Helping your child at home with Maths

Also including Outdoor Learning !

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Maths Coordinator

In the street

- Can your child recognise bus numbers?
- Can you undertake a number plate hunt? Who can find multiple of 3? Add the numbers up. What would you need to add / subtract from this number to make 56?
- How are houses organised? Can you compare door numbers? Are all houses on each street numbered in the same way?
- Counting – how many lamp posts are on the way to school? What is the double of this number? What is 25% of this amount?

Doing the washing

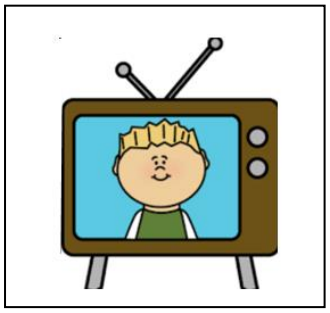
- Counting in 2s – can you match the socks?
- Sorting by colour and size.
- Explore the sizing of clothes items. Are all T-shirts that are labelled 6-7 the same length?

Time

- What day / date is it today, tomorrow?
- Use timers, phones and clocks to measure short periods of time.
- Count down 10/ 20 seconds to get to the table/ into bed etc.
- Recognising numbers on the clock. If you cover a number, what number was missing?
- What time is it in 30 mins?
- How long does it take for the washing to complete a cycle?

Food!

- Can you cut your toast into 4 pieces? Can you cut it into triangles? Can you make a symmetrical shape?
- Can you set the table. Counting the right number of plates etc. How many more do we need?
- Can you make shapes/ patterns out of the knives and forks. Can you put them in the right place in the drawers?
- Can you help with the cooking by measuring and counting ingredients?
- Positional language at dinner time: what is on the rice, where are the carrots etc?
- Weights and measures. Can you measure accuracy but also estimate? What does 500g actually look like and feel like?
- Ratio and proportion – can you scale a recipe up or down for more or less people…



Watching TV!

- How long does your favorite programme last?
- What is the average number of adverts in the breaks?
- How long do you spend watching TV each day… in a week… a month… a year? Is this the same as others?

Going shopping

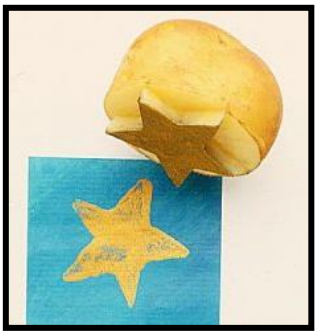
- Can you read the price tags?
- Can you count items into the basket?
- Can you find the correct money to pay for the items? Can you use different coins / notes to make the total?
- Comparing weights – which item is heavier?
- What is the cost of a meal?
- Estimate the total cost of a shopping trip.
- Find the change.
- Can you work out the new price of an item if there is a % change

Holidays and trips out.

- Can you create a day to day timetable so your child can recognize what comes next?
- How much petrol will you need and how many miles away is the destination? How long will it take to arrive? Can your child convert miles into kilometers?

Measuring

- Are you taller than a …?
- Can you mark your height on the wall? How much will you grow in 6 months' time? (Make a prediction)
- Cut hand shapes out of paper. How many hands long is the couch? How long is the table? Which is longer?
- Who has the biggest hands in your family?
- How many steps from the gate is your front door?



Shapes

- Cut a potato into shapes (circles, triangle etc). Can you make pictures and patterns.
- Cut out shapes from coloured paper/ newspaper and arrange into pictures.
- Shape hunt: Can you find a square in your house (windows etc), a circle …

Playdough

Here is a simple recipe for play doh:

1. *1 cup of plain flour*
2. *1 cup of water*
3. *1 tablespoon cooking oil*
4. *2 teaspoons cream of tartar*
5. *Half a cup of salt*
6. *Food colouring and essences (optional)*

Put all ingredients in a large saucepan, and heat slowly, stirring all the time until it forms a ball. Keep it wrapped in cling film or in a covered tub to stop it drying out.

Then ….

- Make numbers and shapes
- Show different fractions
- Sort shapes into groups, or order by size
- Make long and short wiggly snakes.

Games

- Putting cards into piles
- Jigsaws (you can make your own by cutting up a magazine picture)
- Snap (matching pairs) or Happy Families (collect 4 of a kind)

- Snakes and ladders or other simple dice games.
- Adding numbers on two dice.
- Bingo, with numbers or shapes
- Hopscotch

Number rhymes and songs

Eg: 5 little monkeys jumping on the bed
One fell off and bumped his head
Mummy called the doctor and the doctor said
"No more monkeys jumping on the bed!"
4 little monkeys jumping on the bed …

Your child can teach you lots more or try this website which has the words and sings it for you:
http://www.nurseryrhymes4u.com/NURSERY_RHYMES/COUNTING.html

Practising number facts

- Throw a dice: throw two dice.
    - Can the children add the numbers?
    - Multiply the numbers?
    - Find the difference between them?
    - Recite the times table for that number?
    - Can you do it faster?

- Give your child an answer. How many maths questions can they come up with to fit the answer?

- Start with a fact, eg 5 + 3 = 8. Over a few days try together to compile as long a list as you can of further facts that derive from the first one, eg 8 – 5 = 3, 300 + 500 = 800 etc

Additionally, here are a number of specific ideas for all ages

Activities using a number line

Number detective

You will need

Nothing except the number line!

- Tell your child to pick a number on the line but not to tell you! They should write it down - to prevent cheating!
- You are going to guess their number by asking questions.
- They can ONLY answer 'yes' or 'no' to your questions.
- You have to try to guess their number in three questions or less!

E.g. You play like this:

- Your child chooses '7' but does not tell you!
- Your first question: *Is your number further along the number line than 5?* (Your child answers 'yes' or 'no'. If it is '5' they still say 'no'.)
- Your second question: *Is your number an even number?* (Now your child answers 'yes' or 'no'.)
- Your third question: *Is your number written with only curly lines?* (Now your child again answers 'yes' or 'no'.)

Keep playing like this until you have guessed their number.

- Then give your child a turn to guess a number which you have thought of. (You may need to 'assist them' with the questions!)

NB For the first few times you play this, you may need to guess your child's numbers, rather than the other way around. It is thinking of questions that's hard!

Which two?

You will need

Raisins, biscuits or other snacks

- You choose two numbers.
- You add these two numbers and write the total.
- Show your child the total.
- They have to guess what two numbers you chose.
- If they guess wrong, you get a raisin.
- If they guess right, they get a raisin.

E.g. play goes like this:

- You write 7
- They guess 3 and 4.
- You say 'no!' and you eat a raisin.
- They guess 6 and 1.
- You say 'yes' and they eat a raisin.

Now they choose two numbers, add them and write a total.

- You try to guess the two numbers they chose.
- Play continues like this. Who eats most raisins?

NB Encourage your child to try to say the total without working it out!

Ten more

You will need

Nothing except the number line!

- Decide who will have a turn first!
- That person writes down a number. They do not show the other person! E.g. Your child writes 7
- They then add ten, and write the new number, e.g. 17.
- Their partner then points at a number on the line, e.g. 3 and says the number ten more, e.g. 13.

- The first person must say whether the secret number they have written is larger or smaller than the number spoken. E.g. You say 13 so the child says, 'larger' because their number (17) is larger than 13.
- You then try another number on the line, e.g. 5, add ten and say the total, e.g. 15.
- The child says 'larger' or 'smaller', according to whether their secret number is larger or smaller than the number you have just said.
- Keep playing like this until you have guessed their number.
- Then you have a turn at writing a secret number which they have to guess.

NB For the first few times you play this, your child can write the number and have you guess, rather than the other way around. It is the adding 10 that is hard!

What total?

You will need

Some raisins

- Ask your child to choose a number on the line that is larger than 4 but to keep it secret. They write it down – without you seeing!
- You say two numbers, e.g. three and two.
- They add these two numbers and say the total, e.g. 5.
    - If the total is the same as their number, they must give you a raisin!
    - If the total is not the same as their number, they get to take a raisin.
- Assuming you have not yet guessed their number, play again.
- Say another two numbers.
- They add these numbers and say the total.
- Play continues like this until you have guessed their number!
- Now you write down a secret number and they have to choose two numbers to add.
- Continue playing like this!

NB This activity is designed to help your child to add two small numbers. Encourage your child to start with the larger number and to find it on the number line. They then move their finger along the number of spaces indicated by the smaller number.

One more, ten more

You will need

A coin

- You and your child each choose a number on the line.
- You each write your number.
- Take turns to spin a coin.
- If it lands 'heads', say the number one more than your number.
- If it lands 'tails', say the number ten more than your number.
- If you are correct in the number you say then you can score ten points!
- Now each person chooses a new number.
- Spin the coin, and play again.
- Keep playing like this until one of you has more than 100 points!

NB Saying ten more should not really be any harder than saying one more. Encourage your child to see that ten more often takes us to a 'teen' number!

Three in a row!

You will need

Paper and felt-tips

- You and your child both draw a 3 x 3 grid on your page.
- Take turns to choose a number from the line.
- You each write the number somewhere on your grid.
- Choose another number each and repeat the process.
- You are both trying to make rows or columns which add up to ten! E.g. 3 + 2 + 5 or 4 + 5 + 1 or 3 + 3 + 4.
- You continue taking it in turns to choose a number from the line and write it on your grid.
- When you have each chosen nine numbers and your grids are full, look at each other's.
- Each person scores 10 points for any rows and any columns which add up to 10!
- Play again and try to do better!

NB Encourage your child to plan ahead. 'If I choose a 3 that will make this row add to ten!' This is mathematical reasoning

Folded paper holes!

What to do…

1. Fold a piece of paper in half.
2. Draw two straight lines that meet against the folded edge. See the example below.
3. Cut along the lines and then open out your paper.
4. What shape is the hole? Is it a shape you know?
5. Do this again and try to make a shape which doesn't have 4 sides.
6. Can you make a square, an oblong? How about a triangle?
7. Remember you can only cut two straight lines!

Telephone Keypads

What to do…

1. Look at someone's mobile phone key pad.
2. Write down 2-digit numbers that you can see, e.g. 12 or 56 or 78.
3. How many of these can you write?
4. Write these down in a list starting with the smallest then go up to the largest
5. Which two 2-digit numbers are the closest together?
6. Can you find 3 single digit numbers that add up to make 15 e.g. 1 + 9 + 5?

Chain Mail

What to do…

- Work with your child to create a chain each. Here's how!
- To start write a 2-digit or 3-digit number.
- If it is odd, multiply it by 3 and add 1.
- If it is even, halve it.
- Keep going like this, until you go round in a circle.
- Create one chain each and then try another and then another.
- Compare about ten chains. What do you notice?
- Who created the longest chain? The shortest chain?

Durer's magic square

What to do…

1. Copy the square below.
2. Somehow you have to fit each of the numbers 2-9 on the square in such a way that:
   - Every row adds to 34
   - Every column adds to 34
   - Each diagonal adds to 34
   - The four central squares add to 34

16			13
	10	11	
			12
	15	14	1

3. When you have succeeded in this (!), try adding the four corner squares.
4. What about the sum of the four squares making up each corner of the square?
5. Finally try adding the pairs of adjacent (next-door) numbers in each row!

Remainder Scores

What to do…

1. Use six mixed 2p and 1p coins placed in a mug
2. Tip these out of the mug.
3. Add up the coins that land heads up, e.g. 2p + 2p + 1p = 5p.
4. Choose a number from one of the circles below.

5. Divide this by the amount in heads, e.g. 124 ÷ 5 = …
6. Score the remainder
7. Repeat this six more times and then add up all the remainder scores.

Internet maths games:

www.mathszone.co.uk
http://www.bbc.co.uk/bitesize/ks1/maths/
http://www.familylearning.org.uk/online_math_games.html
www.sesamestreet.org