Number Champions
1 2 3 4 5
fun + skills = confidence

Resource for Year 2 Core Curriculum

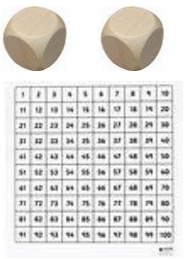
Year 2: Reason that a number not ending in 0 or 5 is not divisible by five

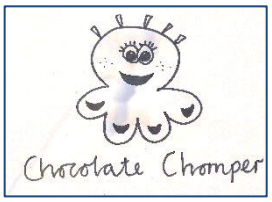
Chocolate Chomper!

Aim of the Game

Time to feed the Chocolate Chomper who only eats chocolate cubes that are divisible equally by 5!

You will need





(borrow Numicon from school or cut out shapes)

Before you play

Check how secure they are with understanding multiplying by 5.

- Count in 5s together taking turns. Use the Numicon 5 shape to build as you go.


etc

- If this is secure, then count in 5s again, jotting the multiples of 5s as you go.

5, 10, 15, 20, 25, 30, 35, 40, 45, 50

Check they can identify the pattern

- "What do you notice about these multiples of 5?"
- We want them to notice the pattern which is that all the ones' digits alternate between 5 or 0. Ask them to use the Numicon to show you.
- Use a hundred square to circle the multiples of 5 up to 50 – the pattern should be very clear!
- Ask "what would happen if we carried on counting in 5s? Do you think this pattern will continue or change? Why?" It will carry on as 5 plus 5 is always 10 which has 0 ones.
- What would be the multiple of 5 after 100?
- Explain that we have discovered a super helpful maths rule:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

All the multiples of 5 have a ones' digit of 0 or 5.

Play

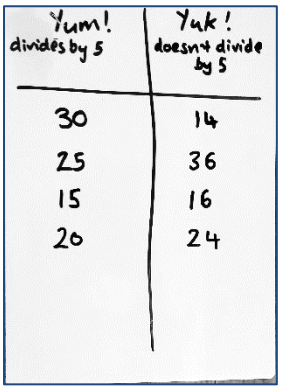
- Explain that the rule that ***all the multiples of 5 have a ones' digit of 0 or 5*** is going to help us play a game called Chocolate Chomper.
- Use base ten / dienes one cubes to represent cubes of chocolate.
- Draw or print out the Chocolate Chomper – a chocolate loving creature with **5 hungry mouths** that must be fed **equally**!

- If the total amount of chocolate cubes is divisible equally by her 5 mouths – then she YUMs them up! If they don't divide equally…she spits them out! YUK!
- To find out how much chocolate we can give Chomper, we roll 2 special dice.
- To make the tens digit, roll a 6-sided die with 1, 1, 2, 2, 3, 3
- To make the ones digit, roll a 6-sided die with 0, 0, 5, 5, 4, 6.
- E.g. They roll a 3 and a 0 so that makes 30 cubes of chocolate. Or if they roll a 1 and 4, that makes 14 cubes of chocolate.
- The child might notice the number is or isn't in the 5 times table – praise! If they don't not to worry yet but we want them to eventually be able to predict if it's yum or yuk by noticing if it ends in 0 or 5 but also link that rule to being divisible by 5.
- "Will Chomper YUM that amount of chocolate or YUK it?!" Gather that number of cubes and share them out **into Chomper's 5 mouths -** to check. They might need organisational help to be able to count out accurately.
- Are their equal groups in each mouth? If yes – YUM! If not -YUK!

30 chocolate cubes = YUM!

14 chocolate cubes = YUK!

- Continue to try and feed Chomper as long as it is motivating with the eventual goal to be that child can pre-empt whether she will YUM the chocolate or YUK the chocolate!
- Keeping a record might help.



Yum! divides by 5	Yuk! doesn't divide by 5
30	14
25	36
15	16
20	24

Reflect:

All numbers that end in 5 or 0 are divisible by 5.

Do you agree or disagree?

How do you know?