

# **A Quick Guide to Wise Owl Maths for Children & Parents**



**Welcome to Maths Investigations!**

**Rob Porteous**

# What is Maths Investigations?

- Maths Investigations is an amazing web site which helps **you** learn all about Maths yourself and shows your **parents** how to help you at home.



- Your **teachers** can use it in class too.



- Here's what some other children have said about it:

***"It is cool, it is awesome, it is brilliant"***

***"The best website ever"***

***"Has completely helped me develop on my maths skills"***



- As you do the activities, you get to collect lots of things!

# Logging In

- To get started, you first have to log in.
- Go to [www.mathsinvestigations.com](http://www.mathsinvestigations.com) and click the 'Login' button.
- Type your username and password.

Login

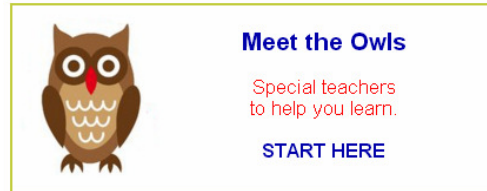


A screenshot of the login page for Math Investigations. The page has a white background with a yellow border. At the top center, the word "Login" is written in blue. Below it, on the left, are two input fields: "Username:" and "Password:". Below the "Password:" field is a small "Enter" button. To the right of the input fields is a cartoon bee character with yellow and black stripes, wearing a small yellow bag. At the bottom of the page, there is a link that says "No login? Sign up for a free trial!"

- And click 'Enter'.
- Now click on Children.










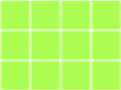
# The Owls



- Now, click on 'Meet the Owls' and scroll down a bit.

**WISE OWLS**

We are the wise owls. Each of us will teach you different things. Choose who you would like to learn with.

 Bod Join this group	<p>Bod knows all about numbers to 10. You will learn to count forwards and backwards, add 1 and 2, find out about odds and evens, and investigate the numbers that add to make ten.</p>  <p>You will need 10 counters.</p>
 Teeny Join this group	<p>Teeny gets her name from the teens numbers. You will practise counting in 1s and 2s, find out all about the teens numbers and investigate the numbers that add to make 20. Teeny will also help you learn about addition triangles and missing number problems.</p>  <p>You will need 10 counters of one colour and 10 counters of another colour.</p>
 Didgie Join this group	<p>Didgie will help you learn how to add and subtract any single digit numbers.</p>  <p>She will make sure you know your important number facts and show you how to use them to work out other facts: near teens, near tens and near doubles.</p> <p>You will also learn more about adding and subtracting with odds and evens.</p>
 Mully Join this group	<p>Mully will help you to explore the tens numbers, teach you how multiplication works and introduce you to factors of 10 and 20. You will also learn your 10x, 2x and 5x tables.</p>  <p>You will need counters or cubes and tens rods. A metre stick would also be useful.</p>

- The owls are like a set of special teachers to help you learn maths.

Each owl is in charge of a different level.

# Bod and Teeny



- Bod is really easy Maths,  
all about numbers to 10.



- Teeny is all about numbers to 20:  
the teens numbers;  
knowing things like 3 and 10 is 13;  
facts like your doubles: like 6 and 6 is 12;  
and how adding and subtracting are opposites.

# Didgie, Mully, Honey, Divvy



- Didgie teaches you how to use facts you already know to work out other facts **without counting**

Like, if you know  $6 + 6 = 12$   
you can work out that  $6 + 7 = 13$   
because it's just one more.



- Then there's Mully who is all about multiplying,



Honey who does numbers to 100,



and Divvy, who is like the opposite of Mully  
because you learn all about dividing.

# More Owls



Sticky is a real whizz with metre sticks. She will show you how to use them to count in tens, find pairs of numbers that make 100, and to add, subtract, double and half multiples of ten. You will also learn how metres and centimetres work.



For these lessons it would be useful to have two metre sticks!



Fizzy knows all about fives. You will investigate the fives pairs that make 100, memorise your 5x table, and find out what happens when you add and subtract 5 from different 2-digit numbers. You will also learn how half metres work.



For these lessons a metre stick will be very useful.



Addisub will teach you how to add and subtract a single digit number to or from another number. You will learn quick ways of adding and subtracting 8 and 9.



You will also learn more about the number pairs that make 100.



Quarty takes his name from quarters. He will help you with your 4x table (and your 3x table) and also show you how quarter metres work.

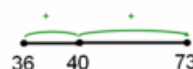


You will also learn about how to find different fractions of small numbers like 12 and 20.

For these lessons a metre stick and counters would again be very useful.



Toodie's name means two digits. She will teach you all about how to add and subtract two-digit numbers.



You will learn how to add using partitioning, and how to subtract by taking away or by finding the difference. You will also learn quick ways of adding 19, 18, 29, 28 etc.



- There are lots more owls after that, that get harder and harder.
- They do things like harder multiplying & dividing; fractions, decimals & percentages; and other things like that.

# The Activities

## Counting with whole numbers

 INVESTIGATION TO DO	Step 1: Counting in 1s to 10 Investigate! 
---	---

▶ See Parent Notes ▶ See champions and stars

 INVESTIGATION TO DO	Step 1: Counting down in 1s within 10 Investigate! 
---	--

▶ See Parent Notes ▶ See champions and stars

 INVESTIGATION TO DO	Step 1: Count on in 2s Investigate! 
--	--

▶ See Parent Notes ▶ See champions and stars

 INVESTIGATION TO DO	Step 1: Count back in 2s Investigate! 
---	---

▶ See Parent Notes ▶ See champions and stars

- Go back to the top and click on Bod.



- If you scroll down you can see all the different activities Bod teaches you.
- Each of them has an **investigation** (you click on the magnifying glass) and when you've done the investigation some of them also have a **quiz** to do.
- At the bottom, there is a **tournament** which gives you a mixture of questions to check you really know everything.
- If you get full marks you win an egg!





# Learning Wall

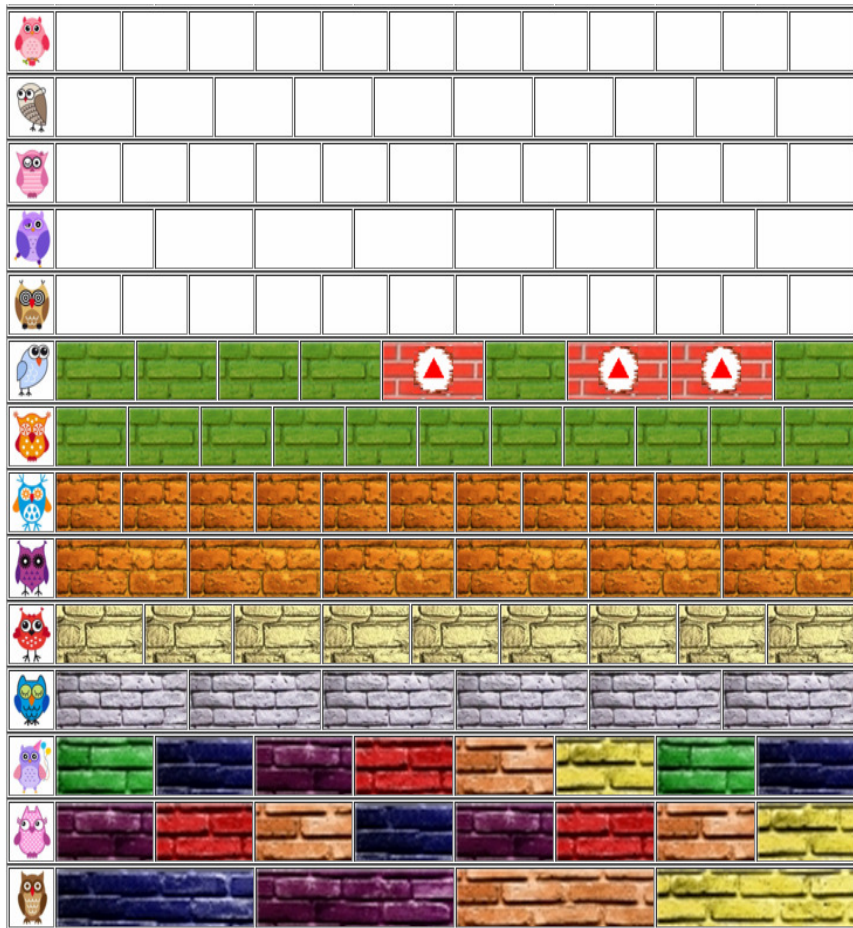
- See where it says 'My Learning Wall'?



► **My Learning Wall**

- Click on that,  
and you get to your learning wall.

# Learning Wall



- The learning wall is the **most important** part of Maths Investigations.
- It is like a picture of your Maths brain!
- It shows you all the things you have learned, and what you need to work on to get better.
- When you start, your wall is white.
- This is what one looks like when it is partly coloured in.

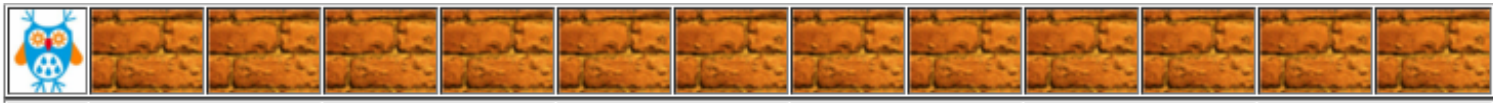
# Learning Wall



- Do you see the owls on the left?
- Each owl is in charge of a different level on the wall.
- You need to start at the bottom of the wall and build up.
- If you do the tournament for that owl, then your bricks get coloured in to show you how you did.

# Learning Wall

- If you go through the whole tournament,  
and get every question right,  
and get full marks,  
you get a bronze bar at that level on your wall.



- If you come back the next day  
and do the tournament again,  
and get full marks again,  
then your bar turns from bronze to silver.



# Learning Wall

- Then you can come back again and turn it to gold.



- And if you do it four times in a row with no mistakes at all then you get rainbow!



- If you have rainbow that means you are **really** secure with your learning at that level.

# What about mistakes?

- If you make a mistake, the computer will make the things you know in that row go green.
- It will put red triangles for the activities where you made a mistake,



like holes to show you where the holes are in your learning.

# How to get help

- At the bottom of the learning wall you will see there is a link which says 'See parent notes: How to help with the next steps.'

▶ **See Parent Notes:** How to help with the next steps..

- If you click on that and scroll down to the red section, you will see it tells your parents **exactly** what they need to do to help you with the things you are stuck with!



**Activities to do with Daisy to help fill the holes in Bod**





**Subtracting from Ten**

As well as learning the addition facts for ten, you need to learn the corresponding subtractions. Use ten counters again and try taking some away. How many do you have left?



# Helping yourself

- You can also help yourself.
- Scroll back up to the wall and click on a red triangle.  
It takes you to the activity you need to practise  
so you can fill the hole.

 <b>INVESTIGATION TO DO</b>	<b>Step 2: Doubles, Teens and Ten Pairs Subtractions</b>		
	<b>Investigate!</b> 	<b>Try Quiz</b> 	 Didgie says <b>work needed</b> on this one!



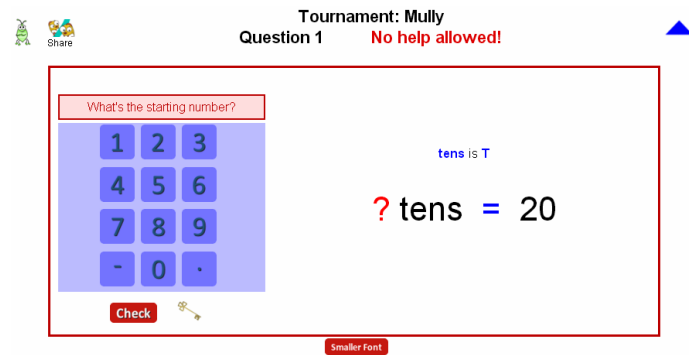
# Finding the holes

- Did you know that **mistakes** can be a **good thing**, because they show you what you still need to learn?
- If you make a mistake, be honest about it and say:  
'There is something I am not quite sure about.  
So I need to do more practice.'
- If you had a hole in your tooth,  
you would want the dentist to find it and fix it,  
so that your tooth doesn't start rotting.
- So it is important to find the holes in your learning  
and fill them.



# No help allowed!

- If you go in a tournament, it says at the top: '**No help allowed**'.



- So it is really important in Maths Investigations that you do the tournaments all by yourself with absolutely no help from anyone, not even your teddy!



# The Investigations

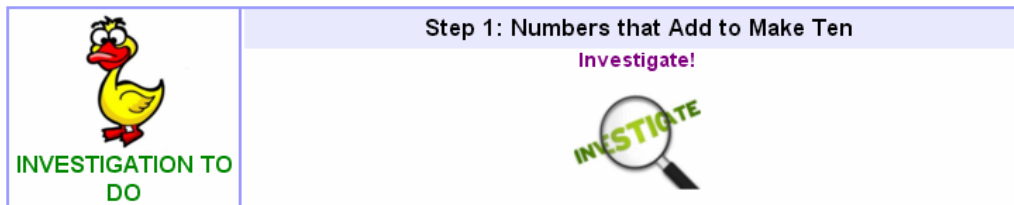
- Let's take a look at an activity.
- Use the arrows at the top of the page to get back to the wise owls



and click on Bod,



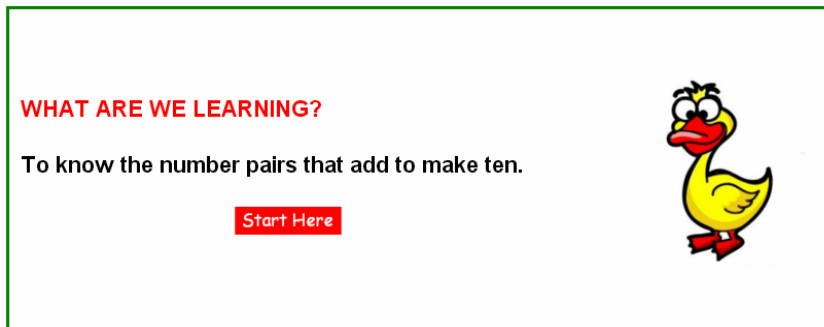
- then find the activity with the yellow duck.



- This is not the first one on the page, but it is a good one to look at first to understand how everything works. It is really easy!

# The Investigations

- Click on the Investigate button and the first page tells you what you are learning about.



- If you find you are on a different page, you can get back to the first page by clicking on the green arrow on the left.
- Click 'Start here' ...

# The Investigations

and you get another page telling you what you need.

## WHAT YOU NEED...

10 counters or cubes.



# Using Practical Equipment

- Lots of the activities ask you to get practical equipment like cubes or counters; or sometimes a metre stick.



- Practical equipment is really important for learning ideas about numbers
- If you use counters and really think and talk about what you are learning, then you will learn much more and understand maths much better.
- You can use all sorts of things for counters at home, like buttons or coins or pasta shells and you can even make your own metre stick!

# Collecting Gems



- Some of the pages in some of the investigations say 'TO THINK AND TALK ABOUT' and on these pages there is nothing to click on.

- You have to read something, and think about it and talk about it with someone.



- If you do that regularly, and don't just rush, then gems will magically start popping up for you to collect.
- But, if you just skip these pages, then you won't learn so much, and you won't get any gems.

# Read the instructions!

- See the page numbers at the bottom?
- If you go to page 2 and look at the top you will see there is an instruction about what to do with your counters.

Split your counters. Put 5 in one group. How many in the other group?

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



# Read the instructions!

- If you read the instructions and do what it says, it will really help your learning.

Split your counters. Put 5 in one group. How many in the other group?

5 + ? = 10

Check

Smaller Font

wordproblems Investigate

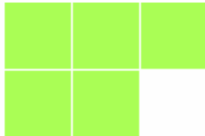

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16


- In this investigation, since it is really easy, you will be able to do it without the counters, but you get the idea!







# Putting in the Answers

- On page 2 there is a keypad.
- Do you see how in the sum there is a red question mark?

Split your counters. Put 5 in one group. How many in the other group?


$$5 + ? = 10$$

Check 



Smaller Font      wordproblems Investigate 


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

# Putting in the Answers

- It is obviously 5 that is missing.
- So, to put the 5 in, you just click on 5 on the key pad, and a 5 will go in place of the red question mark.

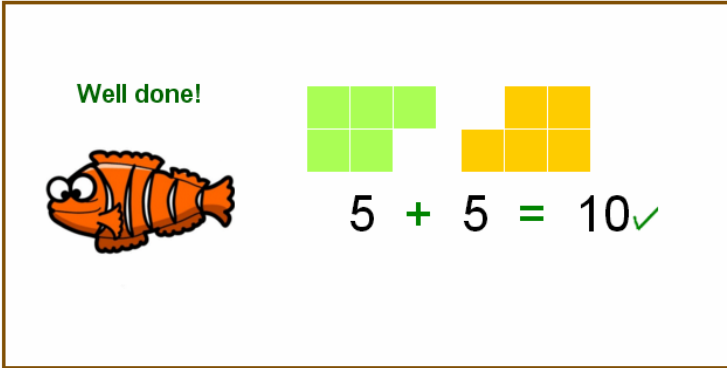
Split your counters. Put 5 in one group. How many in the other group?


$$5 + 5 = 10$$


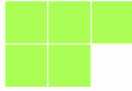

Check 

# Putting in the Answers

- Do that now.  
Put in the 5, and click on 'Check'.
- You will see that a character pops up  
and it says well done.
- It also show you a picture  
of a pattern you can make  
with your counters.
- Click the arrow on the right  
to get to the next page.



Well done!



$5 + 5 = 10$  ✓

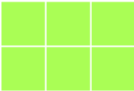
Smaller Font 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 wordproblems Investigate


# Putting in the Answers






- On the next page, put in 4 and click 'Check' again.

Put 6 in one group. How many in the other group?

1	2	3
4	5	6
7	8	9
-	0	.


$$6 + 4 = 10$$

Check 

Smaller Font     wordproblems Investigate 

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

- Each time you click 'Check' you get a point.

# Speaking Maths out loud

- Now go to page 5.
- Some of the pages have more than one question, so you need to put in both answers.

Complete this pattern.

Fill Down

Start Again


1	2	3
4	5	6
7	8	9
-	0	.

$$6 + 4 = 10$$

so

$$4 + 6 = 10$$

Check



# Speaking Maths out loud

- Do you see there is a 'so' in between the two sums?  
That's because they're linked together.

Complete this pattern.

Fill Down Start Again

1	2	3
4	5	6
7	8	9
-	0	.

6 + 4 = 10  
so  
4 + 6 = 10

Check

- It is good, when you've put numbers in and checked them, to then read the sums out loud:  
6 add 4 equals 10 **so** 4 add 6 equals ten.
- Speaking maths out loud is really important to help your learning, so there are lots of places where you are asked to do that.


# Sums with two numbers missing






- If you go to page 9, there are two missing numbers

Can you do it any other ways?

1	2	3
4	5	6
7	8	9
-	0	.

$$? + ? = 10$$

Check 

Smaller Font     wordproblems **Investigate** 

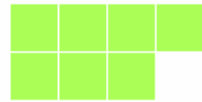
1 2 3 4 5 6 7 8 **9** 10 11 12 13 14 15 16

and it says at the top that you have to make up your own sums.



# Sums with two numbers missing

- So you maybe put 7 in first  
then click on the other question mark to make it red




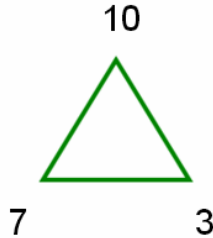
$$7 + ? = 10$$


- Then you put the 3 in.
- If you forget to click on the other one  
and the 3 goes in the wrong place,  
then just **click on the number**  
and it will change back to a question mark.  
Then you can put the number in again.

# Number Triangles

- All the pages you have been looking at just have sums on.
- But you also sometimes get pages with number triangles. These are really useful for seeing how adding and subtracting are linked together.
- Do you see the little triangle at the bottom of the page? Click on it and you will make one now!

Can you do it any other ways?

		$7 + 3 = 10$
		$3 + 7 = 10$
		$10 - 3 = 7$
		$10 - 7 = 3$

[Check](#) 


# Getting more points!

- If you look at page 10 you will see there are lots of sums.
- With pages like this you should put in one answer and **press 'check'** and **then** put in the next answer and press check and so on.

Build this pattern.

Fill Down Start Again

1	2	3
4	5	6
7	8	9
-	0	.

Check 

0 + ? = 10  
1 + ? = 10  
2 + ? = 10  
3 + ? = 10  
4 + ? = 10  
5 + ? = 10

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

## Important!

- If you **press check after each answer** you get lots more points!

# Self Assessment

- Now go to the last page.
- This is where you say how you think you did.
- **Green** means you were really confident,  
**amber** means you think you need more practice  
**red** means it was a total disaster and you need help!

Self Assessment:




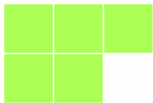

Choose your colour!






- It is good to be really honest  
because it lets you and your teacher see how you did.
- If you put amber or green  
then you sometimes get a quiz to do.

# Get help with Investigations

- The investigation that you have been doing with all the page numbers is designed for you to work through slowly and discuss the ideas with someone else.

Well done!


$$5 + 5 = 10 \checkmark$$

Smaller Font     wordproblems **Investigate** 

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

- So you need to do lots of talking and get as much help as you want.

# No help with Quizzes!

- But then on the quiz you have to do it completely by yourself, like the tournament, with **no help** from anyone.

Quiz: Numbers that Add to make 10  
Question 1 Score so far: 0 **No help allowed!**

What's the action number?

1	2	3
4	5	6
7	8	9
-	0	.

3 + ? = 10

Check

Smaller Font Investigation

- And that means you know whether you really know it or not.
- Now click on the triangle at the top right ...

# Colours on the page

...and you get back to the page with Bod's activities.

- Scroll down again to find the duck.



- Do you see the investigate button?
- If you've done the investigation you will get a score under this which shows how much work you put in and if you did the traffic lights you will get a coloured circle to show what you said.

# Quizzes and Stars

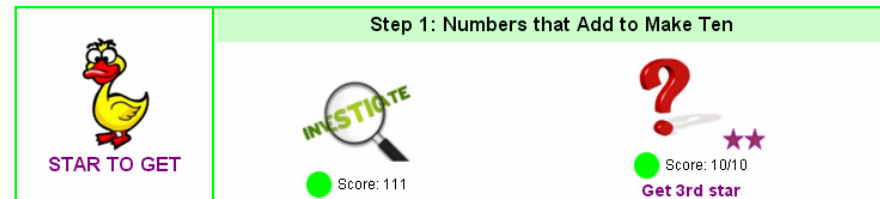
- If you do the quiz  
you get another coloured circle  
which shows how you did in the quiz.

	<div data-bbox="909 683 1528 716">Step 1: Numbers that Add to Make Ten</div> <div data-bbox="787 797 976 938"></div> <div data-bbox="793 951 970 992"> Score: 111</div> <div data-bbox="1354 787 1501 922"></div> <div data-bbox="1346 951 1549 992"> Score: 10/10</div>
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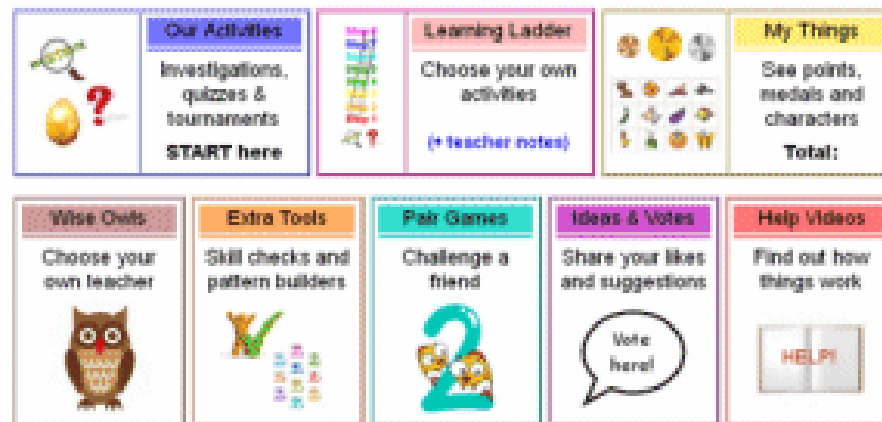
# Quizzes and Stars

- If you do a quiz and get full marks and wait a week, then you can come back again the next week and do the quiz again and collect your first star
- If you come back after a month you can get your second star, then after three months your third star.
- The reason for stars is that you keep coming back and doing the same activity. so you really remember it properly and don't just forget it again.
- If you get stars, then you get lots more points.



# Collecting Things

- As you work through Maths Investigations you get to collect lots of things.
- If you go to the top of Bod's page and click on the triangle at the top right then you get to the main page.



- Click where it says 'My Things' (the yellow box).

# Collecting Things

- This is where you can find out how to collect characters and medals and jewels.

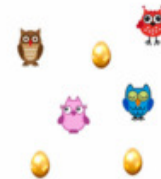
▶Activities



▶Learning Wall



▶Tournaments



▶Characters



▶Medals



▶Jewels



- You can also get to your Learning Wall from here.

# Collecting Things

- If you scroll down you will see that you can also collect owls if you do all the activities.
- And you get big eggs here when you get a rainbow wall in a tournament

▶ Owls



▶ Eggs



▶ Houses



- Also, when you collect an owl you can choose a house to put your characters in.

# Characters

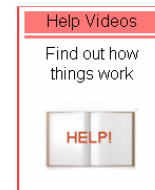
- If you go in characters, you can also name characters that you have collected and you can choose one to be your avatar.

▶Name a Character ▶Swap Shop






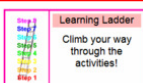


# Help Videos

- Maths Investigations has help videos.
- Click on the blue triangle at the top to go back up a level again and then click on 'Help Videos'...
- There are lots of different videos here to show you how all the different things work in Maths Investigations.



## GETTING STARTED

 <p>What is Maths Investigations?</p>	 <p>How do you find the web site and login?</p>	 <p>How do you get the app?</p>
 <p>What can you do?</p>	 <p>What is the Our Activities page?</p>	 <p>What is the Learning Ladder?</p>

- They don't help you with the maths but they explain things like the 'Learning Ladder' pages and how you get to be a shooting star.

# Last Thing!

- Go back up to the arrow at the top and back to the main page.



- If you look at the top left you will see a double arrow. Click on it and it takes you to the first page of the web site.



- Do you see there is a section called 'Parents'? This is where your parents can go so that they can see how to help you.
- If a teacher logs in, there is a 'Teachers' section as well so your teacher can get help too!

# Games to help with Tables

- Ask your parent or teacher to print games like the 'Counting Caterpillar' and 'Tap Say Turn' that you can play to help you with your tables facts and things like that.



## Printable Games

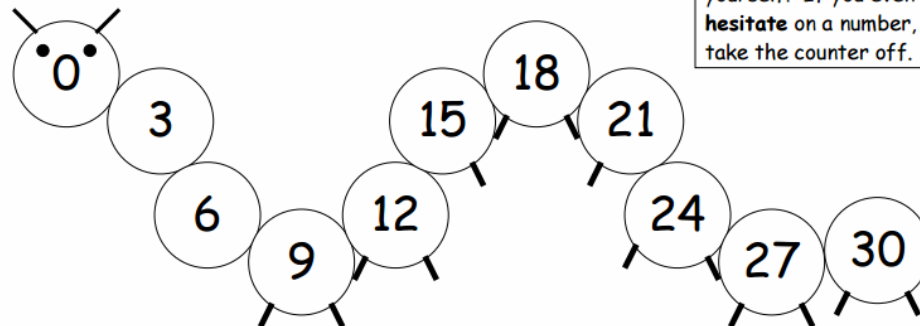
Quick links to popular games.



## Multiply & Divide

### Counting Caterpillar

I can count in threes!



**Most Important Thing:**  
Be really **STRICT** with yourself! If you even **hesitate** on a number, take the counter off.

**Rule 1:** If it is too **easy**, make it a **little bit harder**. Add **one** more counter.

**Rule 2:** If it is too **hard**, make it a little bit **easier**. Take counters off.

**Rule 3:** If you start **getting worse**, your brain is tired. It is time to **stop**!

www.mathsinvestigations.com

### Tap, Say, Turn

$$2 \times 2$$

$$2 \times 3$$

$$2 \times 4$$

$$4$$

$$6$$

$$8$$



# Over to you!

- That's it for now.
- There's lots more to find out, but it's best just to get started and find out as you go along.
- If there is anything you don't understand, just get your parents to click where it says 'Contact' and email me and I can answer your questions for you.
- Have fun!

Mr P

