You do not need to print off any of the challenges. You can complete them on a piece of paper and take a picture of your work to upload it to Twitter or Facebook.

Year 5 Week 4 Inventors	Reading	Spelling	Maths	STEM	Wellbeing
	Reading	**Spelling**	**Maths**		**Wellbeing**

Reading

Task1: Read all about Alan Turing's phenomenal contributions to cracking codes during world war two. Then answer the questions that go with it.

Task 2: Log into Active Learn and read one of the books assigned to you.

Writing

Task 1: Read the beginning of the story 'Curiosity Shop' and complete the activities attached.

Task 2:

Write a description of the curiosity shop; remember to include all of the different senses.

Use the resources attached to help you.

Spelling

Adding Verb prefixes de- and re-

Task 1: practice this week's spelling, remember look, cover write check.

For an extra challenge, use each word in a sentence.

1. deflate
2. deform
3. decode
4. decompose
5. defuse
6. recycle
7. rebuild
8. rewrite
9. replace
10. revisit

Task 2: Complete the word search provided.

For an extra challenge, create your own word search.

Maths

Bus Stop division.
Mrs Talbot and Mr A will be uploading tutorials on Seesaw.

Task 1: Bus stop division.
Watch this video on bus stop division.

D10e: Short Division

$5978 \div 7 = 854$

$$7\overline{)5978}$$ = 854

https://www.theschoolrun.com/what-is-the-bus-stop-method-for-division

A. $1047 \div 3 =$
B. $2456 \div 4 =$
C. $3296 \div 5 =$
D. $2784 \div 4 =$
E. $1011 \div 3 =$
F. $2780 \div 5 =$

Task 2: Mr A's problem solving treasure hunt.
Instructions: Use division to solve each problem. When you have found the answer, it will have a matching letter.
Unscramble the 12 letters you find to make 3 words.

STEM

This week we are focusing on inventors and inventions. Inventions often solve problems that people have in society.

Task 1: Think about a problem that needs to be solved, it could be something to do with the current Coronavirus. Use your imagination. You could design a way to keep hot drinks hot for many hours. Or a way to hug friends that live on the other side of the world.

Draw out your design and label it with the materials you would use.

If you can create a proto-type, using recycled objects from around your home.

Wellbeing

Task 1: Draw pictures of all the things you can do in the current situation that make you happy. When you are feeling sad look at these things and choose one to do.

Task 2: Have a look at the mindfulness mantra cards, practice these every day. Then create 3 of your own. Remember these are kind words we can tell ourselves, so be kind to yourself.

I am smart!
I am special!
I can do hard things!

I believe in myself!
I can work hard!
I can accomplish anything I set my mind to!

Reading Task 1:

Alan Turing

Alan Turing was an English computer scientist, mathematician and **cryptanalyst**. He is thought to be one of the inventors of modern computing and he is best known for his important role in cracking German codes during the Second World War.

Early Life

Alan Mathison Turing was born on 23rd June, 1912 in Maida Vale, London. His father, Julius, worked for the Indian Civil Service. His mother, Ethel, was the daughter of the chief engineer of the Madras Railway in southern India. Due to Julius's job, Julius and Ethel spent a vast amount of time travelling between their homes in Hastings (in England) and India. Wishing for their children to be brought up in Britain, Julius and Ethel made the decision that Alan and his older brother, John, would not travel to India with them. Instead, while they were in India, the boys would stay with friends of the family.

Childhood Genius

From a very early age, Alan began to show signs of his intelligence, and stories about his childhood clearly show a boy who enjoyed puzzles and challenges. One story tells that Alan traced the path of flying bees, in order to work out where their hive was and find honey for his family.

Alan's intelligence was also recognised by his teachers. At the age of 13, Alan joined Sherborne School: a **boarding school** in the county of Dorset. Alan was so determined to attend school on his first day at Sherborne that he rode his bicycle for over 60 miles and slept overnight at an inn, all without any help from an adult.

It was while at Sherborne School that Alan's ability in mathematics and science became clear. Alan was able to solve problems and understand theories far beyond those expected for a child of his age. At only 16 years of age, Alan was able to understand the work of **Albert Einstein**.

Bletchley Park

Alan was 27 years of age at the start of the Second World War, and had been working part time at Bletchley Park with the
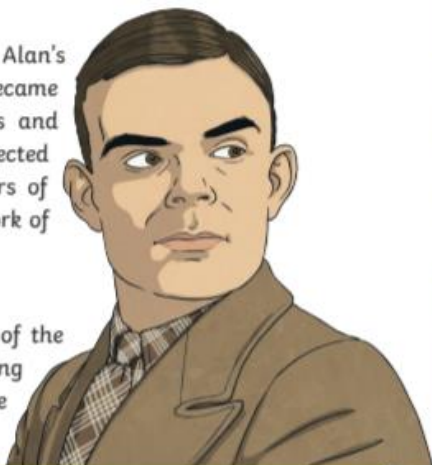
Government Code and Cypher School, known as the GC&CS. Bletchley Park was a **stately home** at which all codebreakers worked during the war.

During the war, the Germans believed that **encrypting** their messages would stop their enemies from reading them. The Germans used a clever system which involved replacing one letter with another several times. By keeping a log of what changes had been made (called a key), German soldiers could still read the original message, even though the final outcome did not appear to make any sense.

However, a machine called the Enigma had been invented by Polish codebreakers during the First World War. In 1939, the Polish codebreakers shared their machine with British and French codebreakers. The Enigma machine tried to change the final outcome back into the original message that was sent. This would help Britain and France to learn the Germans' secrets and outsmart them in the war.

Working alongside senior codebreaker Dilly Knox, Alan and a team of **cryptanalysts** tried to use the Enigma machine to break the German code. Within weeks of starting work at Bletchley Park, Alan had created a new machine – 'the bombe' – which was far better at cracking codes than the Enigma machine had been. Alan's new machine became one of the most important tools used to read German messages and it played a huge part in ending the Second World War.

For his services during the war, Alan was awarded an OBE (Officer of the Order of the British Empire) by King George VI in 1946.

Glossary

Albert Einstein: A scientist and philosopher who is credited with making some of the greatest scientific discoveries in recent history.

boarding school: A school at which the students also live, as well as learn.

cryptanalyst: Somebody who is able to break coded messages without being told the key.

encrypting: Turning something into code.

stately home: A large and impressive house that is or was lived in by a rich family.

Alan Turing

Questions

1. What was the name of the senior codebreaker that Alan worked alongside at Bletchley Park? Tick **one**.

   ○ Albert Einstein
   ○ John Sherborne
   ○ Dilly Knox
   ○ Julius Hastings

2. **During the war, the Germans believed that encrypting their messages...**
   What does encrypting mean? Tick **one**.

   ○ destroying something
   ○ turning something into code
   ○ transmitting a message
   ○ outsourcing work to someone

3. List three members of Alan Turing's family.

   1. _____

   2. _____

   3. _____

4. **Alan and a team of cryptanalysts tried to use the Enigma machine...**
   Give another word which the author could have used instead of **cryptanalysts**.

   _____

5. At what age did Alan enrol at Sherborne School?

   _____

6. According to stories, why did Alan trace the path of flying bees?

   _____

   _____

7. What was unusual about Alan's first journey to Sherborne School?

   _____

   _____

   _____

8. Why do you think Polish codebreakers shared their invention with the British and French?

   _____

   _____

   _____

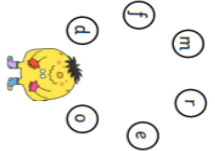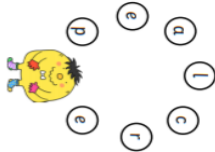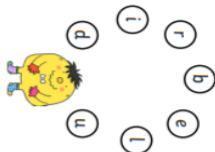9. Summarise what you have read in the section entitled 'Childhood Genius' in 20 words or fewer.
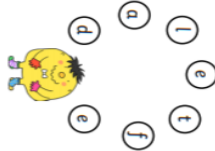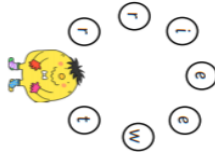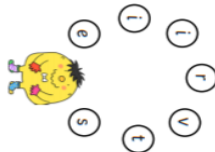
   _____

   _____

   _____

   _____

Spelling:

Verb Prefixes -re and -de

```
d u h j r e w r i t e e u b h
g y e r a i i x d w s s l t w
x m e l r e b u i l d o w n k
x u d s c j m r k j d p w x p
r r e h u y s f k t r m l h x
u k h r g f c f f k h o n g q
j j q e n x e e z t q c r t c
c z y p u u f d r t e e n a k
d o z l z r x x n c v d h e o
g e t a l f e d v i b e c z u
q v l c r j c r s o n f s i u
z c g e t y p i d e c o d e m
b a j r j k t e a h f r i u a
w t e d s c t p l d g m v b l
v x g a b u b e c d i b l a t
```

deflate	recycle
deform	rebuild
decode	rewrite
decompose	replace
defuse	revisit

Mr Whoops' Juggling Muddle!

Clumsy Mr Whoops has been juggling with this week's re- and de- verb prefix words and he's got in a real juggling muddle! Could you help him to unjumble each word using the clues to help?

To let the air out of something.
d f o e r l a t e

To fill the place of someone or something with somebody or something else.
m r f o e l c a e p r e

To redraft a text.
d p e a r e c e r i t r w

To rot or break down into pieces.
c o d d s c o e s m e p

To go back to somewhere you have been before.
e i i r v t s o p d e s m

To construct a building again.
p d i r e b o e l u i d

To make a bomb harmless.
d f s e u e

To bend or squash something until it is no longer recognisable.
d e f o r m

Writing Task: Curiosity Shop.

Read the story starter and write the next part of the story.

He drummed his long, wiry fingers on the counter, waiting for his next customer. The Curiosity Shop attracted the strangest of visitors, drawn to the unique range of peculiarities within. There was certainly more to the shop that met the eye, and people travelled from far and wide to peruse the bizarre collection. ! Mr. Obadiah (the owner) had resided behind the counter of this wondrous shop for as long as anyone could remember, and was now regarded far and wide as the finest purveyor of bizarre oddities and trinkets; a collection to excite and mesmerise even its most impartial visitor. ! As the next customer arrived, Mr. Obediah opened his moustachioed mouth to speak…

Question time

1. What is it that Mr. Obediah is going to say?
2. What kind of man do you think Mr. Obediah is?
3. What do his clothes tell you about him?
4. Why does he hold one hand behind his back?
5. What do you think the Curiosity Shop is? Is it just a shop?
6. What do you think the shop has inside?
7. Can you explain the presence of the wanted poster?
8. Why might Mr. Obediah display it on his shop front?
9. Is there something behind Mr. Obediah?
10. Can you spot the ladder? Where might it lead?

Perfect picture!

Can you draw a picture of some of the items you think might be sold at the Curiosity Shop?

Adjectives to help you with your writing.

Alternative Adjectives

small				big				bad				nice			
tiny	minute	miniature	pocket-sized	enormous	gigantic	mammoth	thundering	appalling	awful	gross	tiny	enjoyable	marvellous	lovely	delightful
microscopic	meagre	modest	insufficient	monumental	whopping	colossal	giant	dreadful	frightful	horrendous	hideous	great	wonderful	excellent	brilliant
slight	diminutive	petite	teensy	large	huge	sizeable	vast	nasty	terrible	unacceptable	shocking	pleasant	charming	pleasurable	swell

quiet				loud				fast				slow			
silent	peaceful	muted	soft	deafening	intense	raucous	resounding	speedy	rapid	brisk	nimble	gradual	moderate	reluctant	leisurely
hushed	muffled	mute	reserved	roaring	thundering	booming	crashing	swift	dashing	flashing	hurried	sluggish	crawling	dawdling	idle
noiseless	speechless	soundless	inaudible	ear-piercing	piercing	deep	boisterous	hypersonic	agile	quick	racing	plodding	slack	creeping	lagging

old				young				hard (not easy)				angry			
ancient	aged	decrepit	elderly	youthful	infant	juvenile	tender	puzzling	challenging	difficult	tricky	enraged	resentful	irate	wound up
mature	debilitated	getting on	seasoned	childish	budding	inexperienced	new	mind-boggling	complicated	complex	laborious	worked up	indignant	seething	furious
venerable	enfeebled	wasted	fossil	blooming	blossoming	fledgling	recent	problematic	arduous	troublesome	tough	touchy	grumpy	infuriated	bitter

D10e: Short Division

5

$$5978 \div 7 = 854$$

$$
\begin{array}{r}
8\ 5\ 4 \\
7{\overline{\smash{\big)}\,5\,9^{5}\,7^{3}\,8^{2}}}
\end{array}
$$

Mr A's treasure hunt:

Using your knowledge of short division, find the answer to each of these questions. When you have found the answer, match it to a letter on the next page.

When you have found all of the answers, unscramble the 12 letters to make 3 words. Good Luck!

A factory puts cakes into boxes of 4. How many boxes can they fill with 5070 cakes?	Grandma Jones has £6044 to share equally between her 4 grandchildren. How much money will each grandchild receive?	A school has 4628 pupils. Each pupil is put into one of 4 houses. How many children will be in each house?
An author writes 3624 words over 6 minutes. On average, how many words does she write every minute?	Sam has saved £1341. He splits his savings into 3 separate bank accounts. How much money will there be in each account?	A large supermarket lays out 5 trolleys in a row. How many full rows can be made with 3652 trolleys?
A factory puts 6 cans of beans in a pack. How many full packs can the factory make with 7503 cans?	A farmer has 4852 eggs. A box takes 5 eggs. How many boxes will he need to transport all the eggs?	A factory makes 2734 tennis balls and packs them into tubes of 5. How many full tubes will the factory be able to pack?
A garden centre has 3928 daffodil bulbs. They are sold in bags of 9. How many full bags will they be able to fill with bulbs?	A school buys 1246 pencils for its pupils. They are shared equally between the 8 classes. How many pencils will each class receive?	8265 people are travelling on a ship. Life jackets come in packs of 6. How many packs are needed so that everyone has a life jacket?

155 m	735 e	146 p	1629 k	604 n
1267 c	1378 s	789 b	971 o	159 r
1626 d	1250 n	730 a	765 h	1356 L
447 s	1157 i	1110 u	546 g	625 y

Mindfulness Mantra Cards.

I believe in myself!
I can work hard!
I can accomplish anything
I set my mind to!

I am smart!
I am special!
I can do hard things!