Year 6 Nova Home Learning- Term 6 **(29/6 to 12/7)**		
Day	**Writing Task** Please remember to practise your spellings. You can use your Spelling Shed Log in. *Continue to work your way through your Grammar and Punctuation Homework Workbook as well as the tasks below.*	**Maths Task** Please play Time Table Rockstars to practise your fluency! *Continue to work your way through your Maths Homework Workbook as well as the tasks below.* **Complete the starter** then go to the VIMEO video links for each lesson. **ZOOM IN TO VIEW WORKSHEETS**	**Line of Enquiry Task**

1

Writing Task:

LO: to review Y5/6 SPAG   Start by writing the sentence in your book.

TAKE 1 SENTENCE

The boys rode their bicycles.

This could be the answer to what question? _____

Type of sentence	Subject	Verb(s)	Object
____	____	____	____

Active or passive?	Noun(s)	Pronoun(s)	Determiner(s)
____	____	____	____

Add a fronted adverbial _____

Add a conjunction and extend _____

Add adjectives to describe a noun phrase _____
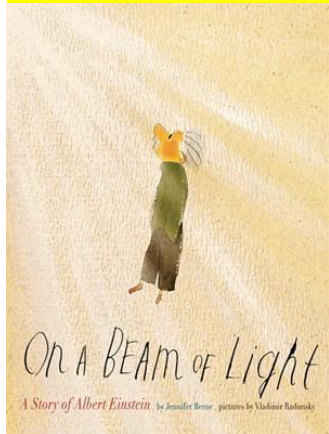
Re-write the best sentence you can make _____

Maths Task:

Starter:

Four pens cost 80p.
How much will five of the same pens cost?

What is the scale factor of the enlargement?

4 cm   12 cm

Write down the ratio of circles to squares.

■ ●●● ■ ●●● ■ ●●● ■ ●●●

Solve the equation $a + 45 = 76$

LO: to investigate vertically opposite angles
https://vimeo.com/403441119

Work out the sizes of the unknown angles.
Give reasons for your answers.

a)

y 29°
$y = $ ⬜ because _____
_____

b)

132°   48°
z
$z = $ ⬜ because _____
_____

Line of Enquiry Task:

PSHE: To think about, discuss and make decisions based on looking at all points of view.
Start by reading the BIG STATEMENT:
All seats should be taken out of buses.

- what's positive
- what's a minus
- what's interesting

Make a grid to help you get your ideas down.

positives	minuses	interesting facts or ideas

What do you think? What does someone else in your house think?
It's OK to change your mind as you think of more positives and minuses!
Now make a decision and write a paragraph explaining your decision.

Column 1 (top cell):

TAKE 1 SENTENCE

The rocket zoomed into space.

This could be the answer to what question?
_____

Type of sentence	Subject	Verb(s)	Object
_____	_____	_____	_____

Active or passive?	Noun(s)	Pronoun(s)	Determiner(s)
_____	_____	_____	_____

Add a fronted adverbial
_____

Add a conjunction and extend
_____

Add adjectives to describe a noun phrase
_____

Re-write the best sentence you can make
_____
_____

Login to spelling shed and practise Y5/6 word list for 20 minutes. **Password is: Nova2020**

Column 2 (top cell):

Work out the unknown angles.

a)
133°
a

a = [ ]

b)
b
73°

b = [ ]

c)
c
52°

c = [ ]

d)
81°
65°
d

d = [ ]

Row 2:

| 2 | | | |

Column 1:
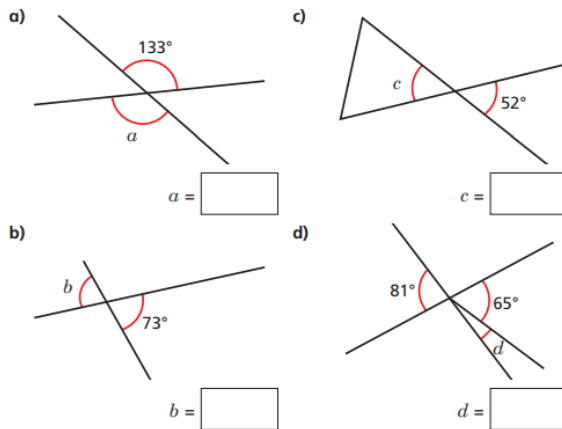
LO: to write a letter in role as Mrs Einstein

On a BEAM of Light
A Story of Albert Einstein by Jennifer Berne, pictures by Vladimir Radunsky

Go to the picture book: 'On a beam of Light' at:
https://www.youtube.com/watch?v=-4YTFAiSUi4

Column 2:

Starter:

Which angle is obtuse?

A   B   C   D
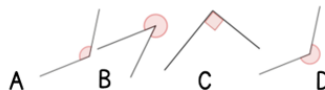
A recipe for 2 people uses 30 g of butter.
How much butter is needed for 8 people?

Write down the ratio of squares to triangles.

■ ▲▲▲ ■ ▲▲▲ ■ ▲▲▲ ■ ▲▲▲

How many metres are there in 7 km?

LO: to investigate the angles in a triangle
https://vimeo.com/403441277

Column 3:

Science
LO: Learn about fossil fuels and renewable energy.

There are different types of renewable energy:

- Hydropower - moving water helps create electricity by turning turbines under the sea as the tide moves in and out, or by using water stored in a dam.
- Solar energy - solar panels collect energy from the Sun to create electricity.
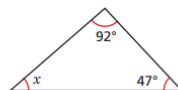
Listen and follow the story.

TASK:

Write a letter from the point of view of Mrs Einstein (Albert's mother) to her friend explaining her concerns about her young son:

· As a baby
· As a schoolboy

Work out the sizes of the unknown angles.
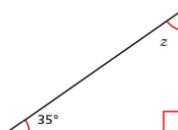
Give reasons for your answers.

a)

92°
x
47°

$x =$ [ ] because _____

_____

b)

58°
y
25°

$y =$ [ ] because _____

_____

c)

z
35°

$z =$ [ ] because _____

Activate Windows
Go to Settings to activate

a) Two angles in a triangle are 42° and 57°.

What is the size of the third angle?

[ ]

b) Two of the angles in a triangle are 12°.

What is the size of the third angle?

[ ]

- Wind energy - wind turns turbines to create electricity.
- Geothermal energy - volcanic activity can be used for heating water and the steam produced can be used to power generators and create electricity.

Go to the website to find out more:
https://www.bbc.co.uk/bitesize/articles/zr9ckmn

TASK (highlighted)

Make an infographic poster to show your learning.

Include:

Why fossil fuels are harmful to our planet.
Why renewable energy so important.
Why are renewable sources of energy much cleaner to use than fossil fuels?

Make it visually appealing. Grab the reader!

| 3 | LO: To make a timeline of Albert Einstein's life and write a biography | Starter: | Magic or maths? Thinking skills. |

Albert began to read and study. He read about light and sound. About heat and gravity, the invisible force that pulls us down to keeps the moon from floating away into outer space
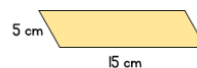
MAGNETISM
GRAV
light

Make notes about Einstein's life to make a timeline.
You can do further research online eg:

Starter:

Work out the missing angle.

$a°$ 57°
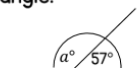
The parallelogram is enlarged by scale factor 4
How long are the sides of the new parallelogram?

5 cm
15 cm

Write down a unit you would use to measure area.

Multiply 5.3 by 7   37.1

Magic or maths? Thinking skills.

Follow the link below to some maths magic. You will need to practise before you amaze your family with your magic maths. Can you work out how each trick works?

https://nrich.maths.org/85

https://nrich.maths.org/1051

First read about what makes a good biography:

Purpose:

To give an account of someone's life

Structure:

🖊 Opening statement introduces the subject, and explains why he/she is known

🖊 Significant events are ordered chronologically

🖊 Closing statement explains how this person will be remembered, and sometimes gives the writer's opinion

Language Features:

🖊 Refers to named individuals
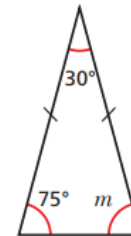
🖊 Contains dates linked to specific events

🖊 Written in the past tense

🖊 Written in 3rd person

🖊 Includes time conjunctions to link ideas

LO: <mark>to investigate angles in a triangle – special cases</mark>
https://vimeo.com/403441389

1 Here is a triangle.

a) What type of triangle is it?

_____

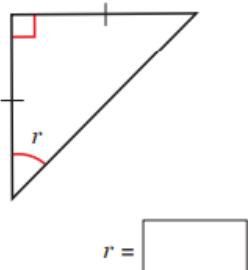How do you know?

_____
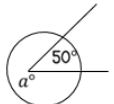
_____

b) Work out the size of angle m.
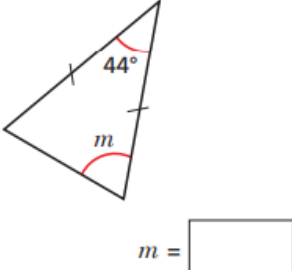
c) What do you notice?

d) Complete the sentence to describe the angles in an isosceles triangle.

In an isosceles triangle _____

**2** Identify and label the angles that will be equal in each triangle.

Work out the sizes of the unknown angles.

a)

44°

m

m = [ ]

c)

r

r = [ ]

4	LO: to explain how a compass works. A compass got Albert interested in science. How does a compass work? Find out. **Write a short explanation with useful diagrams and technical words**. Can you make your own compass? You will need to do some research eg. https://kids.britannica.com/kids/article/compass/390676	Starter: Work out the missing angle. 50° a° For every £3 Jack has, Eva has £5 Jack has £15 How much money does Eva have? Find the volume of the cube. 10 cm Work out $\frac{3}{5}$ of 60 LO to investigate angles in a triangle – missing angles https://vimeo.com/403441519	LO: Find out what effect exercise has on the heart rate. Your heart is a pump which pushes blood around your body. Blood containing oxygen and glucose is pushed to all the cells in your body where it is used to keep you moving and growing. Your heart rate can be measured by taking your pulse, which is the push of the blood moving in your arteries. Heart rate is measured in beats per minute, (bpm). Do you think exercise will make your heart beat faster or slower? GO TO THE SECOND VIDEO CLIP TO LEARN HOW TO TAKE YOUR PULSE. Watch here: https://www.stem.org.uk/resources/elibrary/resource/315584/what-affects-your-heart-rate

How to make a compass at home:

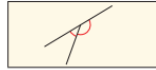https://www.bbc.co.uk/bitesize/topics/zrvbkqt/articles/zfb6pbk

1 Match each diagram to the correct rule.
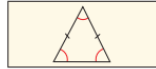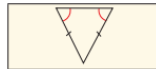
 Angles on a straight line sum to 180°

 Angles around a point sum to 360°

 Angles in a triangle sum to 180°

 In an isosceles triangle, two angles are equal

 Vertically opposite angles are equal

Work out the sizes of the unknown angles.

Give reasons for each stage of your working.

a)
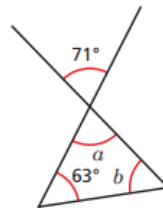
$a =$ [ ] because _____

_____

$b =$ [ ] because _____

_____

b)
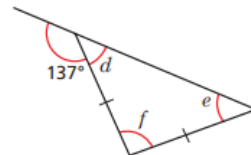
$d =$ [ ] because _____

_____

$e =$ [ ] because _____

_____

$f =$ [ ] because _____

_____

Results

Name	Heart rate before exercise (beats/minute)	Heart rate after exercise (beats/minute)

- Measure your resting heart rate by taking your pulse. You will take this for 15 seconds then multiply this by 4 to get your heart rate.
- Carry out your chosen exercise for a set amount of time, or number of repeats, eg 2 minutes of running on the spot or 50 star jumps.
- Take your pulse as soon as you finish the exercise and again x by 4 to get your heat rate.

Write up your findings using scientific vocabulary. Eg

From my results I can see…

I conclude that…

| 5 | | Starter: | **LO: to experiment with pointillism** |

To research and write facts about the children's book illustrator Vladimir Radunsky
A good starting point:
http://www.wolphins.com/blog/interview-vladimir-radunsky-children-books

When you have researched Vladimir's life and work, present your facts any way you like. You might like to make a mini-book like this:
https://www.bl.uk/childrens-books/activities/make-a-miniature-book

Go to the Line of Enquiry box on the right for the related art task.

Starter:

Which pair of angles are vertically opposite?

A   B   C

What do the angles in a straight line add up to?

What fraction of the fruits are apples?

Work out $4 + 5 \times 6$

Friday Fun Day Art with Maths
Make an art poster showing what you have learned this week about angles. Use a ruler and a protractor (if you have one at home).
Some ideas to get you thinking:
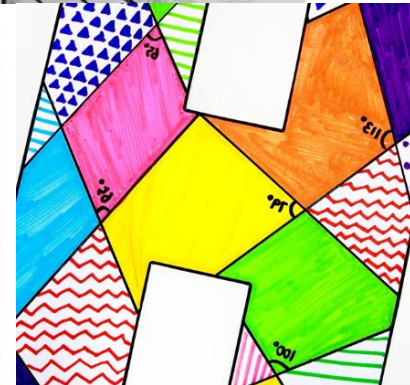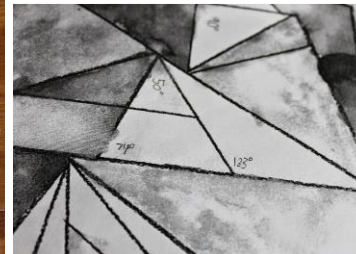
LO: to experiment with pointillism

Make an 'atom picture' in the style of illustrator Vladamir Radunksy. Label it with a quote from the book.
(He uses 'pointilism') in 'A Beam Of Light'.
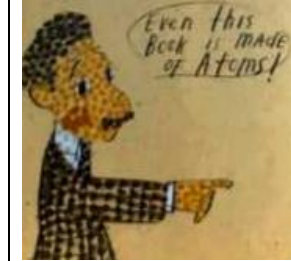
He has written and illustrated many books. You can visit here to view some more of his work.
http://www.vladimirradunsky.com/

Experiment with his many styles of illustration.

Week 6 below

| Year 6 Nova Home Learning- Term 6 **(29/6 to 12/7)**		
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1	LO: to write a fact file or biography of American activist,'Rosa Parks'. Watch the video book about the life of Rosa Parks at: https://www.youtube.com/watch?v=aCcSsjkQe9s Little People, BIG DREAMS Rosa Parks Make notes as you listen so that you have facts for your report.	Starter: The angles in a triangle add up to which total? 90° 180° 270° 360° Estimate the size of the angle. Write down the ratio of carrots to apples. Write $\frac{13}{20}$ as a percentage. LO: to investigate angles in special quadrilaterals https://vimeo.com/403441636	**PSHE:To think about, discuss and make decisions based on looking at all points of view.** **Start by reading the BIG STATEMENT:** Food and housing are free for everyone. • what's positive • what's a minus • what's interesting Make a grid to help you get your ideas down. 	positives	minuses	interesting facts or ideas	 What do you think? What does someone else in your house think? It's OK to change your mind as you think of more positives and minuses! Now make a decision and write a paragraph explaining your decision.

1 Work out the sum of the angles in each shape.

a)   b)
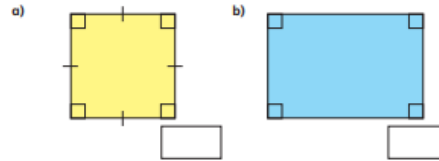
What do you notice?

2 The diagrams show the four vertices of a quadrilateral arranged around a point.

What do the diagrams illustrate about the sum of the angles in a quadrilateral?

Complete the sentence.

Angles in a quadrilateral _____

3 Work out the size of the unknown angle in each trapezium.

a)   b)

a 63°

57° b 123°   123°
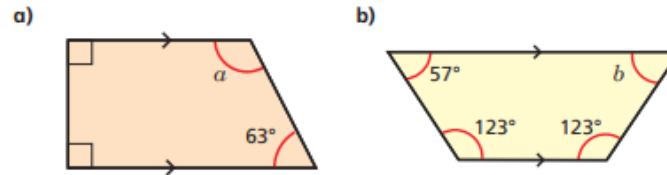
$a =$ _____ $b =$ _____

c) What is the same and what is different about the trapeziums?

| 2 | LO: to write a newspaper report. Remind yourself how to write a newspaper report here: https://www.bbc.co.uk/bitesize/topics/z2yycdm/articles/z2gk9qt | Starter: | LO: to know how the heart works

Go to: https://www.bbc.co.uk/bitesize/clips/z9dg9j6 |

Revisit the story of Rosa Parks and do further research online about what happened when Rosa Parks refused to give up her seat on the bus, to a white person.

Success criteria for a newspaper report:

- **Is there a catchy headline?**
- **Is the report written in the past tense?**
- **Does the first paragraph include the most important information?**
- **Who? What? When? Where?**
- **Does the rest of the report include more detail about how and why?**
- **Is it written in the third person?**
- **Is there a quote in inverted commas?**
- **Has the reporter used emotive language?**
e.g. struggle, hardship, unfortunate, demise, exciting, compelling, honourable.
- **Is the report written in chronological order? (Time order)**
- **Does the last paragraph speculate what will happen in the future?**
- **Is there a picture with a caption?**

Work out the missing angle in the triangle.

70°
52°
w°
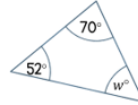
How many obtuse angles does a rhombus have?

What is the ratio of squares to triangles?

How many millimetres are there in a metre?

LO: <mark>to investigate angles in regular polygons</mark>
https://vimeo.com/405761459

The sum of the interior angles of a triangle is 180°.

Split the polygons into triangles to work out the sum of their interior angles. Your lines should not overlap.

The first one has been done for you.

a)

number of sides = 5
number of triangles = 3
3 × 180 = 540
The sum of the interior angles of a pentagon is 540°

b)

number of sides =
number of triangles =
☐ × 180 =
The sum of the interior angles of a hexagon is

c)

number of sides =
number of triangles =
☐ × 180 =
The sum of the interior angles of a heptagon is

What do you notice about the number of sides compared to the number of triangles?

Use the worksheet below to help you to draw and label a diagram of the heart.

Deoxygenated blood ☐   Oxygenated blood ☐

THE HEART

The P_____ A_____ Takes blood to the _____

The A_____ takes blood to the _____ P_____

V_____
C_____
R_____
A_____
R_____
V_____

V_____
L_____
A_____
L_____
V_____

The heart is made out of _____ Muscle.
It is a double _____ that squeezes the blood around the _____ and to the _____. The _____ side pumps blood to the lungs to pick up _____. The _____ side pumps blood around the rest of the body.

RIGHT, LEFT, CARDIAC, BODY, PUMP, LUNGS, OXYGEN

Write a short description of how the blood travels into and out of the heart.

3	

Column 1:

LO: to write a balanced argument in the form of a letter.

In 1974, French aerialist Philippe Petit threw a tightrope between the two towers of the World Trade Centre and spent an hour performing high-wire tricks.

Watch the video book reading of 'The Man who Walked Between the Towers' by Mordicai Gerstein
https://www.youtube.com/watch?v=5SCA556HSw8

Task:

Write a letter of advice to Philippe Petit, considering the pros and cons of what he is about to do.

Plan out your ideas eg

For	Against
❖Point 1	❖Counter point 1
❖Point 2	❖Counter point 2
❖Point 3	❖Counter Point 3

Language features:
Use words and phrases to signal both sides of the argument (on the one hand, some people believe, others believe, supporters may say)
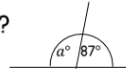
Use connecting phrases to signal your points (first of all, in addition)

Column 2:

Starter:

What do the angles in a quadrilateral add up to?

90°   180°   270°   360°

Work out the missing angle?

$a°$ $87°$

For every 3 green sweets, there are 2 blue.
There are 15 green sweets.
How many blue sweets are there?

Divide 299.2 by 8

Lo: to review how to turn fractions to percentages
https://vimeo.com/420690848

b) Write the fractions as percentages.

$\frac{40}{100} = \boxed{}$ % $\frac{65}{100} = \boxed{}$ %

$\frac{1}{2} = \boxed{}$ % $\frac{7}{10} = \boxed{}$ %

Fill in the missing numbers.

a) $\frac{9}{10} = \frac{\boxed{}}{100} = \boxed{}$ %   c) $\frac{9}{50} = \frac{\boxed{}}{100} = \boxed{}$ %

b) $\frac{9}{20} = \frac{\boxed{}}{100} = \boxed{}$ %   d) $\frac{9}{25} = \frac{\boxed{}}{100} = \boxed{}$ %

Convert the fractions to percentages.

a) $\frac{1}{4} = \boxed{}$ b) $\frac{1}{5} = \boxed{}$

$\frac{1}{2} = \boxed{}$ $\frac{2}{5} = \boxed{}$

$\frac{3}{4} = \boxed{}$ $\frac{4}{5} = \boxed{}$

c) $\frac{16}{20} = \boxed{}$ d) $\frac{45}{50} = \boxed{}$

Column 3:

LO: to know that muscles are needed for movement.

SC for a report or fact file:
- **Title**
- **Subheadings**
- **Technical words (you could make a glossary too)**
- **Clear facts**
- **Fun fact boxes**
- **Diagrams**

Make a mini-fact file or info poster explaining the importance of muscles and how muscles work. You could research one particular muscle and how it works. Describe the three types of muscles: smooth, cardiac, and skeletal.
Include helpful diagrams and fact boxes.

Check this video to get started:

https://www.bbc.co.uk/bitesize/clips/zqm8q6f

Useful info:
https://www.coolkidfacts.com/muscle-facts/

| 4 | | Starter: | LO: to perform a sequence of balances and jumps, |

LO: to write a newspaper report

Your newspaper report should describe what happened on the morning of 7 August 1974

Read the video book again if you want to.
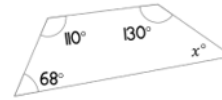

Create a newspaper report for The New York Times.

Visit here for eye witness quotes.
https://www.youtube.com/watch?v=mAZppPSbxxs&feature=youtu.be

Check the newspaper report success criteria on day 2 before you begin.

Starter:

Work out the missing angle.

True or False: Vertically opposite angles are equal.

What fraction of the fruits are cherries?

Write down the factors of 20

LO: to review fraction, decimal and percentage equivalence
https://vimeo.com/420690973
Complete the table.

Fraction	Decimal	Percentage
	0.21	
		12%
$\frac{2}{10}$		
	0.4	
	0.44	
		4%
$\frac{3}{4}$		
	0.99	

LO: to perform a sequence of balances and jumps,
Try these activities:

https://www.youthsporttrust.org/sites/default/files/Balance%20Time.pdf

https://www.youthsporttrust.org/sites/default/files/Home%20PE%20Jumping%20Dice.pdf

https://www.youthsporttrust.org/sites/default/files/Home%20PE%20Sequence%20Champions.pdf

| 5 | | Starter: | |

LO:To write a post card from Phillipe Petit to his father.

Write a short postcard **with an illustration inspired by the book**. Write in role as the main character, using figurative language (similes, powerful verbs, amazing adjectives) to describe your feelings and the scenery as you embarked on your mission.
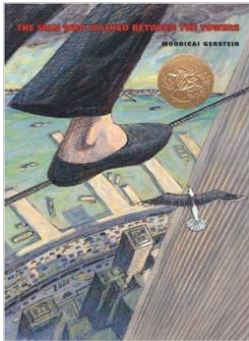
Starter:

What is the value of the digit 7 in the number 10.75?

What is 36×10?

Work out $\frac{1}{3} + \frac{5}{9}$

Write down a 4-digit number with 7 in the hundreds column.

LO: to find a percentage of an amount
https://vimeo.com/420691195

To find 10% we just divide by 10. Dora says:…

To find 5% you can find 10% and then halve it.

Use Dora's method to complete the calculations.

a) 5% of 40 =

d) 5% of 2,000 =

b) 5% of 400 =

e) 5% of 6,000 =

c) 5% of 4,000 =

What do you notice about your answers?

LO: to use perspective in drawing

Create a piece of artwork inspired by 'The Man who Walked Between the Towers' by Mordicai Gerstein

Look at some of the aerial views in the book. There are many looking down from the skyscrapers.

Watch this tutorial and have a go yourself. Challenge yourself! It looks harder than it is!
https://www.youtube.com/watch?v=V7IRqKZ7Sk0

This one is a bit easier:
https://www.youtube.com/watch?v=B40yP0Im5Hk