Multiplication – Primary 2 (or Primary 3 and 4 consolidation)

Playing with dice (Google dice can be used in online lessons)

1. Normal dice
2. 10-faced dice

Students' prior knowledge –

- Students are expected to do simple multiplication by repeated addition.
- Students should be able to read multiplication table to check multiplication facts.

5-minute games –

Game 1: 6 x 6 multiplication facts

Goal:

- Develop students' multiplication fluency for 6 x 6 multiplication facts, i.e. the shaded multiplication facts in Figure 1.

Name: _____ Class: _____

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Figure 1: Multiplication facts

Materials needed:

- Multiplication table
- 2 normal dice

How to play:

1. Two students play together.
2. Student A throws two dice and then tells the multiplication facts. For example, the numbers shown on the dice are 3 and 4. Student A says "3 times 4 equals 12" or "4 times 3 equals 12".
3. Student B checks student A's answer by referring to the multiplication table.
4. Students swap their roles.

Remarks:

- Point system can be employed. For example, if a student can tell the correct multiplication fact in five seconds, he/she scores one point.
- It may take about two weeks for students to recall all the 6 x 6 multiplication facts.
- When most students in the class can tell the multiplication facts in five to ten seconds, teachers can play Game 2 with the students.

Game 2: 6 x 10 multiplication facts

Repeat Game 1 with one normal dice and one 10-faced dice.

Remarks:

- After students have played Game 1 for one week or two weeks, they can move on to play Game 2. It helps students recite the highlighted multiplication facts in Figure 2.

Name: _____ Class: _____

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Figure 2: Multiplication facts to be recited

Game 3: 10 x 10 multiplication facts

Repeat Game 1 with two 10-faced dice.

Remarks:

- After students have played Game 2 for another one week or two weeks, they can move on to play Game 3. It helps students recite the highlighted multiplication facts in Figure 3.

Name: _____ Class: _____

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Figure 3: Multiplication facts to be recited

Game 4: Self-assessment multiplication table with dice

Students work in pairs. They are given two 10-sided dice and personalised multiplication tables.

How to play:

1. Throw two dice.
2. When a student can recall the multiplication fact in few seconds, he/she can shade that multiplication fact.
3. The other student is the checker.
4. If the student cannot recall the multiplication fact, that multiplication fact should be unshaded.
5. After several days, the unshaded facts are the multiplication facts that the student has not yet memorised. The student has to put effort to memorise those multiplication facts.

Remarks:

- Teachers may check students' self-assessment multiplication tables by asking students to tell the product of two numbers.
- This game is suitable for students who have not yet recalled all the multiplication facts.

Other useful resources –

iPad app:

Touch Times – It is a good app helping students visualise multiplication facts in arrays or in a grid form. Getting used to this kind of representation, students can learn Japanese multiplication method more easily.

The Japanese multiplication method

https://www.archimedes-lab.org/Maths2_Multiplication.html

Remarks:

- This method can be used as an alternative option for students (P3-P6) to check their answers after doing multiplication.