DICE GAMES FOR P1 AND P2 STUDENTS – ONLINE ZOOM LESSON

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INTRODUCTION

- Some of the games are amending from the book **骰樂無窮——小學生骰仔學數學**
- The games in this mini-workshop are designed for online ZOOM lesson in training student different skills in the 'Number' Strand.
- Without the 10-sided dice, teachers can use virtual dice https://dice.virtuworld.net/?sides=10&nr=2
- There many different templates for folding dice. Simply keyword search for 'Folding dice'; 'Folding 10-sided dice'.
- Dice can be printed by 3D printers. Search for 'thingiverse d4 d6 d8 d10 d12 d20'. Here is a good one https://www.thingiverse.com/thing:94738.

GAME 1 - P1 MAKING 10

- Throw a normal die.
- Type the number that makes ‘10’ with the number shown on the die in the chat room.

Remarks:

Use 10-frame so that students can visualize the the pair of numbers that give a total of 10 without counting or doing addition. This is a subitizing skill.

GAME 2 – P1 ADDITION

- Throw 2 a 10-sided dice.
- Type the sum in the chat room

Teacher can invite the student who uses the idea of making 10 to share his/her thought.

E.g. 5 + 9 = 9 + 5 = 9 + 1 + 4 = 14 (by splitting 5 into 1 and 4 so that 1 and 9 make a 10.)

This games trains student subitizing skill in addition (using commutative property of addition and the skill of 'Split and re-group'.)

GAME 3 – P1 MAKING 100

- Throw two 10-sided dice to obtain a 2-digit number. The red one represents the ten digit and the yellow one represents the unit digit.
- Type the 2-digit number obtained from the dice.
- Also, type the number that makes '100' with the 2-digit number obtained from throwing the dice in the chat room.

Remarks:

In using the subitizing skill without borrowing, students can use 99 minus the obtained number and then add one to the result.

GAME 4 – P1 COMPARING NUMBERS

- Throw 2 10-sided dice to form the first 2-digit number. The red one represents the ten digit and the yellow one represents the unit digit.
- Throw 2 10-sided dice again to form another 2-digit number. The red one represents the ten digit and the yellow one represents the unit digit.
- Type the expression in comparing the two 2-digit numbers in the chat room.

(Teacher can also ask students to type a sentence of the expression – training students the uses of 'more than', 'less than' and 'equal to')

GAME 5 - P1 COMPARING NUMBERS

- Throw 4 10-sided dice. Each number on the dice represents a digit of two 2-digit numbers. E.g. the dice shows 2, 5, 3, 4. Some students may give the numbers 52 and 34, while some other give 23 and 54.
- Type an expression for comparing the two numbers in the chat room (by private message).

E.g. S1: 34 – 25 = 9; S2: 42 – 35 = 7; S3: 52 – 34 = 18 ➔ Student 2 wins this round

- Variation – add a criterion the student who gets the smallest difference between the two numbers wins

(This games trains student mathematics sense in the concept 'place value')

GAME 6 (P2 MULTIPLICATION)

- Level1: Throw 2 normal dice.

  Type the product of the two numbers in the chat room.
- Level 2: Throw 1 normal die and 1 10-sided dice.

  Type the product of the two numbers in the chat room.
- Level 3: Throw 2 10-sided dice.

  Type the product of the two numbers in the chat room.

- If the students cannot recall the multiplication facts, they are allowed to use the multiplication table.

(Using games to help students memorize the multiplication facts.)

GAME 7 – RELATING MULTIPLICATION AND DIVISION

- Throw 2 dice (can be normal dice and 10-sided dice).
- Type the multiplication expression and the corresponding division expression in the chat room.

E.g. the dice shows 5 and 6. Type 5 x 6 = 30 (or 6 x 5 = 30) and 30 ÷ 5 = 6 (or 30 ÷ 6 = 5) in the chat.

(Teacher can also ask students to type the sentence representing the expression. That is 'Multiply 5 by 6, the answer is 30'; 'The product of 5 and 6 is 30'; 'Divide 30 by 5, the answer is 6'.)

GAME 8 – P2 COMPARING NUMBERS

- Throw 6 10-sided dice. Each number on the dice represents a digit of two 3-digit numbers. E.g. the dice shows 2, 5, 3, 4, 6, 9. 529 and 346 can be formed; 293 and 564 can be formed.
- Type an expression for comparing the two numbers in the chat room (by private message).

- Variation – add a criterion the student who gets the smallest difference between the two numbers wins
  - E.g. S1: 349 – 265 = 84; S2: 425 – 396 = 29; S3: 529 – 364 = 165 ➔ Student 2 wins this round

(This games trains student mathematics sense in the concept 'place value')

OPEN DISCUSSION

- Comments?
- Suggestions?
- Any particular math skills that you would like to teach your students?