

Target

I can multiply three single digit numbers together

### Activity Card 1: Which is Faster?

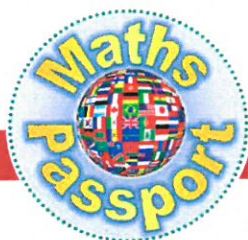
Pangea

#### You will need

- A partner
- A pack of playing cards
- A calculator

#### What to do

- Take the pack of playing cards and remove the 10s, jacks, queens and kings.
- Put the rest of the cards together and shuffle them well.
- The youngest player turns over the first three cards.
- The youngest player then multiplies these three numbers together mentally whilst the oldest player multiplies the numbers on the calculator. The player with the calculator **MUST** type in each digit and use the x and = keys.
- The first player to say the correct answer wins the cards.
- Play until you finish the deck – who has the most cards?
- Now swap roles and play again!



Target

I can multiply three single digit numbers together

Activity Card 2: Speed Multiplication

Pangea

You will need

→ A whiteboard and pen or paper and pencil.

What to do

→ Copy the grid below.

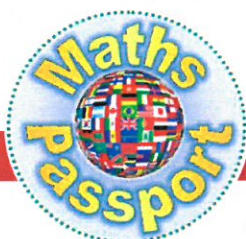
	X		X		=	
	X		X		=	
	X		X		=	
	X		X		=	
	X		X		=	
	X		X		=	

→ Fill in each of the yellow boxes with a digit from 1 to 9 (use each digit twice).

→ Now solve the multiplication problems and fill in the green boxes.

→ Check your answers with a calculator.

→ Now you have warmed up – time yourself! Put the numbers in a different place in the grid and go for it!



Target

I know by heart all the squares of numbers between 1 and 12 and use the notation for squared ( $^2$ )

Activity Card 1: Square, Double and Total

Pangea

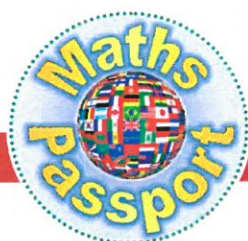
You will need

- Digit cards 1-12

What to do

- Put the cards in a pile and shuffle them well.
- Place the pile of cards face down in front of you.
- Turn over the top card and square it.
- Now double it (this is your score). Write this number on your whiteboard/paper.
- Repeat until you have used all the cards.
- Add up all your scores.
- Shuffle the cards, put them in a pile face down and start again.
- Remember to record your score after you have squared and doubled each card. When you finish, add the scores again.
- Compare this answer to the first total you got.
- Keep repeating the activity until you can complete this statement:

*If you square then double every whole number from 1 to 12 then add these answers together, the total will be \_\_\_\_\_*



Target

I know by heart all the squares of numbers between 1 and 12 and use the notation for squared ( $^2$ )

Activity Card 2: Bingo

Pangea

You will need

- Two 1-6 dice.
- A whiteboard and pen or paper and pencil
- A partner

What to do

- Both players draw a grid like this on their whiteboard or paper.

	1		

- Fill in the grid randomly with the numbers

4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144

- The oldest player starts and rolls both dice. They then add the numbers on the dice together and square the answer. For example, if Player 1 rolled 2 and 4, then the total is 6.  $6^2 = 36$  so 36 would get crossed off the grid.
- Now it is Player 2's turn to roll the dice and cross off a number from their grid.
- Keep taking it in turns. There are four points to play for:
  1. The first player to cross off a row on their grid.
  2. The first player to cross off a diagonal line (corner to corner) on their grid.
  3. The first player to cross off the numbers in all four corners.
  4. The first player to cross off every number in the grid.



Target

I can double any number with up to 1 decimal place

### Activity Card 1: Digit Card Doubles

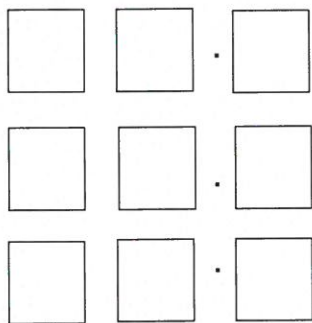
Pangea

#### You will need

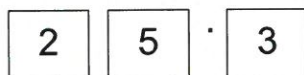
- Digit cards 1-9
- A whiteboard and pen or paper and pencil
- Three cards with decimal points on (you can make these with scrap paper if you need to)

#### What to do

- Place the digit cards FACE DOWN in front of you like this.



- Turn the cards over
- Double each number created and record on the whiteboard/ paper. For example, if you turned over...



...then you would write 50.6 on your whiteboard

- When you have doubled all three numbers, check your answers.
- Put the digit cards together, shuffle them and start again, creating your second set of numbers.

**Challenge: how quickly can you double five different sets of numbers?**



Target

I can double any number with up to 1 decimal place

Activity Card 2: Double Time

Pangea

You will need

- A whiteboard and pen or paper and pencil

What to do

- Here are 20 numbers.
- Write their doubles on your whiteboard/paper.
- Time yourself: how fast can you double all 20?

23.7

93.4

15.2

99.7

46.5

67.3

28.7

53.6

32.8

72.1

12.9

55.5

71.7

18.8

65.2

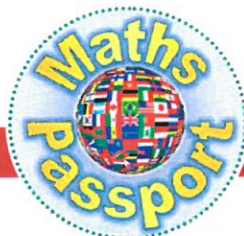
49.2

6.6

83.9

92.0

6.9



Target

I can halve any 2-digit number

### Activity Card 1: Always Seven?

Pangea

#### You will need

- 100 square
- A whiteboard and pen or paper and pencil

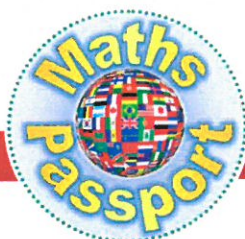
#### What to do

- Choose any number from the last three rows (i.e. the 70s, 80s or 90s) of your 100 square.
- Halve it. Record your answer.
- If your answer has a 0.5 (half), round it to the nearest whole number and continue from there.
- Halve your answer. Record the new number, remembering to round up if necessary.
- Keep halving and recording until you get to 1. For example, if you chose 83 as your starting number, your sequence would be

86, 43, 21.5 (round to 22), 11, 5.5 (round to 6), 3, 1.5 (round to 2), 1

- In this example the starting number had to be halved seven times to get to 1.
- Choose another starting number from the last three rows on your 100 square.

Question: Do you always need to halve a number from 70 to 100 seven times to get to 1?



Target

I can halve any 2-digit number

### Activity Card 2: 10 Halves

Pangea

#### You will need

- A whiteboard and pen or paper and pencil
- A partner

#### What to do

- Copy the table below.


- Write a different 2-digit number in each yellow box.
- Give the whiteboard/paper to your partner face down.
- When both players are ready, count down from three and turn over the whiteboard/paper.
- Halve every number your partner has written down in the yellow boxes.
- Race against your partner. The first person to finish gets one point.
- Check each other's answers. Players score one point for a correct answer but lose a point for an incorrect answer.





Target

I can double any 2-digit number

### Activity Card 1: Double Trouble

Pangea

#### You will need

- 100 square
- A whiteboard and pen or paper and pencil

#### What to do

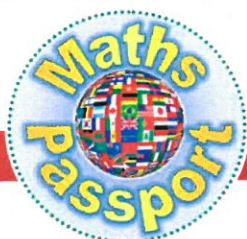
- The aim of the game is to get as close to 200 as you can without going over.
- Choose any number from the first three rows of your 100 square (e.g. single digit numbers, teen numbers or numbers in the twenties)
- Double it. Record the answer.
- Double the answer. Record the next number.
- Keep doubling your number until you go over 100.
- Record how far away from 200 you are. For example, if you chose 17, the sequence would be

$17 - 34 - 68 - 136 \dots\dots$  I am 64 away

- Now choose a second number from the first three rows of your 100 square. Again, keep doubling this number until you go over 100. For example, you could choose 20

$20 - 40 - 80 - 160 \dots\dots$  I am 40 away

- Now add together how far away you were from 200 after two goes. In the examples above, the two goes would be worth 104 (64 +40)
- What is the lowest score you can get after two goes? Remember, you must always start with numbers in the first three rows.



Target

I can double any 2-digit number

## Activity Card 2: Card Shark

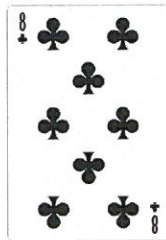
Pangea

### You will need

- A pack of playing cards
- A whiteboard and pen or paper and pencil.

### What to do

- Take out the tens, jacks, queens and kings from the pack of cards.
- Pick a card. This is the tens digit of your number.
- Pick another card. This is the ones digit of your number.
- You now have a 2-digit number. For example, if you turned over



.... this would be 68.

- Double it.
- Record the number and its double on your whiteboard or paper (e.g.  $68 \rightarrow 136$ ).
- Get two more cards from the pack to make another 2-digit number.
- Double it and record the number and its double again.
- Keep going! How fast can you finish the pack?
- When you finish, ask a friend to check your answers.

Target

I can recall all multiplication and division facts for all multiplication tables up to 12 x 12

### Activity Card 1: Grid Maker

Pangea

#### You will need

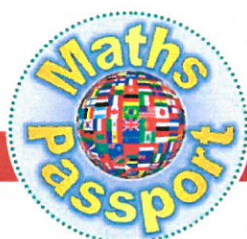
- A whiteboard and pen or paper and pencil
- A 1-6 dice

#### What to do

- Copy the grid below

x												

- Randomly fill the yellow boxes with numbers from 2 to 12
- Roll the dice and place the number in the red box.
- Roll the dice again and place the number in the green box.
- Add the two numbers together and place the answer in the blue box.
- You have three minutes to fill in the boxes
- Record your time
- Now ask a friend to give you an answer from the grid – can you give the two numbers that made that product?



Target

I can recall all multiplication and division facts for all multiplication tables up to 12 x 12

### Activity Card 2: Division Race

Pangea

#### You will need

- A whiteboard and pen or paper and pencil
- A partner

#### What to do

- Copy the grid below

	Divided by	9	=	
	Divided by	6	=	
	Divided by	8	=	
	Divided by	11	=	
	Divided by	10	=	
	Divided by	7	=	
	Divided by	12	=	
	Divided by	4	=	
	Divided by	7	=	
	Divided by	9	=	
	Divided by	6	=	
	Divided by	11	=	
	Divided by	8	=	
	Divided by	12	=	
	Divided by	7	=	
	Divided by	5	=	

- Ask a friend to put a number in each yellow box. The number must be between 40 and 144 and a multiple of the number in the green box.
- Whilst your friend is doing this, you do the same for them.
- When you have both filled in each other's yellow boxes, race to see who is first to finish.
- The person who finishes first gets one point.
- When both players have finished, check each other's work. Players score one point for every correct answer, but lose one point for every incorrect answer.
- Play the game several times – the first player to win three games is the champion!

