



# Teach Active

Maths & English

## Home Learning Packs Year 6



# Home Learning Packs - Year 6

The team at Teach Active have selected 10 activities each for Maths and English for children who are having to stay at home and isolate instead of being in school. They have been chosen to encourage independence, increase confidence and develop fluency in the key skills of number, reading and writing. Some are deliberately active games and others are designed for sitting down and recording responses. The key objectives that the activities meet are:

- Determine the value of each digit of any number up to 10,000,000
- Identify multiples, factors and prime numbers
- Multiply and divide multi-digit numbers
- Calculate intervals across zero
- Read and order numbers to 10,000,000
- Round any whole number
- Solve problems using  $+$ / $-$ / $\times$ / $\div$
- Multiplying adding and subtracting money (decimals)
- Explain key facts
- Retrieve information
- Find the meaning of words in context
- Legibility, consistency and quality of handwriting
- Discuss and record ideas
- Spell Y5/6 word list



# Available Activities

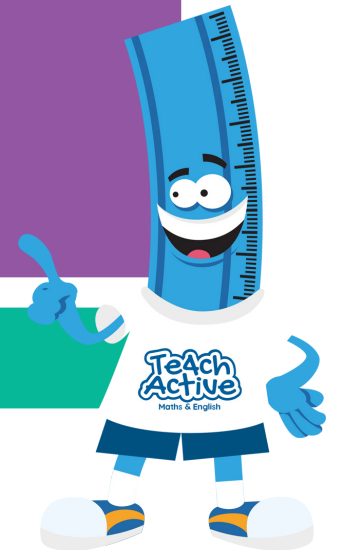
## Maths Activities

1. Digital Values
2. If This Is The Answer
3. Pasta Dash
4. Solve It
5. Fraction Fun
6. Comparing Numbers
7. Random Roundings
8. Missing Cash
9. Making Money
10. Step This Way

## English Activities

1. Climate Change - Reading
2. Reading - Comprehension
3. Persuasion - Poster Design
4. Poetry - It's a Rap!
5. Researching Facts: Eco-Champions
6. Writing - a letter to the Prime Minister
7. Discussion
8. Interview
9. Acrostic Poem
10. Spelling Practice

**'Fun Activities to do at Home' worksheet included**



# Maths Plans

See and Share #TeachActive in Action!



## Digital Values

**Objective:** Determine the value of each digit of any number up to 10,000,000.

### Starter Activity

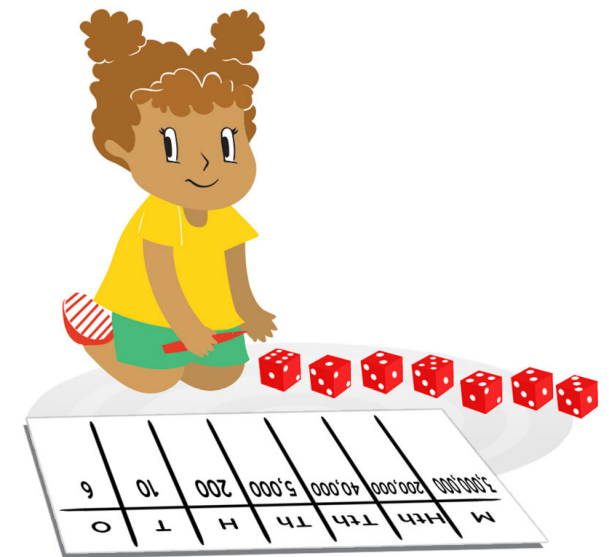
Practice your times tables – write, count and march on the spot, or clap in 6s to 72 and back down to zero

### Game Instructions

1. Make a set of 0-9 digit cards. Distribute them around the room or garden.  
Collect 7 cards, one at a time
2. Add the digits together and complete an exercise activity of your choice that many times, like shuttle runs, push ups or sit ups, for example
3. Use the cards to make ten 7-digit numbers (such as 3745216, 3754261, etc)
4. Write down the value of each digit on a chart divided into millions, hundred thousands, ten thousands, thousands, hundreds, tens and ones columns, for each number you created
5. Read the numbers out loud in words

### Challenge

Ask someone to think of a number between 1,000,001 and 9,999,999. Tell them as quickly as you can how many millions, hundred thousands, ten thousands, thousands, hundreds, tens and ones are in their number.



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## If This Is The Answer

**Objective:** Identify multiples, factors and prime numbers.

### Starter Activity

Practice your times tables – write, count and march on the spot, or clap, in 7s to 84 and back down to zero

### Game Instructions

1. Make a set of 0-9 number cards. Spread them out face down on the floor
2. Run and turn one card over. Do this many jumping jacks.  
Move onto another card and repeat
3. Use the two cards you have turned over to make a 2-digit number,  
e.g. turning over a 6 and a 3 could be put together to make 63 (or 36)
4. Write down all the factors and multiples of that number
5. Repeat until all 10 cards have been used
6. Identify which of your numbers (if any) are prime numbers.



### Challenge

Try making three 3-digit numbers (leaving one card out) and finding all the pairs of multiples and factors for each one!

Are any of them prime numbers?

### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Pasta Dash

**Objective:** Multiply and divide multi-digit numbers.

### Starter Activity

Practice your times tables – write, count and march on the spot, or clap, in 8s to 96 and back down to zero

### Game Instructions

1. Get 200g of dried pasta and estimate how many pieces are in the bag.  
Make number cards that show 6, 7, 8 and 9
2. Put the bag of pasta at the other end of the room or garden
3. Pick a card – this is how many pieces of pasta you can pick up each time
4. Dash across and collect that many pieces of pasta at a time and count them into a container back at the start. Count in multiples of the number you chose
5. Continue until all the pasta pieces have been collected and counted
6. Multiply the total by a random 2-digit number made from two of the remaining number cards
7. Divide this bigger total by the last remaining card.



### Challenge

Challenge your friend to compete against you in this game:  
pick a card, and both complete the game and the maths.

Who is quickest to finish?

### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Solve It

**Objective:** Solve problems using  $+/ - / \times / \div$

### Starter Activity

Practice your times tables – write, count and march on the spot, or clap, in 9s to 108 and back again

### Game Instructions

1. Make a set of 0-9 cards and pick five to make a 5-digit number, such as 42930
2. Add the digits together (e.g.  $4 + 2 + 9 + 3 + 0 = 18$ )
3. Do that many step ups
4. Repeat - generate another 5-digit number, add the digits together and complete that many step ups
5. Add the two 5-digit numbers together
6. Subtract the lower number from the higher number
7. Multiply and divide each number by 10, 100 and 1000.

### Challenge

Is either number divisible by 6, 7, 8, 9, 11 or 12?



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.





## Fraction Fun

**Objective:** Find fractions of a number.

### Starter Activity

Practice your times tables – write, count and march on the spot, or clap, in 11s to 132 and back again

### Game Instructions

1. Generate ten 2-digit or 3-digit numbers in a minute by looking around the house – look at weights on packages, money on receipts or stamps, coins, people's ages, door number etc
2. Write each number in the middle of a piece of paper and find  $\frac{1}{3}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{7}$ ,  $\frac{1}{8}$ ,  $\frac{1}{9}$  and  $\frac{1}{20}$  of each number. Some numbers will not divide equally into some fractions, so only write any that do.

### Challenge

Can you find fractions like  $\frac{5}{6}$ ,  $\frac{5}{7}$ ,  $\frac{4}{5}$  and  $\frac{9}{20}$  of numbers as well?  
Make a note of these number sentences too, such as  $\frac{5}{6}$  of  $132 = 110$ .



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Comparing Numbers

**Objective:** Read and order numbers to 10,000,000.

### Starter Activity

Practice your times tables – write, count and march on the spot, or clap, in 12s to 144 and back again

### Game Instructions

1. Make a set of 0-9 cards
2. Collect one card at a time, until you have 5 cards (e.g. 2, 5, 4, 7, 0)
3. Make five 5-digit numbers using the five cards you picked (e.g. 23470, 23740, 27043 etc.), Write the five 5-digit numbers down in order from smallest to biggest, reading them out loud afterwards
4. Repeat so you have ten 5-digit numbers
5. Put all ten numbers in order from biggest to smallest this time.

### Challenge

Repeat but make six 6-digit numbers this time, ordering and reading them aloud; and then seven 7-digit numbers!



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Random Roundings

**Objective:** Round any whole number.

### Starter Activity

Counting practice – write and count on in 10000s from any random 5-digit number ten times each way (up and down)

### Game Instructions

1. Using a pack of playing cards, remove the picture cards and then spread the others out face down
2. Collect five cards at random, one at a time
3. Use the five cards to make five 5-digit numbers (e.g. 23456, 34562, 45623, 52634 etc)
4. Round each figure to the nearest 10, 100, 1000, 10000 and 100000, keeping a note of all your work

### Challenge

Select 6 cards, making six 6-digit numbers and rounding each one to the nearest 10, 100, 1000, 10 000, 100 000 and 1 000 000.



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Missing Cash

**Objective:** Find percentages of different amounts of money.

### Starter Activity

Counting practice - write and count on and back in 100s from any random 6-digit number ten times each way

### Game Instructions

1. Print out the resource cards (or alternatively make some similar question cards of your own)
2. Spread the cards out, face down
3. Collect one card
4. Solve the problem on the card.
5. Continue until all the cards have been collected and problems solved.

### Challenge

With a partner: who is quickest to run, collect and solve 5 questions and do 5 answers-worth of star jumps? If you are on your own, time yourself doing 5 questions and activities, then see if you can beat your time with the next 5.



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



10% of £0.99 =



20% of £0.75 =

5% of £2.62 =

25% of £4.88 =

15% of £4.40 =

40% of £3.60 =

30% of £3.90 =

60% of £7.50 =

75% of £8.32 =

45% of £4.20 =

## Making Money

**Objective:** Multiplying adding and subtracting money (decimals).

### Starter Activity

Counting practice - write and count on and back in 1000s from any random 6-digit number ten times each way

### Game Instructions

1. Make and use two sets of 0-9 cards and sort them into two groups: One set of cards should have a set of 0-9 cards and the extra 0, 1 and 2 cards (Set A); the other group should only have the numbers 3-9 (Set B)
2. Spread each set of cards out face down in two distinct places
3. Collect 3 cards from Set A and make these cards into a £ and p amount, e.g. £4.07
4. Collect a card from Set B, e.g. 9
5. Multiply the cash amount (A) by the single-digit card (B) - e.g.  $£4.07 \times 9 = £36.63$
6. Repeat, and then add the two amounts together. ,Continue until you have collected all the cards
7. Can you do all this quicker than your partner?

### Challenge

Can you calculate the change from £200.00 for each total you ended up with?

#### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



## Step This Way

**Objective:** Calculate intervals across zero.

### Starter Activity

Write and count on and back in 100000s from any random 6-digit number ten times each way

### Game Instructions

1. Roll two dice.
2. The two numbers will make your first 2-digit number, e.g. rolling a 5 and a 2 could make 52. Roll again, and make another 2-digit number, e.g. (a 3 and a 4, making 34)
3. Make the first number a negative number (-52 in this case), and the second a positive number (34). Find the difference between the two numbers (from -52 to 34 = 86, for example). Write the maths down
4. Repeat 5 times.



### Extra Activity

Have a go at making up your own game to meet this objective, and then teach someone at home to play it with you.



# English Plans

See and Share #TeachActive in Action!





## Climate Change - Reading

Read the information leaflet. How does it make you feel? Write down any questions you have about, and any vocabulary you don't understand. See if you can find the answers to your questions using the internet, and the meanings of words from a dictionary.

## Reading - Comprehension

Scan the Climate Change leaflet again and then answer the following questions:

1. Why do we need a gas atmosphere?
2. What two gases make up most of our atmosphere?
3. Describe the two gases that are causing global warming, and where they mainly come from.
4. What is the effect of global warming?
5. Why is the UK particularly affected by flooding?
6. What goal do we need to reach by 2030?
7. Explain two ways in which we can all help reduce our own 'carbon footprint'.
8. Why do you think the section about Greta Thunberg is titled 'Climate Hero'?
9. Describe what the author means by saying that Greta Thunberg has 'used her platform to raise awareness'.
10. Explain whether you think this leaflet is sending a positive or negative message about global warming and climate change. Does it inspire you to do something? If not why not? If it does, what will you do?

You will need  
The Climate Change  
Leaflet can be found on  
the next two pages.



## 4 What needs to be done?

Governments across the world are already working to limit the damage caused by climate change and global warming. Scientists believe that if we were able to ensure that the planet's temperature does not increase by more than 1.5°C by 2030 the permanent damage to our planet will be reduced. What this means is that we will need to halve the amount of greenhouse gas emissions by this date and some believe that not enough is being done to ensure this goal is reached.

Although much of the hard work needs to be done by politicians, we can help reduce climate change through actions in our own lives. Reducing the amount of greenhouse gases we produce, also known as our 'carbon footprint', is going to require radical changes to the way we live, from how we heat our homes, to the cars we drive and products we buy. If we show world leaders that we don't want to buy and use the things that hurt the environment, they will have to make changes to the way they run our country.



Everyone can make a difference by following some of our simple steps:

- Use renewable energy. Some energy suppliers only use renewable energy sources, rather than fossil fuels, check to see if yours is one of them.
- Don't waste energy. Think carefully about whether you need the heating on, or could you put on an extra layer; turn off the lights and household appliances when they are not needed.
- Drive less. If you can walk, or cycle or take a bus instead you are reducing the amount of fuel being burnt.
- Reduce the amount of plastic you use. Avoid single use plastics, such as carrier bags, drinks bottles, straws and plastic cups; instead invest in reusable bags and drinks bottles and consider buying products that do not come with large amounts of unnecessary packaging.

## 5 Climate Hero - Greta Thunberg

Aged just 15 years old, Greta Thunberg decided that her government in Sweden weren't taking enough action to combat climate change. Instead of going to school on 20th August 2018, she went to sit outside the parliament building in Stockholm to protest: 'Skolstrejk för Klimatet' (School Strike for Climate). Her actions were prompted by the summer's record temperatures and devastating wild fires in her home country.

She vowed to continue to strike every day until the government elections on the 9th September. She shared photographs daily on her Instagram account and each day more and more people joined her. The photographs of this young girl with her home-made sign went viral and travelled around the world and by the final day of her strike hundreds of young people across the globe had joined her, both in Sweden and in their own countries too.

Since her rise to fame, Greta has spoken passionately to world leaders on numerous occasions about the need for them to do more. She has used her platform to raise awareness about climate change and sets an example in the way she lives her own life. She refuses to travel by aeroplane and has insisted on travelling to events by boat or train in order to reduce her carbon footprint. In 2019, she was nominated for the Nobel Peace Prize and became TIME Magazine's person of the year.



"If you still say that we are wasting valuable lesson time, then let me remind you that our political leaders have wasted decades through denial and inaction."

- Greta Thunberg, Climate Activist

She firmly believes that if the world's governments do not do more, then there is no point in going to school as there will not be a future to live for. Her strike has continued in over 125 countries around the world - 'Fridays for Future' is a global strike in which young people have decided to continue to fight to be heard by those in charge. She has proved that young people's voices need to be heard, each of us can make a difference and our actions count.

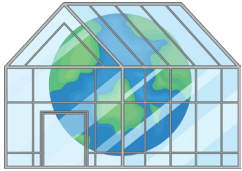


# Climate Change: What is it and what can we do about it?



Here at the 'Action for Climate Trust' we are passionate about spreading the facts about climate change and information about how we can all make a difference.

## 1 What is global warming and how is this different from climate change?



Surrounding our planet is a layer of gases known as Earth's atmosphere. We need this layer of gas, mostly made up of nitrogen and oxygen, to help us retain heat from the sun as without it Earth would be too cold for

us to live on. Some people compare it to a greenhouse: as the sun shines on us, heat becomes trapped inside and keeps us warm.

Unfortunately, our planet's atmosphere is heating up too much and very quickly. Although we need to trap some of the heat from the sun, additional gases – known as greenhouse gases – are being released into the atmosphere and causing more heat to become trapped. It might not sound like a lot, but since the late-1800s scientists have calculated the increase in temperature to be nearly 1°C, with majority of this increase happening since the 1950s. This is known as global warming.

If global warming does not slow down dramatically in the next decade, the consequences could be disastrous: the warming of our planet is causing the climate to change. 'Climate change' refers to the altering weather conditions and patterns we are experiencing in different parts of the world.



## 2 What is causing global warming?

An increase in the amount of greenhouse gases being released into the atmosphere is causing the planet to heat up. Carbon dioxide (CO<sub>2</sub>) is one of these gases and it is released when we burn fossil fuels. Over 80% of the world's energy is created by burning these types of fuels (coal, natural gas and oil). We use these fuels to heat our homes, drive our cars, fly planes and run factories to manufacture everyday products. The leading contributors to CO<sub>2</sub> emissions are China and the USA. Although made up of a number of countries, Europe is the third largest contributor followed by India.



Did you know...?

Oil is used to make plastic and so its production releases large amounts of CO<sub>2</sub> into the environment.

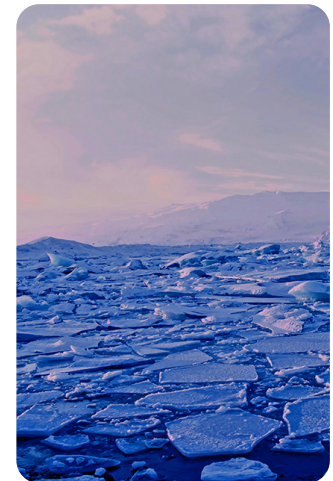
Rainforests are not only a sanctuary for rare and exotic wildlife, they are a fantastic filtering system for our planet. Trees are able to take in carbon dioxide and turn it into oxygen through a process called photosynthesis. However, people are cutting down vast areas of rainforest every day for a range of reasons: land for farming, wood for construction and to make paper. Without trees, the effects of greenhouse gas emissions are only going to get worse.

Additionally, as the world's population grows so does the demand for food. Large areas of land are being used to farm livestock. Not only are we clearing valuable forests in which to do this, but the gases which are produced are contributing to global warming as well. Cattle, pigs and sheep produce a lot of one particular greenhouse gas – methane. The more meat we eat, the more animals are farmed and the more methane is produced.

## 3 How is our climate changing?

Climate change is the effect of global warming. Over the last 30 years, scientists have noticed changing patterns in our temperatures and weather conditions.

Due to the rise in temperature of the earth's surface, glaciers and ice sheets in polar regions have begun to melt. This has resulted in rising sea levels; as the sea rises coastal areas experience greater erosion and the risk of flooding increased. As there is more water in the sea, this also increases the amount of rainfall and therefore yet more flooding. Flooding in some regions is becoming more and more frequent and by the end of the century, some coastal areas of the country could be underwater if nothing is done.



Did you know...?

The UK is particularly affected by flooding as we are a small island, surrounded by sea.

Meteorologists have found that across the globe we are experiencing higher temperatures than ever before. Heat waves are becoming more common and, although this may sound like great opportunity for a barbeque and a trip to the beach, the consequences have already been quite severe. Spikes in temperatures have resulted in devastating wildfires recently in places such as Sweden and Australia. There is also an adverse effect on crops, with some areas unable to grow sufficient food because of the increased heat.

In contrast with the more intense heat, we are also experiencing more severe storms. Increased rainfall is a contributing factor, but extreme hurricanes are also a feature of global warming.

## Persuasion - Poster Design

Design a poster that will encourage everyone to reduce their carbon footprint.  
We need to know why this is important!

## Poetry - It's a Rap!

Make up a rhyming rap about global warming and climate change.

- Start by noting down the key words you want to include, and the key facts.
- What message do you want to give your audience? You want to persuade them to reduce their use of energy, cars and waste. Why do they need to do this?
- Make up a beat and rhythm – think of We Will Rock You as a starting point. Use that beat, or develop your own, which repeats over and over.
- Write 2 lines which rhyme and fit over the rhythm and build it up from there! Speak the lines, like poetry, with rhythm and expression.
- Finally practice, and then perform your Climate Change Rap to someone else!

Do you need an instrument to help keep the rhythm? If you don't have anything, make something - improvise with a stick or pencil and an empty container or can, for example.



## Researching Facts: Eco-Champions

Choose one of the following famous environmentalists:

- Greta Thunberg
- David Attenborough
- Chris Packham

Find out about the work and life of one of these great environmental campaigners. Create an attractive-looking factfile.

## Writing - a letter to the Prime Minister

Write a letter to the Prime Minister explaining what laws they should make in order to reduce the amount of carbon emissions in the UK. Tell them why this is so important, and include emotive and persuasive language.



## Motty's Top Tips for persuasive writing

- First explain why you are writing
- Give three reasons why things need to change
- Finish by asking for a response, such as 'Will you help?'
- Use facts and data to prove your point - asking 'Did you know that....?'
- Write in the present tense
- Ask the reader questions like 'How would you like it if....?'
  - Use a formal voice
  - Use 'Firstly', 'Furthermore' or 'Added to this' to start your sentences and to connect your ideas
  - Use 'because' to explain why

## Discussion

Imagine an alien has arrived at your home and they have never seen our world before. Imagine a toy or teddy is the alien and that they have said to you: “What is this place?”

- Describe the wonderful wildlife, habitats and ecosystems we have on Earth
- Tell them about the atmosphere and how it keeps us warm
- Explain how the atmosphere is becoming warmer, and what is causing this
- Describe the problems global warming brings
- Tell them what we are hoping to do to reduce global warming and climate change and improve the health of the planet

Imagine it as a conversation, where they keep asking questions. Write down the questions the ‘alien’ has asked and practice explaining it all to them.

### Important Note!

You will need The Climate Change Leaflet found within this booklet.

## Interview

Write an interview with Greta Thunberg, using the information leaflet to help answer the questions.

First, read the section about Greta and her work, views and ideas. Also look her up on youtube - at the United Nations in 2019 she read her famous ‘how dare you?’ speech. Listen to how she speaks and what she says. Then make up about six questions to ‘ask’ her, as in on the radio or TV. Each time you write a question, write what her reply would be.

Then, ask an adult or someone at home to play one of the roles, while you play the other one: one is the interviewer, the other is Greta. Re-enact the interview together as if you are on the news or a chat show.



## Acrostic Poem

Make up an acrostic poem describing our amazing planet and our responsibilities for it, where each line begins with the next letter of the word:

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### Important Note!

You will need The Climate Change Leaflet found within this booklet.





## Spelling Practice

Write out 20 of the word list words onto post-its. Another handwriting and correctly-copying opportunity! Stick them all around the house, inside cupboard doors, on the back of doors etc. Every time you see one, read it, turn away and spell it out loud.

As the days go by remove the easy ones, the ones you can spell easily, and replace them with more words from the list. Leave the harder ones up to practice whenever you see them.



You will need  
The Word List can be  
found on the next  
page.







## Word List

according	community	explanation	neighbour	shoulder
achieve	competition	familiar	occupy	signature
aggressive	convenience	forty	occur	soldier
apparent	criticise	identity	persuade	stomach
attached	definite	Immediate	profession	suggest
average	desperate	Individual	programme	symbol
bargain	determined	language	recognise	system
bruise	develop	lightning	recommend	variety
category	especially	marvellous	relevant	vegetable
communicate	excellent	muscle	restaurant	vehicle

## Handwriting Practice - A Few Ideas From Motty

1. Practice five of the trickiest spellings on the word list by writing them out in your best handwriting.
2. Exercise the fingers on your writing hand by playing with a lump of blutac or plasticine – keep squishing it and turning it, with your thumb and first two fingers. Try it while you're watching something on TV or a tablet.
3. Practice writing your name in the air with big hand strokes, as if you are writing onto an invisible whiteboard.
4. Make up some continuous patterns using a pencil and paper. They need to include curves or straight lines, perhaps like this:  or 
5. Try copying the name from a cereal packet, drinks can or a tin from the cupboard (ask a parent first to help you find one). Write it in your neatest handwriting – then try copying the style it is actually written in.

Why don't you try one each day this week?



# Fun activities to do at home

- ☐ Write and record a blog about a computer game, app or you tube channel you really enjoy - what makes it so good?
- ☐ Make up and present a weather report
- ☐ Help prepare the dinner
- ☐ Bake some cupcakes
- ☐ Use an atlas or google earth to see what a place you'd like to visit looks like, and note 5 geographical facts about where it is and what it's like there
- ☐ Draw and label a map of an imaginary island: it could be where adventures could happen, or the dream holiday destination; it could be in space, or your perfect hideaway. The more detail the better. Remember to give your island a name and explain where it is.
- ☐ Research an aspect of your class topic this term and have it ready to present to your class when you are back in school
- ☐ Practice a musical instrument, singing, or dancing for 20 minutes every day
- ☐ How many books can you read in two weeks?
- ☐ Help keep the house clean and tidy every day
- ☐ Plant and look after some flowers or vegetables
- ☐ Help look after your pet if you have one
- ☐ Sit still, watch out for and note down all the wildlife you see through the window for 10 minutes every day - keep a nature log or diary
- ☐ Keep a diary for the two weeks you have to stay at home, recording what you did each day, and how you felt - it could be a video diary, or written down

