TEACHER NOTES

Firstly, a big THANK YOU for purchasing this product. Please checkout my store for more products and follow me for updates.

Maths games are a great way to engage all students and allow your students to practice their math in a fun way. Some of the games in this unit are best played in pairs while others can be played as a whole class. Dice and counters may be required for some games.

Four in a Row: A popular two player game which allows students to practice their basic multiplication facts. Students have to connect 4 numbers in a row – a bit like connect four.

Bowl a Fact: Another two player multiplication game where students have to knock down the numbers (pins) in order to win.

Dominos: Two versions of this game are provided. For this game you will have to cut out the dominos (I would suggest laminating the page first) before the students can play. In the first version students use the dominos to convert between basic percentages, fractions, and decimals. The second version is a basic facts version.

Multiplication Bingo: Always a popular warmup activity to start off your maths lesson. Students choose numbers between 1-50 and mark them off as you call out basic fact questions from the four provided tables.

Time Machines: This game is a bit like snakes and ladders but instead uses time machines and black-holes to race through time. When students land on one of these squares they have to answer a basic fact question to find out how far they move.

Beat the Teacher: A whole class game exploring probability and place value up to hundreds of thousands.

Greedy Pig: A fun whole class game exploring luck, probability, and mental adding. can also be played in pairs.

Land Grab: A printable 2-3 player area based game.

Probability Game: This dice game can either be played in pairs or as a whole class. It lets the students see probability in action.

Race to the Moon: This is a printable board game which can be played with 2-5 students. Students roll a die to move around the board answering math questions as they go. A blank template is also provided if you want to create your own questions – or perhaps you could get your students to make their own game.

FOUR IN A ROW

14	56	27	42	21
9	54	72	6	16
3	20	12	36	48
18	24	12	8	32
45	28	4	30	15

Number Line

1	2	3	4	5	6	7	8	9

PREVIEW
THANKS FOR LOOKING

Instructions:
*Play with two players.
*The first player puts a marker (paper clip) under two numbers in the number row above.
*These numbers are multiplied together to get a number on the board. This number is covered with a counter of the first players colour.
*Player two moves **ONLY ONE MARKER** to a new number on the number the line. The answer again is found and if it is on the number board player 2 puts one of their counters on it.
*Play until a player connects four counters in a row (vertically, horizontally, diagonally).

If a player forms a number that is not on the board or is already covered they lose that turn.

BOWL A FACT

7   8   9   10

4   5   6

2   3

1

PREVIEW
THANKS FOR LOOKING

Instructions:

Play in pairs – each player has their own board. The aim is to knock out as many pins as possible.

Throw 3 dice. Use all 3 numbers to create a number on a pin - by adding, subtracting, multiplying or dividing them together. Place a counter over this number on your board.
e.g. If you throw a 2, 4, 1 you could go 2x4-1 to get 7.   2x4=8   8-1=7

The next player then throws their dice to try and cross out a number. Take turns, first player to cross out all their numbers wins.

Variations: Throw the 3 dice once, see how many different ways you can arrange those 3 numbers to cross off the pins – can you cross off all the numbers? Next player goes – add up the total score, player with the highest total wins.

DOMINOS – CONVERTING BETWEEN FRACTIONS, DECIMALS AND PERCENTAGES

Cut out (and I would suggest laminate) the dominos below.
The students use these to have a game of dominos where they match fractions with decimals and percentages. E.g. 0.5 can be matched with 50% or ½. There are different ways of playing dominos, below are basic game instructions.
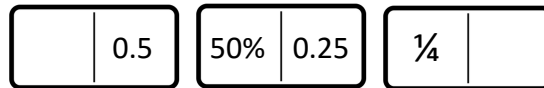
2-6 Players
Domino Instructions: Place all dominos face down. Each player chooses 7 dominos – the aim of the game is to get rid of all your dominos.

*Turn one domino face up. The first player then has to find one of their dominos which has a matching end to one of the face-up dominos ends. Place this end touching the matching end of the face-up domino. (e.g. 0.5 can be matched with 50% or ½). Blanks go with anything.
*The next player then goes and so on until one player gets rid of all their dominos.
*If a player can not go (they have no matching pieces) they must pick up a face-down domino and miss their turn.

| | 0.5 | 50% | 0.25 | ¼ | |

75%	0.5
100%	$\frac{1}{4}$
$\frac{2}{8}$	$\frac{2}{6}$
25%	$\frac{3}{4}$
$\frac{2}{8}$	0.3
$\frac{4}{10}$	0.25
$\frac{2}{6}$	$\frac{75}{100}$

	50%
0.33	
1.0	50%
100%	
$\frac{3}{10}$	
$\frac{2}{5}$	

$\frac{1}{3}$	$\frac{1}{4}$
100%	
40%	$\frac{6}{20}$
33%	
75%	0.4
$\frac{2}{5}$	0.5

DOMINOS – CONVERTING BETWEEN FRACTIONS, DECIMALS AND PERCENTAGES

Domino	Side A	Side B
1	50%	33%
2	$\frac{3}{3}$	1.0
3	25%	$\frac{75}{100}$
4	$\frac{1}{2}$	$\frac{100}{100}$
5	$\frac{3}{3}$	$\frac{6}{20}$
6	$\frac{1}{3}$	$\frac{3}{4}$
7	0.4	$\frac{25}{100}$
8	0.3	0.75
9	$\frac{75}{100}$	$\frac{2}{5}$
10	$\frac{50}{100}$	75%
11	30%	$\frac{3}{10}$
12	40%	1.0
13	$\frac{1}{2}$	$\frac{1}{3}$
14	$\frac{2}{2}$	0.75
15	0.4	$\frac{1}{2}$
16	$\frac{1}{4}$	$\frac{4}{10}$
17	$\frac{100}{100}$	$\frac{2}{6}$
18	1.0	$\frac{4}{10}$
19	$\frac{1}{4}$	$\frac{1}{3}$
20	0.33	0.4
21	0.5	$\frac{3}{3}$
22	$\frac{\quad}{\quad}$	33%
23	$\frac{3}{4}$	75%
24	$\frac{\quad}{\quad}$	$\frac{4}{10}$
25	0.3	40%
26	0.3	$\frac{3}{4}$
27	$\frac{1}{2}$	$\frac{50}{100}$
28	0.5	$\frac{2}{6}$
29	25%	$\frac{2}{5}$
30	$\frac{3}{10}$	30%
31	33%	$\frac{\quad}{\quad}$
32	25%	$\frac{\quad}{\quad}$

DOMINOS – MULTIPLICATION

Cut out (and I would suggest laminate) the dominos below.
The students use these to have a game of dominos where they match fractions with decimals and percentages. E.g. 4X5 can be matched with 20. There are different ways of playing dominos, below are basic game instructions.
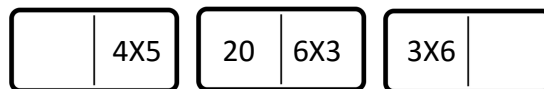
2-6 Players
Domino Instructions: Place all dominos face down. Each player chooses 7 dominos – the aim of the game is to get rid of all your dominos.

*Turn one domino face up. The first player then has to find one of their dominos which has a matching end to one of the face-up dominos ends. Place this end touching the matching end of the face-up domino. (e.g. 0.5 can be matched with 50% or ½). Blanks go with anything.
*The next player then goes and so on until one player gets rid of all their dominos.
*If a player can not go (they have no matching pieces) they must pick up a face-down domino and miss their turn.

| | 4X5 | | 20 | 6X3 | | 3X6 | |

| 24 | 16 | | 3x4 | 24 | | 6x6 | 4x8 | | 4x6 | 42 | | 24 | 6x8 | | 6x6 | 48 | | 54 | 7x4 |

| 32 | | | 28 | | | 9x6 | 24 | | | | | 4x4 | 4x4 | | 48 | 6x8 | | 9x4 | |

| 4x7 | | | 4x4 | 9x4 | | 3x4 | 4x6 | | 16 | 4x9 | | 48 | 4x4 | | 12 | 6x6 | | | |

DOMINOS – CONVERTING BETWEEN FRACTIONS, DECIMALS AND PERCENTAGES

32 / 42	4x8 / 4x9	36 / 28
6x9 / 36	12 / 48	36 / 7x6
6x9 / 4x7		

6x6 / 8x4	6x9 / 48	8x6 / 32
4x7 / 16	36 / 6x8	12 / 9x6
4x9 / 54		

32 / 54	32 / 4x7	4x8 / 6x4
28 / 6x4	36 / 6x7	36 / 4x9
8x6 / 28		

42 /	48 /	4x6 /
9x4 / 16	4x7 /	4x4 /

28 / 42	32 / 6x7	48 / 16
4x9 /	32 / 6x8	32 / 54

MATH WARM-UP MULTIPLICATION BINGO

This is a great warmup game. Get the students to draw a box like the one to the right. Have them fill up the box with any number between 1-50. Read out the basic fact questions below (I have provided 4 sets here, or else create your own). If the student has an answer to a question as one of their numbers they cross it off. You could do first one to complete a line and first one to cross off all numbers in their box. Up to you if you have a small prize.

3+4 = **7**	6x4 = **24**	10x4 = **40**	50-3 = **47**	1x1 = **1**
6x5 = **30**	9+6 = **15**	21+22 = **43**	3x3 = **9**	1x3 = **3**
17-3 = **14**	7x8 = **56**	4x8 = **32**	15+18 = **33**	7x7 = **49**
8x2 = **16**	2+6 = **8**	5x5 = **25**	6x6 = **36**	9x2 = **18**
7x5 = **35**	7x3 = **21**	10+2 = **12**	9x5 = **45**	5x2 = **10**
8x6 = **48**	4x4 = **16**	5x10 = **50**	4x7 = **28**	4x5 = **20**
2x2 = **4**	8+9 = **17**	11x2 = **22**	6+5 = **11**	10-8 = **2**

9+10 = **19**	4x6 = **24**	6x8 = **48**	9x3 = **27**	8+5 = **13**
5-3 = **2**	8+7 = **15**	1 x 23 = **23**	5x7 = **35**	7x3 = **21**
3+6 = **9**	2x9 = **18**	5-2 = **3**	2 + 9 = **11**	5x5 = **25**
7x6 = **42**	7x7 = **49**	7x4 = **28**	1x1 = **1**	31+2 = **33**
6+6 = **12**	11-3 = **8**	13-6 = **7**	11+22 = **33**	9x5 = **45**
5x6 = **30**	15+17 = **32**	19+20 = **39**	2x2 = **4**	30-1 = **29**
7+7 = **14**	6x6 = **36**	2+3 = **5**	5x2 = **10**	8x5 = **40**

MATH WARM-UP MULTIPLICATION BINGO

This is a great warmup game. Get the students to draw a box like the one to the right. Have them fill up the box with any number between 1-50. Read out the basic fact questions below (I have provided 4 sets here, or else create your own). If the student has an answer to a question as one of their numbers they cross it off. You could do first one to complete a line and first one to cross off all numbers in their box. Up to you if you have a small prize.

3x5 = **15**	1+2 = **3**	6x3 = **18**	8x6 = **48**	3+4 = **7**
4x2 = **8**	24-5 = **19**	3x9 = **27**	3x3 = **9**	2x5 = **10**
14+12 = **26**	6x4 = **24**	7x5 = **35**	8x2 = **16**	8x5 = **40**
4x8 = **32**	5x10 = **50**	41-4 = **37**	3x7 = **21**	40-9 = **31**
21+20 = **41**	1x1 = **1**	6x2 = **12**	6+5 = **11**	7x2 = **14**
20-3 = **17**	2x3 = **6**	7x6 = **42**	30-7 = **23**	2x1 = **2**
2x2 = **4**	15-2 = **13**	4x5 = **20**	42+4 = **46**	6x5 = **30**

1x1 = **1**	3+4 = **7**	3x5 = **15**	6x8 = **48**	50-3 = **47**
1x3 = **3**	3x4 = **12**	4x2 = **8**	1 x 23 = **23**	3x3 = **9**
7x7 = **49**	8x5 = **40**	14+12 = **26**	5x5 = **25**	15+18 = **33**
9x2 = **18**	40-9 = **31**	4x8 = **32**	7x4 = **28**	6x6 = **36**
5x2 = **10**	7x2 = **14**	21+20 = **41**	3x8 = **24**	9x5 = **45**
4x5 = **20**	2x3 = **6**	20-3 = **17**	19+20 = **39**	8x2 = **16**
10-8 = **2**	6x5 = **30**	2x2 = **4**	2+3 = **5**	6+5 = **11**

TIME MASTERS

How to play: Roll one die to move around the board. Each square represents a century in human time, first person to get to the year 7500 wins.

- Year 7500 – The end of all humans. Robots and Aliens worked together to destroy us.
- 7400 - Black hole Go back 37-12 spots.
- 7300
- 7200 – People have grown animals that can now speak to us.
- 7100- Black hole Go back 60÷6 spots.
- 7000
- 6900 - Black hole Go back 30÷6 spots.
- 6800

- 6000 Roll die and go forward half the amount
- 6100
- 6200 – Scientists have made healthy chocolate and say we should eat 5 bars a day.
- 6300
- 6400 - A comet hits earth and destroys Australia
- 6500
- 6600 Roll die and go back double the amount
- 6700

- 5900 – Modern medicine now lets humans live forever.
- 5800
- 5700 - Black hole Go back 72÷9 spots.
- 5600 - Time travel forward 4x3 spots
- 5500
- 5400 – Humans have now left our solar system and now live i all parts of the galaxy.
- 5200
- 5100

- 4400 - Black hole Go back 20÷5 spots
- 4500
- 4600- Time travel forward 3x2 spots
- 4700
- 4800 - Black hole Go back 56÷7 spots
- 4900
- 5000 – After 100's of years searching we have finally found an Alien race.

- 4300
- 4200 - Black hole Go back 63÷9 spots.
- 4100 – Robots now perform all jobs for humans.
- 4000
- 3900 - Time travel forward 2x5 spots
- 3800 - Black hole Go back 4÷2 spots.
- 3700 – Scientists bring dinosaurs back to life – opps.
- 3600 – Time travel forward 3x3 spots

- 2800
- 2900 - Black hole Go back 8÷2 spots.
- 3000 Time travel forward 7x3 spots
- 3100 - Black hole Go back 21-18 spots
- 3200 – First person to live to 300 years old.
- 3300 - Time travel forward 4x4 spots
- 3400
- 3500

- 2700
- 2600 – Time travel forward 6x4 spots
- 2500 – Many people now live on Mars
- 2400
- 2300 – Half the world now live in boats due to rising sea levels from climate change
- 2200 Black hole – go back 3x1 spots.
- 2100 – Time travel forward 8x2 spots
- Year 2000

BEAT THE TEACHER

Hand out one playing grid to each student, or else get them to draw their own.

For this activity you will need a deck of cards. Take out all of the picture cards from a deck of cards & then shuffles the remaining cards.

Flip over one card at a time & calls out what it is to the whole class. If a 10 is flipped then call it out as a '0'.

Students write the number called out in one of the columns. The aim of the game is to get the highest number possible. They need to decide where the best place it should go is. The teacher will also do the same but without letting the students see.

Draw out 6 cards so you have a number in each column.

The teacher reveals their number to the class. If a student has a higher number than the teacher they receive 5 points. If it is the same, 3 points. If it is less, 0 points.
If the teacher gets a higher number than all of the students they receive 20 points!

	Hundreds of Thousands	Tens of Thousands	Thousands	Hundreds	Tens	Ones	Points
Game 1							
Game 2							
Game 3							
Game 4							
Game 5							

	Hundreds of Thousands	Tens of Thousands	Thousands	Hundreds	Tens	Ones	Points
Game 1							
Game 2							
Game 3							
Game 4							
Game 5							

GREEDY PIG

This turn-based game can be played in pairs or as a whole class. All you need to play this game is one normal 6-sided die.

For each turn keep rolling the dice, adding up the numbers as you go along. You can stop at any time you want and add the total to your score. If you don't stop before you roll a 1 your score for that turn will be 0.

At the end of your turn write down your new total score and then the next player goes. Each player has 10 turns each and the person with the highest total wins.

To Play as a whole class: Have all the students stand up and roll a class die. Students keep adding up the die total in their heads until they want to sit down and record an amount for that turn. Again if the class die rolls a 1 then all students still standing get 0 for that turn. Play for as many turns as you want then student with highest total wins.

Teacher Tips:
Have a couple of practice rounds so students understand the game. (make sure students understand the difference between a turn and a roll of the die).

Get the students to come up with strategies and discuss as opposed to just feelings of luck.

LAND GRAB

This game is played with 2-3 players and 2 dice.
Players take turns to role the dice.
Use the numbers from two dice to mark of a square area on the grid below. E.g. If a 4 and 3 is rolled mark off a square area 3 squares wide by 4 squares long – any clear area on the board can be chosen and claimed by a player. All the squares inside are now theirs – they mark these with their initials.

If a person cannot fit their square box in a clear space on the grid they choose the highest number from the dice and mark off that many squares any where on the board. E.g. if a 4 was the highest number they choose any four squares to mark off and claim as their own.

Once all square have been claimed the students work out their total area covered. Person with highest total area wins.
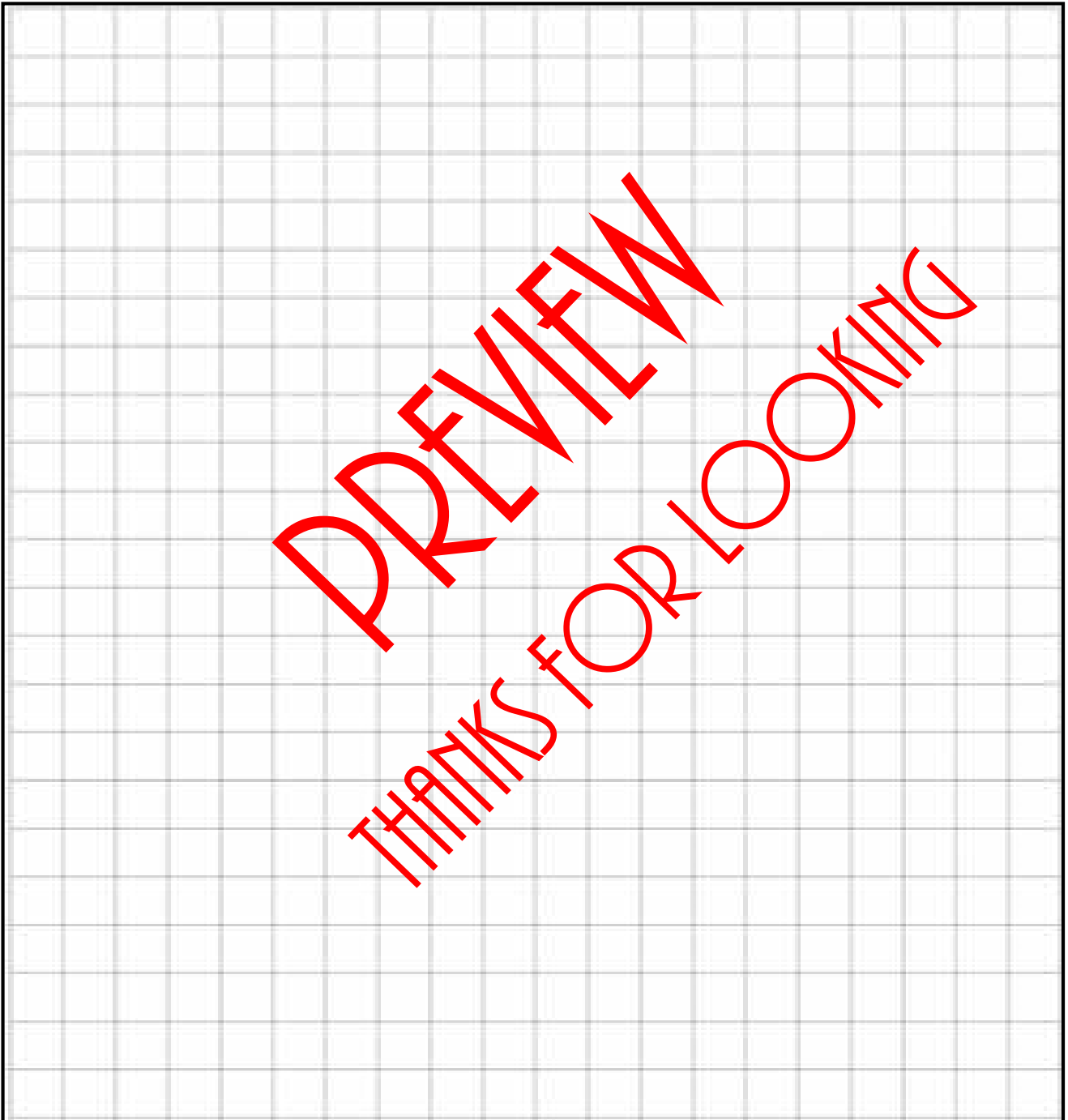
PROBABILITY GAME

This game can be done with two players through to the whole class.

In this game two dice will be rolled. After each roll the numbers are added together. Before the game starts have the students fill out the estimate column stating how often they think the dice will add up to a certain number with 20 rolls. The total amount of estimates must equal 20 and be spread over the numbers. So if they think the dice will add up to five 3 times they put a 3 next to the five in the estimate column.

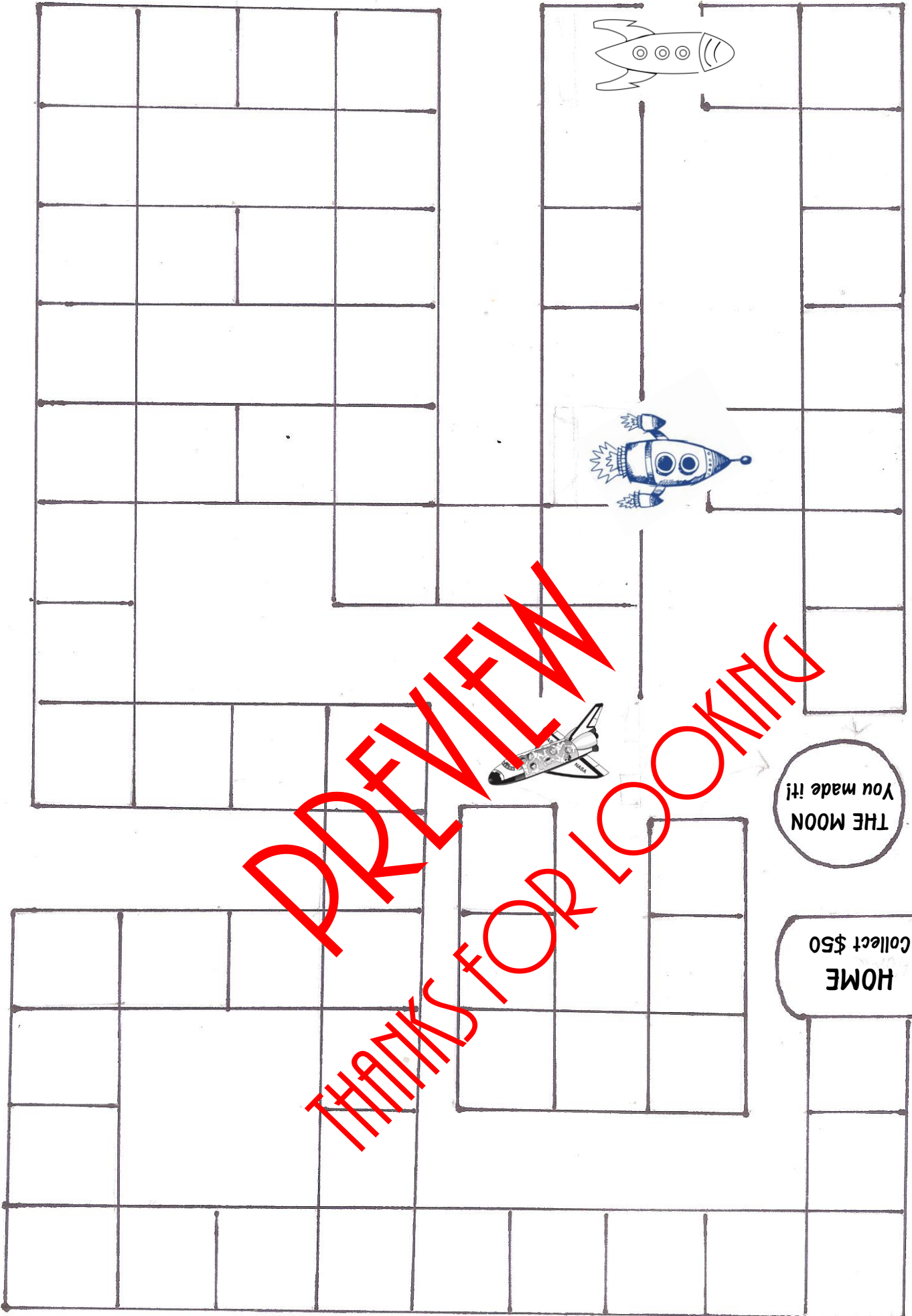After each roll students either mark off a number or miss a turn.
Once a number has been rolled the same amount of times as a student estimate then they must cross this number off their list and must miss a turn if this total is rolled again. For example if a student estimate the total will be 2 only once, but it comes up twice they have to miss the second turn.

After 20 rolls winner is the person who has crossed off the most numbers, or you can carry on until the first student has crossed off all their numbers.

Number	Estimate	Mark off	Number	Estimate	Mark off
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		

RACE TO THE MOON

Reading a Space Book → Roll dice & multiply by 200%. Add to your $

Lose 1 tenth of your money

YOU FOUND $10

Space School → Pay $30 If you want to use this shortcut

Lose 1/3 of your money

$10 to use this ship

Go back 3 spaces

Miss a turn

Lose one quarter of your money

Space University → Pay $50 If you want to use this shortcut

Lose half of your money

YOU LOST $15

Roll dice & multiply by 7. Add total to your $

Miss a turn

BANK Collect $30

SPACE STATION Collect $10

$50 to use this ship

You forgot space suit. Go back to space station

Go back 5 spaces

BANK Collect $70

Roll dice & multiply by 300%. Add to your $

$25 to use this ship

Double your money

THE MOON You made it!

YOU FOUND $20

YOU FOUND $30

Roll dice & multiply by 3. Add total to your $

Lose 1 tenth of your money

RICH- MANS WAY

Roll dice & multiply by 4. Add total to your $

Lose a third of your money

Roll again

Lose 25% of your money

Triple your money

Lose half your money

You forgot space suit. Go back to space station

HOME Collect $50

← Choose a way

Move forward 2 spaces

BANK Collect $50

Roll dice & multiply by 5. Add total to your $

Roll dice & multiply by 4. Add total to your $

RACE TO THE MOON

Create your own version of the game with this blank template

THE MOON
You made it!

HOME
Collect $50

PREVIEW
THANKS FOR LOOKING

RACE TO THE MOON

You will need the race to the moon board, one dice, and some counters to play this game.

Instructions: Each Player starts with $100. As they go around the board each player needs to keep track of how much money they have. If a player runs out of money they need to go back to the nearest bank, home, or space station, take the amount of money there and miss a turn. A player may pay $30 to have 2 rolls in one turn – they must decide and pay this money before they roll the die for their turn.

First person to get to the moon wins.

When calculating how much money you have you should round to the nearest whole number. For example if you have $5 and it says half your amount then $5÷2 = $2.5, so you would round up to $3.

It is up to your teacher to decide whether you are allowed to use calculators.

Money Tracker Sheet – Name _____

Turn number	Money at start of turn	Money lost or won.	Money at end of turn
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

RACE TO THE MOON

Money Tracker Sheet – Name _____

Turn number	Money at start of turn	Money lost or won.	Money at end of turn
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Money Tracker Sheet – Name _____

Turn number	Money at start of turn	Money lost or won.	Money at end of turn
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

MULTIPLICATION TRIANGLE

1x1 = 1									
1x2 = 2	2x2 = 4								
1x3 = 3	2x3 = 6	3x3 = 9							
1x4 = 4	2x4 = 8	3x4 = 12	4x4 = 16						
1x5 = 5	2x5 = 10	3x5 = 15	4x5 = 20	5x5 = 25					
1x6 = 6	2x6 = 12	3x6 = 18	4x6 = 24	5x6 = 30	6x6 = 36				
1x7 = 7	2x7 = 14	3x7 = 21	4x7 = 28	5x7 = 35	6x7 = 42	7x7 = 49			
1x8 = 8	2x8 = 16	3x8 = 24	4x8 = 32	5x8 = 40	6x8 = 48	7x8 = 56	8x8 = 64		
1x9 = 9	2x9 = 18	3x9 = 27	4x9 = 36	5x9 = 45	6x9 = 54	7x9 = 63	8x9 = 72	9x9 = 81	
1x10 = 10	2x10 = 20	3x10 = 30	4x10 = 40	5x10 = 50	6x10 = 60	7x10 = 70	8x10 = 80	9x10 = 90	10x10 = 100

Some multiplication facts are not shown

For example
3x4 = 12, this is the same answer as 4x3 =12
(so only 3x4 is shown)
7x2 gives the same answer as 7x2

YOU MAY ONLY HAVE 15 FACTS TO LEARN

(If you know your 1x, 2x, 5x, 10x, and 9x)

PREVIEW

THANKS FOR LOOKING