and make a range of rides to make up our theme park. Hannah Fry goes on a roller coaster and a zip wire ride and explores how Maths is harnessed by humans to create these thrill seeking experiences. Each week we will work on our rides as we will need to construct them and unpick all the Maths involved.

Arithmetic Focus: negative numbers

- count backwards through zero to include negative numbers.
- identify, represent and estimate numbers using different representations.
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms

Friday 25th January

Learning Experiences:

Friday Big Write: Adventures in a mathematical wonderland - chapter 2. We will write our own adventure in a fantasy world of Maths. This week we will describe the world we find there.

Messy Maths: problem solving with negative numbers

PE/ Sports: (Activities, key skills / techniques)

This week we continue to build on our gymnastics, personal training and ball skills. We will start to look at the game of Dodgeball and how we can start to use tactics in this game in order to enhance our performance.

Skills:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- count backwards through zero to include negative numbers.
- identify, represent and estimate numbers using different representations.
- Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics routines using a range of movement patterns.

WEEK 5 THEME/ Hook: From zero to infinity

Monday 28th January – Wednesday 30th January (Tuesday 29th Play In A Day)

Learning Experiences:

Skills:

Hannah goes head first down the fastest zip wire in the world to learn more about Newton's law of gravity, she paraglides to understand where the theory of Maths and its practical application collide, and she travels to infinity and beyond to discover that some infinities are bigger than others. We will do the same as we bring our theme park to life by harnessing the power of Maths with our imagination.

World Thinking: Big, Critical Curious Questions

What is infinity? Is there more than one infinity? When and how does Maths and science collide?

Learning about & through Film: Film Analysis/ Film Making

English: (Including any experiences for inspiration)

Our formal argument will conclude this week as we set out our own opinion on whether Maths is something invented or discovered. We will sum up all the evidence presented over the previous weeks and decide on our point of view. These points of view will be backed up by mathematical evidence and provide a valuable insight into what we have learnt over the term. They will also show how we have used critical thinking to link up all our learning across our STAR days. We will continue to consider the correct structure for this kind of writing and develop our use of subject specific language.

GPS: using a wider range of contractions in informal writing (e.g he'll, would've, could've)

Reading Tree: comprehension based on a section of the text with a focus on reading domain 2g – identify and explain how meaning is enhanced through word choice.

Maths in the Movies / STEM:

As we construct our theme park rides, we will need to consider the Maths involved. This week we will focus on the concept of calculation across the four operations. We will recap our work on column based methods for addition and subtraction - including decimals and extend our learning to column methods for multiplication. This is an efficient way of handling the multiplication of larger numbers eg HTO by TO. We will explore different ways of doing this - grid, expanded, contracted - to decide which is the best method for the calculation. Then we will explore how to divide bigger numbers using a bus stop method and learn how to handle remainders. As our STEM project evolves we will need to include electricity so we will construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use these circuits to create simple devices.

Arithmetic Focus: multiplication and division facts



- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- In non-narrative material using simple organisational devices [for example, headings and sub-headings
- how to organise paragraphs around a theme
- assessing the effectiveness of their own and others' writing
- using a wider range of contractions in informal writing (e.g he'll, would've, could've)
- other reading skills as above.
- add numbers with up to 4 digits using the column method.
- subtract numbers with up to 4 digits using the column method.
- estimate and use inverse operations to check answers to a calculation.
- solve addition and subtraction 2 step problems in context, deciding on which operations and methods to use and why.
- recall multiplication and division facts for multiplication tables up to 12x12.
- use place value, known and derived facts to multiply and divide mentally including – 1.0 and 1 2.dividing by 1 3.multiplying together 3 numbers
- recognise factor pairs and commutativity in mental calculations.
- multiply using formal written layout – TO x O HTO x O
- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors

Friday 1st February	
<p>Learning Experiences:</p> <p>Big Write: Adventures in a mathematical wonderland - chapter 3. We will write our own adventure in a fantasy world of Maths. This week we will describe the characters we find there.</p> <p>Messy Maths: solving problems involving multiplying and adding, including using the distributive law to multiply 2 digit and 1 digit numbers.</p> <p>PE/ Sports: (Activities, key skills / techniques) This week we continue to build on our gymnastics, personal training and ball skills. We will start to look at the game of Dodgeball and how we can start to use tactics in this game in order to enhance our performance.</p>	<p>Skills:</p> <ul style="list-style-type: none"> ● identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own ● noting and developing initial ideas, drawing on reading and research where necessary ● in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed ● selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning ● solve problems involving multiplying and adding, including using the distributive law to multiply 2 digit and 1 digit numbers. ● Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics routines using a range of movement patterns.

WEEK 6 THEME/ Hook: Maths World	DC3
Monday 4th February – Wednesday 6th February	

Learning Experiences:

The creation of our roller coasters and zip wires will help us to learn more about Newton's ideas on gravity. His discoveries revealed the movement of the planets was regular and predictable. James Clerk Maxwell unified the ideas of electricity and magnetism, and explained what light was. His tools of the trade were nothing more than pure mathematics. Our learning journey continues this week as we link the power of electricity and science with our Maths.

World Thinking: Big, Critical Curious Questions

What makes a roller coaster stay on the rails? How does a zip wire work? How do you go upside down without falling off? Why do objects fall at the same speed?

Learning about & through Film: Film Analysis/ Film Making

English: (Including any experiences for inspiration)

Alongside all of our DC3 assignments, we will put together a podcast based on our pieces of research over the previous weeks. Like Hannah Fry, we will turn our formal research into a presented piece that is enjoyable to watch and stimulates the audience to think. We will narrate our findings over a series of images using the Adobe Voice application on our ipads. The images will be carefully put together as they will have to reflect everything we have made and discovered over the term. We will also put our three pieces together as one formal piece of written research edited and prepared for our portfolios.

GPS: DC3 related work

Reading Tree: DC3 related work

Maths in the Movies / STEM:

There will be a big focus on our work for the DC3 assessments this week and we will revise the concepts covered this term so far. As well as this, we will continue our STEM project as we add the finishing touches to our rides. We will work scientifically by: observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.

Arithmetic Focus: DC3

Skills:



ARGUMENT FORMATION



INFORMATION LITERACY



LEADERSHIP SKILLS



ORGANIZATION



ACTION PLANNING



RESEARCH AND WRITING



CRITICAL THINKING



REFLECTION

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- In non-narrative material using simple organisational devices [for example, headings and sub-headings
- how to organise paragraphs around a theme
- assessing the effectiveness of their own and others' writing and suggesting improvements
- proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences
- proof-reading for spelling and punctuation errors
- reading aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear.
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms
- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors

Friday 8th February

Learning Experiences:

Big Write: Adventures in a mathematical wonderland - chapter 4. We will write our own adventure in a fantasy world of Maths. This week we will describe an incident that goes on in our world.

Messy Maths: multi step word problems

PE/ Sports: (Activities, key skills / techniques)

This week we continue with our gymnastics and personal training sessions. We will also be playing a game of dodgeball to celebrate our success in DC week.

Skills:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
- noting and developing initial ideas, drawing on reading and research where necessary
- in writing narratives, considering how authors have developed characters and settings in what students have read, listened to or seen performed
- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- solve addition and subtraction 2 step problems in context, deciding on which operations and methods to use and why.
- Compare their performances with previous ones and demonstrate improvement to achieve their personal best. Perform gymnastics skills using a range of movement patterns.

WEEK 7 THEME/ Hook: Expanded Horizons

Monday 11th February – Wednesday 13th February

Learning Experiences:

We may just have to accept that the world really is weirder than we thought, and we conclude that while we have invented the language of Maths, the structure behind it all is perhaps something we discover. This debate about the origins of Maths has had the most profound consequences: it has truly transformed the human experience, giving us powerful new number systems and an understanding that now underpins the modern world.

World Thinking: Big, Critical Curious Questions

How has your understanding of the universe grown? What are you more confident about? What questions do you still have?

Learning about & through Film: Film Analysis/ Film Making

English: (Including any experiences for inspiration)

All of our learning from the term culminates this week as we have the 'grand opening' of our theme park. We will present our Maths World to our invited guests and show all of the work that has gone into their creation. Our podcasts will be available to watch and enjoy alongside our high octane rides! We will need to create the explanatory material to accompany our constructions. These pieces will need to provide clear and precise explanations about the construction process and the Maths involved in all the aspects of the process.

GPS: We will review our results from DC3 and set targets for ourselves for moving forward.

Skills:



ARGUMENT FORMATION



INFORMATION LITERACY



LEADERSHIP SKILLS



ORGANIZATION



ACTION PLANNING



RESEARCH AND WRITING



CRITICAL THINKING



REFLECTION

- selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
- in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
- using a wide range of devices to build cohesion within and across paragraphs
- assessing the effectiveness of their own and others' writing
- proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning
- ensuring the consistent and correct use of tense throughout a piece of writing
- ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register
- how to use layout devices such as headings, sub-headings, bullets, and tables to structure text
- using a range of cohesive devices and shifting levels of formality through vocab and grammatical structures

Reading Tree: In this session we will review our results from DC3, creating perfect answers, identifying where points have been dropped and the types of questions that students are finding challenging.

Maths in the Movies / STEM:

In order to bring our theme park rides to life, we will need to consider the costs involved. We will put together a business plan this week that takes into account the necessary price points for our rides, the numbers of staff needed to man the park and the other resources needed to ensure the customers have a great day out at our park. We will display the data in the form of bar and pie charts as we examine how to make the parks the most successful they can be.

Arithmetic Focus: adding and subtracting fractions

- analyse own progress and identify areas of success and where further development is needed
- compare numbers with the same number of decimal places up to two decimal places.
- solve simple measure and money problems involving fractions and decimals to two decimal places.
- estimate, compare and calculate different measures, including money in pounds and pence.
- interpret and present discrete and continuous data using appropriate graphical methods including 1.Bar Charts. 2. Time Graphs
- solve comparison, sum and difference problems using information presented in – 1.Bar Charts 2. Pictograms 3. Tables
- Be able to suggest ways of improving own work
- Be able to comment on works of art
- Be able to choose materials and techniques which are appropriate for their task
- Be able to talk about works of art, giving reasons for their opinions
- Be able to communicate through visual and tactile forms

Friday 15th February

Learning Experiences:

Big Write: This week we will reflect on all of our learning this term, celebrate our success and decide upon areas for improvement.

Messy Maths: using data to solve problems relating to our theme park

PE/ Sports: (Activities, key skills / techniques)

This week we continue with our gymnastics and personal training sessions. We will also be playing a game of dodgeball to celebrate our success in DC week.

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