Home Learning Pack
Science Week
Year 5
Spring Week 10

Home Learning Links

Oak National Academy
Oak National Academy is an online classroom and resource hub. It provides high-quality video lessons and resources to support teachers, parents and pupils.
www.thenational.academy

BBC Bitesize
With BBC Bitesize it is easy to keep learning at home. You can access regular daily lessons in English, maths and other core subjects.
https://www.bbc.co.uk/bitesize

World Book Online
World Book online have just made their fabulous collection of over 3,000 e-books and audiobooks available for free for children to access at home. They have books suitable for all ages. Click on the following link to access them.
https://worldbook.kitaboo.com/reader/worldbook/index.html?usertoken=Mjk5MzQ6MTpJUjA5MjAxNjoy OmNsaWVudDE2OTc6MTY5NzoyMjE2Mjg4OjE6MTU4NDM4MDExMzA2Mjp1cw%3D%3D

Read Works.org
Read Works offers access to 3000+ comprehension for all age groups. Just sign up for a free account to access fantastic texts.
https://www.readworks.org/

Tutortastic
An online platform with tutorials and videos for home learning.
https://www.tutortastic.co.uk/blog/homelearning

Education Quizzes
A series of short quizzes for children to complete related to the National Curriculum subjects. Just select KS1 for Reception, Year 1 & Year 2 and select KS2 for Years 3-6.
https://www.educationquizzes.com/ks1/

Top Marks
A range of activities here but especially good interactive activities for maths.
https://www.topmarks.co.uk/

Classroom Secrets
Classroom Secrets Kids is offering free access to everyone until the end of April 2020. The platform is aimed at primary aged children and covers subjects such as maths, reading, grammar and spelling. The platform is really child-friendly so that they're able to access it on their own. There are a load of games and interactive activities from phonics to SATs
https://kids.classroomsecrets.co.uk/

National Geographic
National Geographic is a great platform for learning and it's totally free. There are online games, resources and competitions, too.
https://www.natgeokids.com/uk/teacher-category/primary-resources/

Reading Eggspress
Reading Eggspress has lots of reading activities including comprehension and retrieval questions to have a go at. Your child's Username and Password should be written in his Homework Book.

We have been learning about division this week, mostly looking in-depth at partitioning and we will transition into using the short method for division. Here are some great maths games to play on Laptops or iPads.
https://www.topmarks.co.uk/Search.aspx?q=division

Times Tables Rockstars
This is a great times tables game, practice all of the tables up to 12 x 12. Log- in should be in Homework book/ Reading diary.
https://ttrockstars.com/

Handwriting

Please spend time each day practising the 'al' join as modelled below.

Remember:

• To hold your pencil/pen correctly.

• To sit on a chair and a desk with a straight back whilst practising your handwriting.

Practise writing the following lines, ensuring that all joins within the words are carefully followed.

ible

ibly

incredible

incredibly

possible

What is Direct speech?

Direct speech is when the exact words that have been said by a person are written down inside inverted commas.

- Inverted commas (speech marks) go before and after direct speech. They surround what was said by the speaker. For example:

"I'm pleased to have raised so much money," said Captain Tom.

Today you will take part in a news conference. Listen carefully and ask appropriate questions in order to form the basis of a report.

1. Using the 6 cards, label them: Who, What, When, Where, Why and How

2. During each interview, attempt to identify:
WHO
WHAT
WHEN
WHERE
WHY
HOW

3. Write down a quote, identify main characters and list key words.

As a class, decide on the most accurate answer to each question:

Barnacle Bill:

- Who:
- What:
- When:
- Where:
- Why:
- How:

Quote from the witness:

As a class, decide on the most accurate answer to each question:

Eddie:

- Who:
- What:
- When:
- Where:
- Why:
- How:

Quote from the witness:

Monday Maths

1 What is 42 x 10?

2 What is 42 x 5?

3 What are the factors of 30?

4 What are the multiples of 6?

<u>Misconception:</u> Helen says that the lowest common multiple of 4 and 12 is 48. Is she correct? Explain your answer.

23 x 10 = 230

How can we use 23 × 10 = 230 to find the answer to 23 × 5?

We can multiply numbers by 5 by **multiplying by 10,** then halving.

23 x 5 = 115

What do we already know? How does that help?

We can **double the** answer to 23 x 10.

23 x 20 = 460

23 x 19 = 437

What do we know? How does that help?

We can **subtract 23 from** the answer to 23 x 20.

Choose four other 2-digit numbers to multiply by 5 and 20, using the strategy of multiplying by 10 then either halving or doubling.

23 x 10 = 230

How can we use 23 × 10 = 230 to find the answer to 23 × 5?

We can multiply numbers by 5 by **multiplying by 10,** then halving.

23 x 5 = 115

What do we already know? How does that help?

We can **double the** answer to 23 x 10.

23 x 20 = 460

23 x 19 = 437

What do we know? How does that help?

We can **subtract 23 from** the answer to 23 x 20.

Choose four other 2-digit numbers to multiply by 5 and 20, using the strategy of multiplying by 10 then either halving or doubling.

Discuss how you would work out 23 × 4.

Doubling twice
Double 23 , then double the answer.

Partitioning
(20 x 4) + (3 x 4)

Try both methods. We'll vote for which you preferred.

Discuss how you would work out 23 × 8.

Doubling three times
Double 23 , double the answer, then double again.

Partitioning
(20 x 8) + (3 x 8)

Try both. Vote for your preference...

Work out 23 x 3.

$23 \times 6 = 138$

How can we use 23 × 3 = 69 to work out the answer to 23 × 6? **?**

One way to multiply a number by 6 is to multiply by 3, and then by 2.

We are using a pair of factors of 6.

Now use this strategy to multiply 25, 53 and 17 by 6.

Also multiply each of these numbers by 6 using partitioning, e.g. (20 × 6) + (5 × 6).

Which method did *you* prefer for each number? **?**

True or false?
- There are exactly four, 2-digit, common multiples of 3 and 7.
- 4 and 5 are common factors of all 2-digit multiples of 10.
- 15 is a factor of 100.

_____

If 350 ÷ 5 is 70, calculate 350 ÷ 10, 350 ÷ 20 and 350 ÷ 70.
So, can you have a try at 350 ÷ 2.5?

_____

Using mental strategies to multiply
Sheet 2

1. Solve these:
   36 × 10   36 × 2   36 × 3

2. Use your answers from question 1 to easily solve:
   36 × 5   36 × 20   36 × 4   36 × 8   36 × 6

3. Use similar strategies to solve the following:

   76 × 5

   64 × 20

   53 × 6

   82 × 4

   37 × 8

   153 × 5

   240 × 20

   In each case note down what you did to find the answer,
   e.g. 'Multiplied by 10 and then doubled'.

4. Does 24 x 30 give the same answer as 34 x 20?
   Make a prediction. Use mental strategies to solve each
   multiplication and test your prediction.

Challenge

Can you find a strategy for quickly solving these:
36 × 50   36 × 200   36 × 60
(Hint! Look at what you already know.)

Monday Science

Research the parts of a flower and label the diagram below.
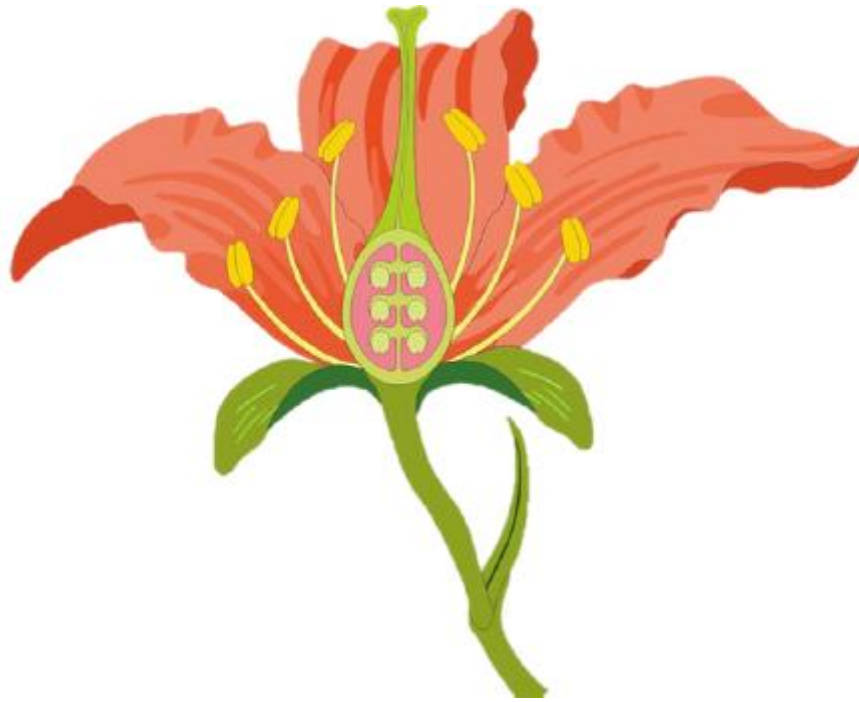
If you can get a lily – try and dissect it as below:

Carefully dissect your flower and examine each part using a magnifier.
Arrange each dissected part separately on your large strip of paper and
label them to make a poster for the working wall.

While you are working, discuss the parts you are labelling and how
they are involved in pollination and fertilisation.

1. Convert your direct speech into indirect speech.

For example:

Direct speech - "I taught them everything I knew" said Barnacle Bill

Indirect speech - When interviewed, Barnacle Bill reported that he had taught the family everything he knew.

2. Write down the reported quotes in your English books.

Newspaper Article

- **We are going to be writing a newspaper article about the events in 'Kensuke's Kingdom'.**

We will need to focus on the:
- **Orientation**
- **The main body - the why and the how**
- **Re-orientation**

Orientation:

Who

What

When

Where

Main body of text:

Why

How

Re-orientation:

Summary

Link to present/now

Things to include

Headline
paragraphs
rhetorical questions
humour
alliteration
formal language
past tense (except re-orientation)
quotes
pictures/photos with captions.

Let's share key features of a newspaper article using powerpoint

Write down as many things about your orientation topic that you can remember from 'Kensuke's Kingdom'.

Planning your orientation

Orientation structure

- 1 sentence that includes the who, what, where and when.
- Then expand on these pieces of information.

How to plan your orientation:

- Use the cut out squares.
- Use bullet points.
- Do NOT write in full sentences.
- Note down ideas of what you want to include about the who, what, where and when.

Time to think of a Headline for your Newspaper Article

Headline

Your headline needs to be...
- **Short and snappy**
- **Use alliteration**
- **Be based on the events of 'Kensuke's Kingdom'**

Tuesday Maths

1 What is 320 ÷ 10?

2 What is 320 ÷ 5?

3 How many 8s are in 64?

4 What is 54 ÷ 6?

Misconception: Marleen says that the bus stop method is the only way to find out the answer to division questions. Is she correct?

Use mental strategies to divide by 5, 20, 6, 4 and 8.

$240 \div 10 = 24$

$240 \div 5 = 48$

How can we use 240 ÷ 10 = 24 to work out the answer to 240 ÷ 5? **?**

We can divide numbers by 5 by **dividing by 10**, and then **doubling**.

$240 \div 20 = 12$

How can we use 240 ÷ 10 = 24 to work out the answer to 240 ÷ 20? **?**

We can **halve** the answer to 240 ÷ 10. If a number is split into bigger groups, there will be fewer groups, so dividing by a bigger number gives a smaller answer.

Work out 270 ÷ 3.
Hint: use the tables fact 27 ÷ 3.

270 ÷ 6 =

How can we use 270 ÷ 3 = 90 to work out the answer to 270 ÷ 6? **?**

We need to **halve** the answer to 270 ÷ 3.

Use this strategy to find 450 ÷ 3 then 450 ÷ 6.

Work out 280 ÷ 4.
Hint: halve twice, or use a tables fact.

280 ÷ 8 =

How can we use 280 ÷ 4 = 70 to work out the answer to 280 ÷ 8? **?**

We need to **halve** the answer to 280 ÷ 4.

Use this strategy to find 128 ÷ 4, then 124 ÷ 8.
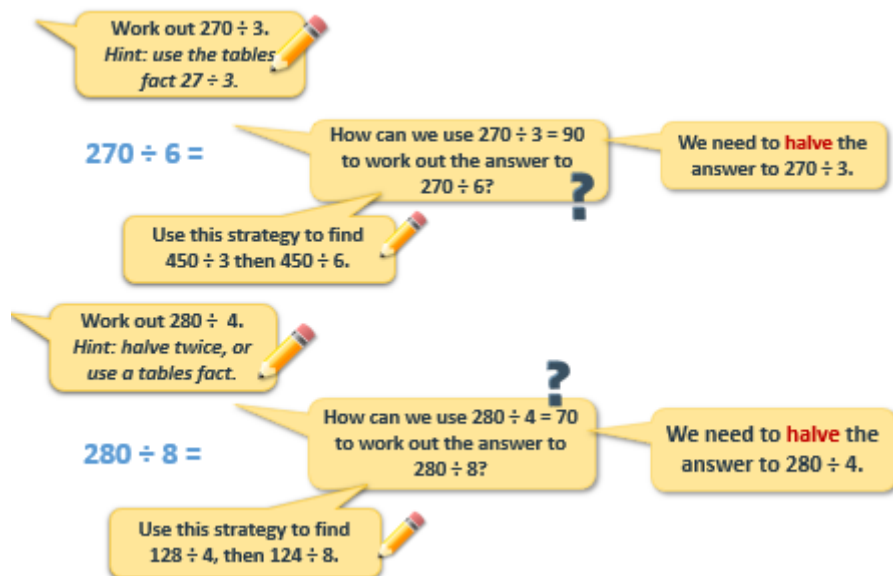
Mental strategies for division
Sheet 1

1.	360 ÷ 10	360 ÷ 20	360 ÷ 5
2.	180 ÷ 10	180 ÷ 20	180 ÷ 5
3.	420 ÷ 10	420 ÷ 20	420 ÷ 5
4.	540 ÷ 10	540 ÷ 20	540 ÷ 5
5.	150 ÷ 3	150 ÷ 6	
6.	210 ÷ 3	210 ÷ 6	
7.	450 ÷ 3	450 ÷ 6	
8.	200 ÷ 2	200 ÷ 4	200 ÷ 8
9.	288 ÷ 2	288 ÷ 4	288 ÷ 8
10.	216 ÷ 2	216 ÷ 4	216 ÷ 8

Problem solving and reasoning questions

Is the lowest common multiple of 6 and 4 smaller than the highest common factor of 30 and 45?

- Write common factors of 24 and 48.

- Write common multiples of 3 and 5 up to 60.

- Are any numbers in both sets?

True or false?

- There are exactly four, 2-digit, common multiples of 3 and 7.
- 4 and 5 are common factors of all 2-digit multiples of 10.
- 15 is a factor of 100.

If 350 ÷ 5 is 70, calculate 350 ÷ 10, 350 ÷ 20 and 350 ÷ 70.

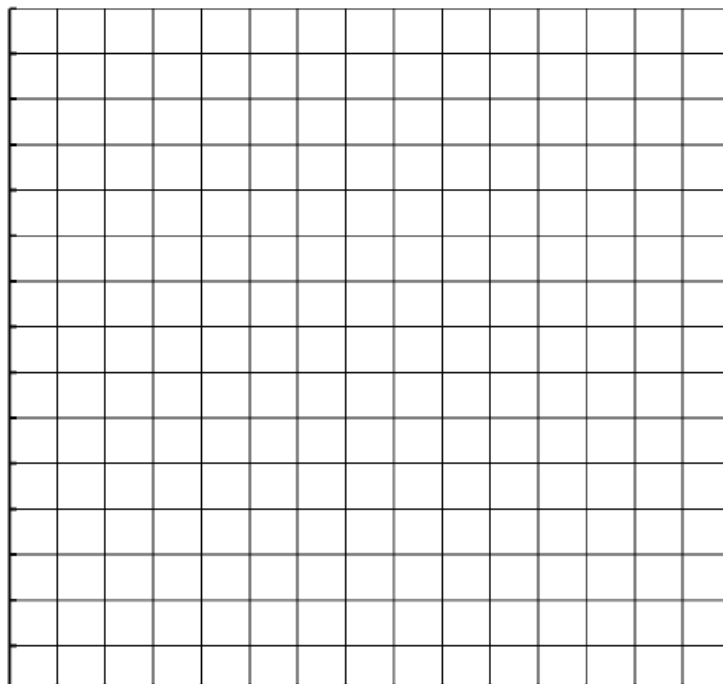So, can you have a try at 350 ÷ 2.5?

Tuesday Science and DT

Use the instructions below to create a seedling pot to grow a seed in.
Watch the video to learn about the conditions carrots need to grow.
https://www.youtube.com/watch?v=mRdavbBf2Gs
We are going to monitor the height of our plants to check our crops are developing healthily.

Graph title_____

ORIGAMI NEWSPAPER SEEDLING POTS

First: using a double page newspaper sheet, cut in half down the center. Fold in half, and cut again to make 4 squares. Then take one square (above) and fold diagonally to mark center point. Fold each corner so the points meet the center. *Repeat process again.*

Fold up and divide into thirds evenly, making crisp creases. Unfold, and do this again in the other direction. When unfolded, the fold lines will resemble a tic-tac-toe grid.

Open one point of the square. Take the upper left corner and fold it straight across to meet the fold line half way. Then take the upper right corner and do the same. Fold the upper tab down into the center of the pot, and tuck the point in.

Do the same thing on the opposite side, and the pot is complete. Fill pot two-thirds with soil, in preparation for planting.

Wednesday Maths

1 Partition this number

2549

2 Partition this number

473

3 What is 3200 x 3? Use grid method.

x	3000	200	=
3			

4 What is 7931 x 5? Use grid method

Misconception:
Rodney says that 8765 partitioned is 8000 700 600 5. Is he correct? Explain your answer.

Day 1: Use short multiplication to multiply 4-digit by 1-digit numbers; Use rounding to approximate.

Use the **grid method** or **short multiplication** to calculate 3 × 235.

×	200	30	5	
3	600	90	15	705

```
  2 3 5
x     3
  1 1
  -----
  7 0 5
```

Day 1: Use short multiplication to multiply 4-digit by 1-digit numbers; Use rounding to approximate.

3 × 4235

Discuss, in pairs, how you might find the answer.

×	4000	200	30	5	
3	12,000	600	90	15	12,705

Add the four numbers.

We need an extra column!

```
  4 2 3 5
×       3
    1 1
  -------
1 2 7 0 5
```

Multiply the 1s first, then the 10s, then the 100s, then the 1000s. Remember to leave a line for any 'carry' digits during addition.

Multiplication

Agree a range for each answer with a partner.
Use a written method to find the answers, unless you see one you can work out mentally!

1. 3 × 3421   2. 4 × 4923   3. 7 × 4235   4. 5 × 6748

5. 5156 × 6   6. 2021 × 4   7. 8267 × 5   8. 4278 × 8

Does 2340 x 8 give the same answer as 4320 x 4?
Explain how you are certain that your answer is correct.

_____

Choose a strategy for each of these three multiplications.
Explain why it is not sensible to use the same method for all three.

(i) 340 x 5 =

(ii) 421 x 7 =

(iii) 350 x 9 =

_____

Wednesday English

What do you need to identify?

Headline

Orientation:

Who

What

When

Where

Here's mine:

In a dramatic series of events last night, a young boy fell overboard from his family's boat into the stormy water of the Coral Sea (off the east coast of Australia).

Michael Finnegan (12 years old today) was enjoying a round-the-world trip with his family when it is believed he lost his footing and fell into the sea.

Wednesday Science and PDW

THE EATWELL PLATE

A guide to the right balance of the five main food groups

- Fruit & Veg
- Carbs & Starches
- Dairy
- Protein
- Sugars & Fats

Why do we need these things in our diet?

Protein	
Carbohydrates (starchy foods)	
Dairy	
Fruit and Vegetables	
Foods high in sugar and fat	

Why can it be difficult to have a healthy diet?

reason 1

reason 2

reason 3

Why is a smoothie a great way to get your 5 a day?

Thursday Maths

1	What is 439 x 6? Use grid method.	**2**	Partition 7699.
3	Which number is closer to 20,000? • 19,231 • 17,999 • 19,132	**4**	What is 7458 x 4? Use short multiplication.

Misconception:
Dereck says that 6543 is closer to 6000 than 5721. Is he correct? Explain your answer.

Day 2: Use short multiplication to multiply 4-digit by 1-digit numbers.

2137 × 6

Talk to a partner. What might be a good estimate for this product? Be ready to explain your reasoning.

Now use short multiplication or the grid method to find the exact answer.
Check against your estimate.

×	2000	100	30	7	
6	12,000	600	180	42	12,822

```
    2 1 3 7
  ×       6
  _____
        2 4
  1 2 8 2 2
```

Did *you* remember to leave a line for the 'carry' digits?

7×6423

Talk to a partner. What might be a good estimate for this product? Be ready to explain your reasoning.

Now use short multiplication or the grid method to find the exact answer. Check against your estimate.

×	6000	400	20	3	
7	42,000	2800	140	21	44,961

```
    6 4 2 3
  ×       7
  ─────────
    2 1 2
  4 4 9 6 1
```

Did you remember to leave a line?

Multiplication Challenge
Sheet 2

Estimate before doing the calculations!

1. Which of these gives the closest answer to 20,000?

   a) 4361×5 b) 7036×3 c) 2973×6

2. Which of these gives the closest answer to 40,000?

   a) 9892×4 b) 8051×5 c) 5754×7

3. Which of these gives the closest answer to 60,000?

   a) 9451×7 b) 7444×8 c) 7023×9

4. Which of these gives an answer between 25,000 and 30,000?

   a) 5137×6 b) 6205×4 c) 3629×8

☐☐☐☐ x ☐

Using the digits 3, 5, 6, 7 and 9, how close can you get to 20,000?

Thursday English

Here's mine:

The Finnegan family set sail from Southampton on September 10th 1987 in their small boat, the Peggy Sue. Travelling with Michael were his mother (Sue) and his father (John), as well as the family pet dog, Stella. So far on their journey, they have visited Spain, Cape Verde, Brazil, Cape Town, Perth and Sydney. John, whose idea it was to set off on the trip, said that the journey was the trip of a lifetime and that so far it had been an amazing adventure.

According to the Finnegans, the evening of the incident had been largely uneventful, although Mrs Finnegan had been taken ill with stomach cramps. John and Sue went to bed at around 10pm on the night of the incident, leaving Michael steering the boat on deck (the self-steering had broken). It is thought that Stella the dog had been wandering around and possibly playing with Michael's football, because when John awoke in the middle of the night, all three had disappeared.

Speaking to BBC news this morning, Sue, Michael's mother reported that the family are so worried about the boy. He's all alone and could be anywhere by now. And that they need to find him.

1. You must have finished your orientation.

2. Write the main body of the article.
   - Why
   - How

3. Your main body must include:
   - reported speech
   - additonal information in brackets
   - formal, 3rd person.

Re-growing spring onions

Step 1: Cut the root ends off some spring onions

Step 2: Place them in a shallow bowl of water

Step 3: Replace the water every day and watch your new onions grow!

- Research some methods of plant propagation that we have not discussed yet.
- Use your research to write a 'How to' gardeners' guide to help new gardeners get started on growing their own ingredients without seeds.
- Remember to use all the features of instruction texts and illustrate each step of your methods.
- You might like to present your guide as mini-booklet, leaflet, power point or video.

Thursday Science and PDW

Working within a budget

Your business group has a budget of £1 per group member.

You will use this to buy the ingredients you need to add to the produce you are growing in order to make your food product.

If you do not have enough money in your budget for the ingredients you plan to use, you will need to adapt your ideas to stay within your budget.

You will be using an online shopping website to find the cost of your ingredients. Remember to keep a total of how much your ingredients are going to cost- what method will you need to calculate this?

To make the most of your budget, make sure you look for good deals on your ingredients and think about the quantity of ingredients you need for your recipe.

Ingredients Shopping List:

Ingredient	Quantity (ml/g)	Price

Remember to check your working out. Accurate calculating will help you to stay within your budget.

Friday Maths

1 Partition 2984.

2 What is 3768 x 8? Use grid or short multiplication

3 Partition £34.45

4 What is 521 x 4?

Misconception:

Trotter says that £79.45 partitioned is £70 45p. Is he correct? Explain your answer.

3 5 7 8

Use these four digits in any order you like to make a 4-digit number. Multiply your number by 7, making an estimate first, then choose short multiplication or the grid method to find the exact answer.

Day 3: Use short multiplication to multiply 4-digit numbers (including amounts of money) by 1-digit numbers.

A shop sells 6 hoodies, each priced £25.79.
We are going to find the total amount.

6 x £25.79

×	£20	£5	70p	9p	
6	£120	£30	£4.20	54p	£154.74

6 x 70p = £4.20

Add the pounds, then the pence.

£ 2 5.7 9
×   6
   3 4 5
£ 1 5 4.74

Take special care with place value when multiplying with money. It is particularly helpful to estimate first...

(6 x 70p) + 50p = £4.70

Multiplying money
Sheet 1

Trainers	Tennis racket	Football	Sports bag	Tracksuit
£46.55	£24.60	£31.66	£19.49	£38.75

1. Which of these would cost more than £200? Estimate each then work out the costs.

    a) 5 pairs of trainers
    b) 4 tracksuits
    c) 7 footballs
    d) 8 sports bags
    e) 7 tennis rackets

2. Which do you think would cost more?
   Estimate each then work out the costs.

    a) 6 pairs of trainers or 7 tracksuits?
    b) 9 sports bags or 6 footballs?
    c) 6 tennis rackets, 4 tracksuits or 3 pairs of trainers?

Problem solving and reasoning questions

Does 2340 x 8 give the same answer as 4320 x 4?

Explain how you are certain that your answer is correct.

Choose a strategy for each of these three multiplications.

Explain why it is not sensible to use the same method for all three.

(i)   340 x 5 =

(ii)   421 x 7 =

(iii) 350 x 9 =

                    x

Using the digits 3, 5, 6, 7 and 9 once each, how close can you get to 20,000?

Reorientation:

bring the story up to date

Here's Mine:

The search for Michael is underway, with police and coastguards scouring the area in the hope of finding him safe and well. Michael's parents have been on contact with authorities in Austrailia, New Zealand and Fiji. They encouage anyone who may have had contact with Michael to get in touch with them immediately.

1. Finish the main body of your newspaper report.

2. Write your reorientation
   - bring the story up to date
   - 2-3 sentences

3. Publish your newspaper report in best using the newspaper template.

Friday Science and DT

After creating your recipe based on healthy food choices, make your smoothie.

Evaluation

What are the strengths of your smoothie?

Would you make any changes to your smoothie if you made it again?

Was it easy or difficult to make? Why/Why not?

Friday Science and Art

Design your packaging:

330ml℮