

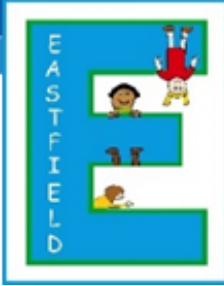
Short Multiplication in Year 5





Purpose

- Homework
- Zones of Regulation / Check in
- Understand how to use short multiplication
- Partake in a short multiplication session with your child.
- Improve your own subject knowledge.



Homework



Core Homework Year 5 - Spring Term 1 Core Reading at home

- All children will be expected to read their home reading books for 10-15 minutes daily with an adult or older sibling at home.
- Their home reading books will be changed weekly (every Friday).
- Every child will have a Reading book and a Reading Record book. Please date and sign the Reading Record books when an adult or older sibling has read with the child. (Home reading records need to be signed by an adult to confirm books have been read before a new one will be issued).
- Reading books and Reading record books are to be kept in your child's book bag and brought to school every Thursday.
- When your child has read to you, it is important that you ask them some questions to see if they have understood the text.

How?

Read a novel piece with no annotations.
Read all annotations, notes, comparisons and tasks. Take time to look at each page. You don't need to read every page or every word every word right. It is ok for both of you to make mistakes. Let them know you are doing it. This helps them see for meaning and to think about what they are happening on the page.
Don't forget to write if you find something interesting by putting a star, drawing, making a note, drawing and adding to an annotation column - these things make children giggle!

Ask questions when you are reading
Remember for yourself or your partner:
• How do you think the characters feel?
• What do you think is going to happen next?
When you have finished, talk about how your child feels about the book.
• What did they think?
• What did they like?
• What don't they like?
• What was their favourite character?
• Why?
• Link the story to their own experiences. (Can they remember when they did something similar?)
• What was the scariest part?
• Most importantly, have fun!



Spellings

- Your child will have a set of spellings to learn each week, they will be test on these every Friday.
- Test your child on all the spellings issued. Get your child to practise the spellings that they got wrong using look, cover, write and check for 2-3 spellings each day.

advance	assist	assist
apologise	assist	assist
beneficial	assist	assist
begin	assist	assist
city	assist	assist
prepare	assist	assist
generous	assist	assist
participate	assist	assist
locate	assist	assist
identify	assist	assist
immediately	assist	assist
individual	assist	assist
interact	assist	assist
language	assist	assist
leave	assist	assist
lightning	assist	assist
marvellous	assist	assist
maximum	assist	assist

Core Maths at home Number, Place Value, Multiplication and Division

- I use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
- I can establish whether a number up to 100 is prime and recall prime numbers up to 19.
- I recognise and use square numbers and cube numbers, and the notation for squared and cubed.
- I can multiply and divide numbers mentally drawing on known facts.
- I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- I can multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, including multiplication for two-digit numbers.
- I can divide numbers up to 4 digits by a 1-digit number using the formal written method of short division remainders appropriately for the context.

Complete the activities below based on factors, squared and cubed numbers.

Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³).

Square Numbers
The product of a number multiplied by itself.
Can be illustrated as a square, e.g.

$$2^2 = 2 \text{ squared} = 2 \times 2 = 4$$



A. Complete the table.

1 ²	1 × 1	1
2 ²		4
3 ²	3 × 3	16
5 ²		
	7 × 7	36
8 ²		
10 ²		100

Cube Numbers
The product of multiplying a digit by itself three times.
Can be illustrated as a cube, e.g.

$$2^3 = 2 \text{ cubed} = 2 \times 2 \times 2 = 8$$



B. Complete the table.

1 ³	1 × 1 × 1	1
2 ³	2 × 2 × 2	
3 ³		27
	4 × 4 × 4	64
5 ³	5 × 5 × 5	
6 ³	6 × 6 × 6	
		343
8 ³		512
	9 × 9 × 9	729
10 ³		

To find the **factors** of a number, you need to find all the pairs of numbers that multiply together to make a **product**.

$$2 \times 5 = 10$$

2 and 5 are **factors**. 10 is the **product**.

Fill in the missing factors for these products:

20	○ ○ ○ ○ ○ ○ ○ ○
27	○ ○ ○ ○ ○ ○ ○ ○
12	○ ○ ○ ○ ○ ○ ○ ○
15	○ ○ ○ ○ ○ ○ ○ ○
11	○ ○ ○ ○ ○ ○ ○ ○

What are common factors?

Factors are numbers that divide exactly into a number. They are the multiplication "facts" of the number.

A **common factor** is a factor that is shared by two or more numbers.

The number 1 will be a common factor for every single number!

- List all the factors of 30. _____
- List all the factors of 48. _____
- What are the common factors of 30 and 48? _____
- What is the highest common factor of 30 and 48? _____
- Find the highest common factor of each of the following pairs of numbers.
 - 12 and 20

 - 72 and 27



Family Homework Year 5 Spring Term 1

Family Homework invites the children, siblings and parents/carers to spend time together, collaborating and having fun when completing the tasks set. Complete as many of the tasks together as you wish to. You can choose when you do the homework and how this could look so there is flexibility built in to fit in with your family routines.

Geography - Create your own model of the ocean or the beach. You may want to include trash & rubbish left within the ocean/beach to show the current issues we have.



History - Research who is currently on the £5, £10, £20 and £50 notes. Complete some of the following tasks:

- Draw each note to show who is on them.
- Write sentences about who these people are.
- Create a fact file for one of the people on the notes.
- Create your own note with a new person you think should be on it.



RE

Create your own 5 pillars of Islam. The Five Pillars are the core beliefs and practices of Islam. What are your core beliefs?



Art and Design

Create a 3D collage (decoupage). This is where an object is decorated by gluing paper, cards or images onto it. Sometimes, other decorations may be added like paint or gold leaf.



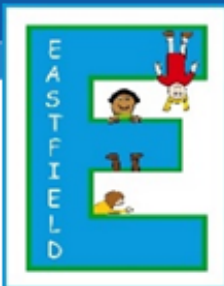
Science

Create a model of the solar system or the planets. This could be 3D or 2D. If it is 2D, you could include facts about each planet.



PSHE - Create a poster to show what we should do when being cyberbullied.

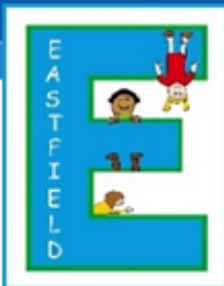




The majority of us, including children, find it hard to manage strong emotions such as worry, angry, restlessness or tiredness.



These high energy feelings stops us from getting on with our day effectively. Children who feel these emotions find it hard to learn and concentrate in school. So...



We teach your children the Zones of Regulation curriculum which helps children to manage difficult emotions. This is known as self regulation.

It teaches children strategies to help them identify their emotions and cope with these feelings, so they can get back to feeling calm and ready to learn.





We explore the four Zones of Regulation and how they are used to categorise and identify a variety of feelings and energy states we all experience. Here they are:

Some feelings in the BLUE ZONE	Some feelings in the GREEN ZONE	Some feelings in the YELLOW ZONE	Some feelings in the RED ZONE
Bored Hurt	Calm Happy	Frustrated Worried	Overjoyed Wild
Sick Tired	Okay Focused	Energetic Silly	Angry Out of Control
Exhausted Sad	Proud Relaxed	Excited Annoyed	Terrified Furious
Low levels of energy and down feelings	Calm energy and a sense of control	Higher energy and stronger feelings	Extremely high energy and strongest feelings



It provides us with an easy way to think about communicate around, and care for our feelings. The four Zones are used to establish a common language that all adults and children will use throughout the curriculum and daily life. Since every person experiences a wide range of feelings, we stress that ALL zones are okay, and you should not attach judgement or shame to any one Zone.





Here is how you can help your child use Zones of Regulation at home:

- ✓ Model and identify your own feelings using Zones language in front of your child (e.g.: "I'm frustrated. I think I am in the Yellow Zone.")
- ✓ Observe your child's behaviour and try to use strategies when they are showing signs of being in the yellow/blue zone, to catch it before they move to the red zone.
- ✓ Practice calming strategies when your child is in the green zone. This may include doing some deep breathing/meditation/heavy work and sensory activities throughout their day.
- ✓ Talk about what tool you will use to be in the appropriate Zone (e.g.: "I need to take four deep breaths to help get me back to the Green Zone.")
- ✓ At times, wonder which Zone your child is in. Or, discuss which Zone a character in a film / book might be in. (e.g.: "You look sleepy. Are you in the Blue Zone?")
- ✓ Share how their behaviour is affecting your Zone. For example, if they are in the Green Zone, you could comment that their behaviour is also helping you feel happy/ go into the Green Zone.
- ✓ Put up and reference the Zones visuals and tools (see links at the end for free resources) in your home to consistently refer to and check in regularly with this
- ✓ Praise and encourage your child when they share which Zone they are in.
- ✓ Develop your child's own zones of regulation tool box – using the exercises above
- ✓ Have easy access to calming/sensory equipment at home
- ✓ Remember to monitor your language: o usually less is best (minimal in the red zone)





Tips for helping your child to regulate

- Know yourself and how you react in difficult situations before dealing with your child's behaviours.
- Know your child's sensory threshold. We all process sensory information differently and it impacts our reactivity to situations.
- Know your child's triggers or sparks.
- Be consistent in managing your child's behaviour and use the same language you use at home.
- Empathise with your child and validate what they are feeling.
- Have clear boundaries/routines and always follow through.
- Do not deal with an angry, upset child when you are not yet calm yourself.
- Discuss strategies for the next time when you are in a similar situation.
- Remember to ask your child how their choices made you feel (empathy).
- Praise your child for using strategies. Encourage your child to take a sensory break to help regulate their bodies.
- Create a 'calm' box or 'sensory box' full of things which help to keep your child calm and alert.



STOP, OPT & GO





In the morning, after break and lunch the whole class, adults included complete a Zones check in. Let's do one together...

Some feelings in the BLUE ZONE	Some feelings in the GREEN ZONE	Some feelings in the YELLOW ZONE	Some feelings in the RED ZONE
 	 	 	 
 	 	 	 
 	 	 	 
Low levels of energy and down feelings	Calm energy and a sense of control	Higher energy and stronger feelings	Extremely high energy and strongest feelings

© 2014 Zones of Regulation, Inc.



Everyone pause, listen to your body signals, how does it feel? What is it telling you?



1. Put your hands on your **heart**, how fast or slow is it beating?



2. Put your hands on your tummy, how you **breathing**, is it quick, short breaths or slow deep ones?



3. What is your **energy** level, is it slow and tired or high and energetic?



4. Is your **movement** still, fidgety or comfortable?



5. Is your **mind** racing, foggy, or focused?

Our body signals tell us how we are feeling.

What did your body tell you ?

My heart is beating quickly, my breathing is getting faster and I am quite fidgety.

I feel anxious

I feel



We connect situation, body signals and emotions to our Zones for regulation:

My heart is beating quickly, my breathing is getting faster and I am quite fidgety, I feel anxious.

I'm in the Yellow Zone

I'm in the



Learning session



Your child has:

- 1 hour maths lesson everyday
- Mastering number session every day for 15 minutes, which focuses on multiplication and division.
- Fluency session every day for 15 minutes, which is where they recap all four operations / fill gaps in learning.



Number - multiplication and division

Pupils should be taught to:

- identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers
- know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
- establish whether a number up to 100 is prime and recall prime numbers up to 19
- multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- multiply and divide numbers mentally, drawing upon known facts
- divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000
- recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)
- solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes
- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
- solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Statutory guidance

National curriculum in England: mathematics programmes of study

Updated 28 September 2021



What is column method?

When do you use column method?





$$213 \times 3$$

$$\begin{array}{r} 3 \times 3 \\ \downarrow \\ 213 \\ \times \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3 \times 10 \\ \downarrow \\ 213 \\ \times \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3 \times 200 \\ \downarrow \\ 213 \\ \times \quad 3 \\ \hline \\ \hline \end{array}$$

Short multiplication with no regrouping

$$\begin{array}{r} 213 \\ \times \quad 3 \\ \hline 639 \\ \hline 213 \times 3 = 639 \end{array}$$



$$172 \times 5$$

$$\begin{array}{r} 5 \times 2 \\ \downarrow \\ 172 \\ \times \quad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5 \times 70 \\ \downarrow \\ 172 \\ \times \quad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5 \times 100 \\ \downarrow \\ 172 \\ \times \quad 5 \\ \hline \\ \hline \end{array}$$

Short multiplication with regrouping

$$\begin{array}{r} 172 \\ \times \quad 5 \\ \hline 860 \\ \hline \end{array}$$

$$172 \times 5 = 860$$



You are now going to use the short multiplication method for the following calculations:

1. $645 \times 3 =$

2. $341 \times 2 =$

3. $1623 \times 4 =$

4. $265 \times 3 =$

5. $8352 \times 2 =$

6. $4152 \times 5 =$



Check your answers!

1. $645 \times 3 = 1935$

2. $341 \times 2 = 682$

3. $1623 \times 4 = 6492$

4. $265 \times 3 = 795$

5. $8342 \times 2 = 16,684$

6. $4152 \times 5 = 20,760$



Any questions?

