More Divisibility Rules

Purpose:
You can help your child extend the divisibility rules they know.

What you need:
- Pack of cards. Ace = 1, remove the 10 and the picture cards.
- Divisibility Rules. You can print these or make your own.
- Calculator

What to do:
Together make a three digit number using the cards.
Use the divisibility rules to work out what numbers the hundreds is divisible by. You can check your answers with the calculator.

What to expect your child to do:
Over time expect your child to become quicker at using the divisibility rules .

Variation:
Ask your child to make a 3 digit number that is divisible by a number, for example "make a number that can be divisible by 3"

He Kupu Māori:

riwhiriwhi (~a)	shuffle
whakawehe (~a)	divide
mati	digit
tau mati-toru	3-digit number
taurua	even number
tapeke	total

He Whakawhitinga Kōrero:

- Riwhiriwhia ngā kāri. Whakaputua, ko ngā mata ki raro. *(Shuffle the cards. Pile them pace down.)*
- Tangohia kia toru ngā kāri. *(Take 3 cards.)*
- Mā tāua ēnei kāri e whakamahi hei hanga i tētahi tau mati-toru. *(Let's use these cards to make a 3-digit number.)*
- He aha ngā tau mati-tahi ka taea te whakawehe ki roto i tēnei tau mati-toru? *(What are the 1-digit numbers that we can divide into this number?)*
- Ka taea te whakawehe ki te rua, nā te mea he taurua te mati whakamutunga. *(You can divide it by 2 because the last digit is an even number.)*
- Ka taea te whakawehe ki te toru, nā te mea ka taea te tapeke o ōna mati te whakawehe ki te toru. *(You can divide it by 3 because you can divide the sum of it's digits by 3.)*
- Ka taea te whakawehe ki te rima, nā te mea he kore, he rima rānei te mati whakamutunga. *(You can divide it by 5 because the last digit is a zero or 5.)*
- Ka taea te whakawehe ki te iwa nā te mea ka taea te tapeke o ōna mati te whakawehe ki te iwa. *(You can divide it by 9 because you can divide the sum of it's digits by 9.)*
- Ka taea te whakawehe ki te tekau, nā te mea he kore te mati whakamutunga. *(You can divide it by 10 because the last digit is a zero.)*

- Ka taea te whakawehe ki te whā, nā te mea ka taea te tau ka hangaia ki ngā mati whakamutunga e rua te whakawehe ki te whā. *(You can divide it by 4 because you can divide the number made by the last two digits by 4.)*
- Ka taea te whakawehe ki te ono, nā te mea ka taea te whakawehe ki te rua me te toru. *(You can divide it by 6 because you can divide it by both 2 and 3.)*
- Ka taea te whakawehe ki te waru, nā te mea ka taea te whakawehe ngā mati whakamutunga e toru ki te waru. *(You can divide it by 8 because you can divide each of the last 3 digits by 8.)*

More Divisibility Rules

A number is...

divisible by 2 if the last digit is an even number.

divisible by 3 if the sum of the digits is divisible by 3.

divisible by 5 if the last digit is either 0 or 5.

divisible by 9 if the sum of the digits is divisible by 9.

divisible by 10 if the last digit is 0.

divisible by 4 if the last 2 digits are divisible by 4.

divisible by 6 if it divisible by both 2 <u>and</u> 3.

divisible by 8 if the last 3 digits are divisible by 8. The last 3 digits of the number are divisible by 8 if it is divisible by 2, then 2, then 2.

<u>**Just for interest**</u>

A number is divisible by 7 if you can take the last digit double it, then subtract it from the rest of the digits. If this number is a multiple of 7 then the original number is divisible by 7. For example, 378, take 8, double it to get 16, 37 take away 16 is 21. 21 is multiple of 3 so 378 is divisible by 7.