

Kindergarten Practical Maths

Activities

Contents

	Page
Counting Level 1	2
Place Value Level 1	5
Addition & Subtraction Level 1	9
Multiplication & Division Level 1	12

Counting Level 1

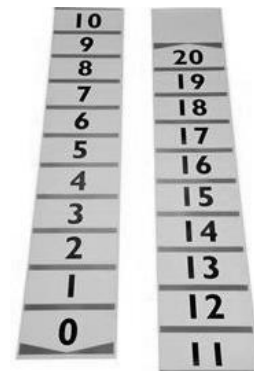
What will the students learn?

- Number names to 10 – counting forwards
- Number names to 20 – counting forwards
- Counting backwards from 10 to 0
- Counting objects to 10
- Counting objects to 20
- Number line to 10
- Number line to 20
- The number in-between two numbers
- Ordinal number: 1st, 2nd, 3rd, etc.

Activity 1: Counting Walk to 10

Resources needed: Large 1-10 number line

Ask students to walk along the number line, counting 1-10.



Activity 2: Counting rhymes

Word chants/Counting Rhymes, (See Resources p. 1)

Example:

1, 2, 3, 4, 5

Once I caught a fish alive

6, 7, 8, 9, 10

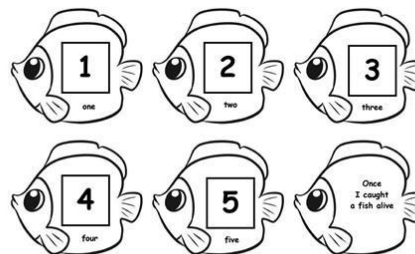
Then I let him go again

Why did I let him go?

Because he bit my finger, so

Which finger did he bite?

This little finger on the right.



Activity 3: Practise counting actions and objects to 10

Counting the number of steps, hops, jumps, claps, bounces, objects e.g.

1, 2, 3, steps etc.

When counting objects, make sure the child has accurate one-to-one correspondence.



Activity 4: Counting backwards from 10

Rocket blast-off:

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, **0 (blast-off)**



Activity 5: Counting Walk to 20

Resources needed: large 1 to 20 number line

Ask students to walk along the number line, counting 1 to 20.

Activity 6: Dot to Dot drawing

Resources: Dot-to-dot picture sheets (See Resources p. 4 - 7)

Use the ones that are suited to the child's counting ability. If the child is fluent to 20, work on sheets a little higher to extend their counting ability.

Activity 7: The number in-between

Resources needed: Number chart 1 to 20 (See resources p. 9)

Ask the student to find a given number on the number chart, e.g., "Put your finger on 8. Now put your finger on 10. What is the number in-between 8 and 10?"

Now give them different examples, e.g. "What is the number in-between 16 and 18?"

Activity 8: Find the collection of counters that matches the dots on the die

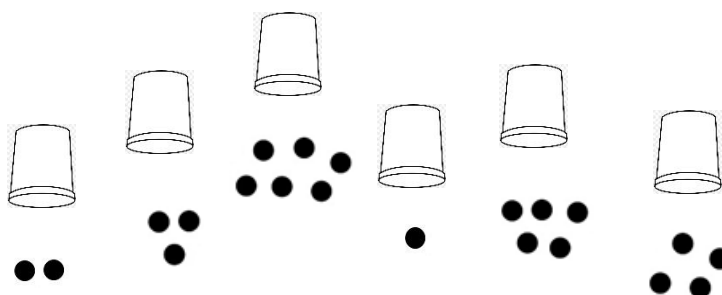
Resources needed: counters, die, empty margarine containers or paper cups

Take 6 margarine containers or paper cups. Hide different numbers of counters under these, (between 1 and 6 counters under each container).

Ask the student to roll a die.

They must find the collection that matches the number of dots on the die.

Repeat several times.



Activity 9: Practise counting things up to 20

Resources needed: counters or objects

Counting the number of steps, jumps, claps, bounces, objects, e.g.

“Take 15 steps.” Also ask them to set out counters, e.g., “Put out 13 counters.”

Activity 10: Count to Fifteen! Take a Counter

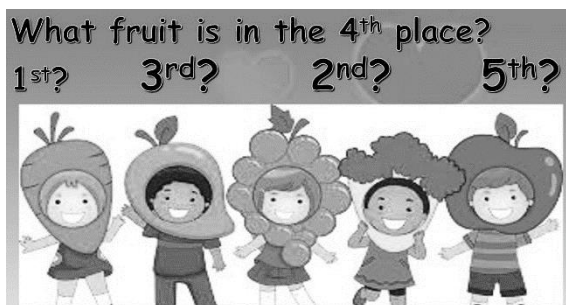
Resources needed: counters

Three people needed: 2 students plus the assistant. First person says ‘one’, second person says ‘two’, third person says ‘three’, first person says ‘four’. Keep the counting going until fifteen is reached. The person who says fifteen takes a counter and begins the next count. Repeat four times. Ask the students if they know who will get the next counter.

Activity 11: Ordinal number

Resources needed: counters or any objects

Put 10 objects in a row. Say, “Show me the 3rd one; show me the 9th one” etc.



Activity 12: Test

The teacher sets out 20 counters for each student. Each student in turn counts the counters out loud and tells you how many counters there are.

Place Value Level 1

What will the students learn?

- Reading single digit numbers 0 to 20
- Writing single digit numbers 0 to 20
- Ordering single digit numbers 0 to 20
- Arranging numbers smallest to largest and largest to smallest 1 to 20

Activity 1: Calculator Count

Resources needed: Calculator or App on phone

Ask the student to press numbers 1 to 9 in order, e.g.

Press 1, clear

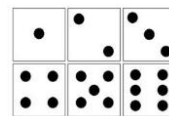
Press 2, clear

Press 3, clear etc.

If you don't have a calculator or a phone you can use number cards 0 to 9 and ask students to say the numbers.

Activity 2: Quick as a Flash

Resources needed: Dot cards 1 to 10, (See Resources p. 3)



Randomly show dot cards (0 to 6).

Say, "Tell me how many dots as quick as a flash."

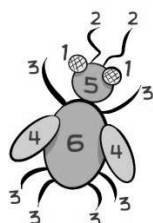
Once students can do this very well, try them with dot cards 1 to 8, and then dot cards 1 to 10

Activity 3: Beetle game

Resources needed: one die; pencil and paper

The aim of the game is to be the first to complete a Beetle. Each person takes turns to roll of the die. According to the number they roll, they can draw a particular body part as follows:

- 6 = body
- 5 = head
- 4 = wings
- 3 = legs
- 2 = feelers
- 1 = eyes



The body must be drawn before the other body parts are added to it. Players must therefore roll a 6 to start. Once the body has been drawn, the other parts of the beetle may be added in any order.

Activity 4: Snap

Resources: Number cards and Dot cards 1 to 10, (or playing cards)

Each student has a handful of number cards and dot cards, (equal number of cards each).

The first student puts a card down face up. Then the second puts one of their cards on top of it.

The student calls 'Snap' when the same card follows the next one.



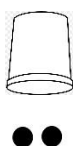
Activity 5: Remember how many counters

Resources: counters, empty margarine container, die or spinner

Teacher puts out three groups of counters, (between 1 and 6 in each group). While the students watch, cover one of the groups of counters with a margarine container. They must remember the number of hidden counters. Roll a die.

They have to clap when the number on the die matches the number of counters under the margarine container. The first to clap wins. (Give them a counter)

Repeat several times, changing the number of counters in the groups.



Activity 6: It's a Match

Resources: a die or 6-sided spinner, number 1 to 6 and dot cards 1 to 6.

The teacher sets out the number cards and dot cards so that the students can see them. They take turns to roll the die or spin the spinner. They pick up a number card or a dot card that matches the number on the die or spinner. Keep going until all the dot and number cards have been collected. The student with the most cards is the winner.

Activity 7: What's the Order?

Resources: 10-sided spinner, counters

The students take turns to spin the spinner. They make a line of that many counters.

They each have 3 turns. Now they have 3 lines of counters. Ask them to put the lines in order smallest to largest, (with the shortest line at the top, and the longest line at the bottom).

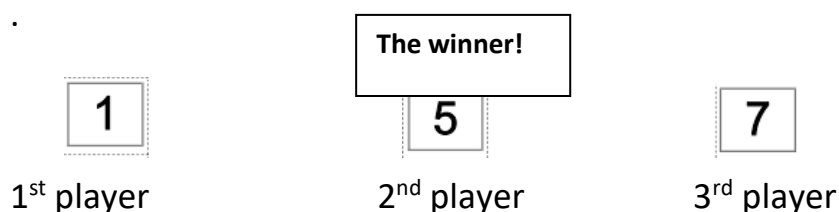
Then ask them to order the lines of counters from largest to smallest, (longest at the top and shortest at the bottom).



Activity 8: In the Middle (for 3 players – the Assistant will have to be a player)

Resources: number cards 0 to 9

Set out the cards (0 to 9) face down. Each player selects a card. The players now have to work together to put the three number cards in order from smallest to largest. The player who puts in the middle number is the winner for this round and gets a point. Repeat several times.

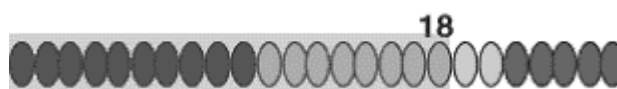


Play the game again, but this time the players have to order the number from largest to smallest

Activity 9: Beads string number find

Resource: Bead string, one per student, (coloured beads arranged in tens, e.g. 10 yellow, 10 blue, 10 green.)

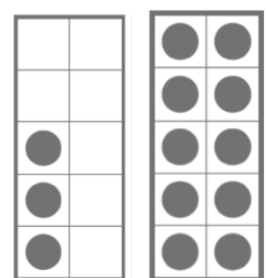
Teacher says, "Find 18!" The students have to quickly find the 18th bead without having to count the first ten. Continue, asking them to find the place for other numbers up to 20.



Activity 10: Using tens frames to make 'teens'

Resource: tens frames 1 to 10 and plenty of whole tens. (See resources p. 12 & 14)

Teacher calls numbers 11 to 20 and students make the number using tens frames.



Activity 11: Test

Instructions for teacher:

- In turn, show the students a dot card, "quick as a flash". They tell you how many dots. Repeat a few times with different dot cards.
- Give each student 3 number cards 1 to 10. Ask them to arrange the numbers smallest to largest.
- Repeat, asking them to arrange the cards largest to smallest.

Addition and Subtraction Level 1

What will the students learn?

- Counting two groups of objects: how many altogether?
- Addition with counters up to 20: Put out 2, and now 3 more. How many altogether?
- Subtraction with counters up to 20: Put out 12, and take away 3. How many now?
- Terms for addition and subtraction: “and”, “take away”, “makes”. (Don’t use the words ‘plus’, ‘minus’ or ‘equals’ at this stage.)
- More than/less than
- Using the number line 1 to 10 for addition, e.g. 2 and 2 more
- Using the number line 1 to 10 for subtraction, e.g. 7, go back 3
- Extend to 1 to 20 on the number line
- “Counting-on”: When adding and subtracting on the number line, you don’t count the number you start on.

Activity 1: How many altogether? (addition)

Resources: Die and counters

Roll a die. Put that many counters together in a group. Role the die again and put out that many counters, but in a different group. Tell a story about joining the 2 groups together, e.g. “Let’s pretend that this group of counters are apples and this group of counters are bananas. We put them together in a bowl. How many pieces of fruit altogether?”

Activity 2: Painted pop-sticks (addition)

Resources needed: Flat pop-sticks that have been painted on one side.

Give children about 6 sticks each.

They take a random bundle and tip them on the table.

How many coloured sticks can you see? How many uncoloured sticks?

Put coloured and uncoloured into 2 groups. Which has *more*? Which has *less*?
How many altogether?

Activity 3: adding more to a group of counters (addition)

Resource needed: counters

Ask student to set out a number of counters, e.g. 6. Say, "Now add 3 more. How many altogether?" (9)

Repeat with different numbers 1 to 10.

Then give them similar addition problems with numbers to 20, e.g. "13 counters. Now add 5 more. How many altogether?" (18)

Activity 4: addition with counters using "and"

Resources needed: counters

Ask students to use counters to solve addition problems with counters e.g. 5 and 3 makes? (They set out 5 counters in one group, 3 counters in another group, and push them together.)

Activity 5: 'Counting-on' board game

Resource: Die, 2 counters of different colours, Board game 1 to 20, (See Resources p. 10)

Students take turns to roll the die and move their counter according to the number on the die. The first to reach 20 wins. When they are almost at the finish, they have to roll the die with the exact number to get to the end.

Activity 6: Number line addition

Resource needed: large number line to 20

Ask the student to stand on a number on the large number line, e.g. "Stand on 3". Say, "3 and 2 more". They step forward and land on 5. Say, "3 and 2 more makes 5".

Give plenty of practice with different examples.

Start by working with numbers to 10. Then increase numbers to 20.

Activity 7: Some Went Away (subtraction with numbers to 10)

Resource: Counters

Ask the student to put out a number of counters on the table, e.g. 9. Now ask them to take some of them away, e.g. Take away 6. How many are left? (3) Tell a story about what you just did, e.g. I had 9 pencils but I gave 6 away. Now I only have 3.

Continue with similar subtraction problems with numbers 1 to 10. Then give them problems with numbers to 20, e.g., “19 counters. Now take 7 away. How many altogether?” (12)

Activity 8: More Subtraction problems

Resource: counters

Ask the students to solve subtraction problems with counters. Use the words “take away” and “makes”, e.g. 12 *take away* 4 *makes* 8.

Activity 9: Number line subtraction

Resource needed: large number line to 20

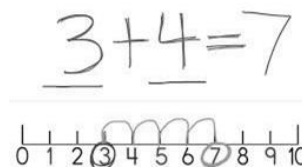
Ask the student to stand on a number on the large number line, e.g. “Stand on 7 and go back 2”. They step backwards and land on 5. Say, “7 take away 2 makes 5”.

Give plenty of practice with different examples. Start by working with numbers to 10. Then work with numbers to 20.

Activity 10: Number line addition and subtraction

*Resources needed: small number lines 0 to 10 and 0 to 20
(Resources p. 8 – 9)*

Give the students addition and subtraction problems similar to those on the large number line, but instead use the small number lines. Be sure that they ‘count on’. They do not count the number they start on.



Activity 11: Test

Instructions for Teacher:

- a) With counters, ask the student to make 7 and 3 more. Ask how many altogether?
- b) With counters ask students to make 9 and take away 6. Ask how many altogether?
- c) Say, "On the number line, show me 8 and 3 more."
- d) Say, "On the number line, show me 13 take away 5."

Multiplication and Division Level 1

What will the students learn?

- The meaning of a group or set
- Finding how many objects are in a group
- Finding out the total of objects on several groups

Activity 1: What Comes in Groups?

Resource: counters

Ask the students what comes in groups, sets, in bunches, in packets? e.g. pencils, wheels, fruit, biscuits, people, birds.

Activity 2: Make 2 groups (Multiplication)

Resource: counters

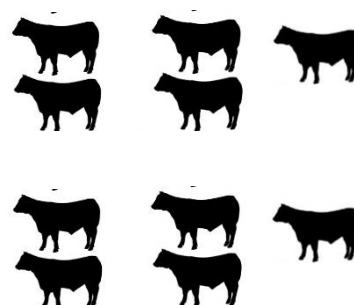
Tell the students to pretend that the counters are cows. Ask them to make a group of 5 cows.

Ask the students to make another group of 5 cows.

How many groups of cows? (2)

How many in each group? (5)

How many cows altogether? (10)

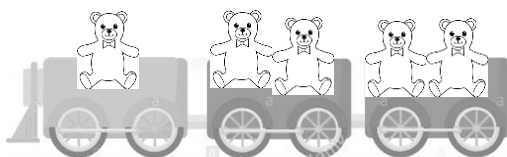


Activity 3: Train activity (Multiplication)

Resources: Pictures of train with carriages; pictures of teddies, (Resources p. 15 - 16)

Make a train with three carriages. Roll a die. Put that many teddies in each carriage. How many teddies on the train altogether? What is the total of teddies?

Repeat with different numbers of teddies and carriages.



Activity 4: What Comes in 2s?

Resources: counters, pencils and paper

Ask the students “what comes in 2s (or pairs)?” e.g. socks, human legs, eyes, hands, bicycle wheels, slices of bread for a sandwich.

Make a list or draw pictures of items that come in pairs.

Ask, “Show me what 5 pairs of shoes would look like, using counters.” Count in twos.

Activity 5: Teddies and their Legs (multiplication)

Resources: Pictures of teddies – see Resources p. 15

Use pictures of teddies. Hand out a different number of teddies to each student. Ask, “How many legs altogether?” “How many lots of 2?”

Repeat several times by giving students a different number of teddies.

Activity 6: Teddies and their Arms

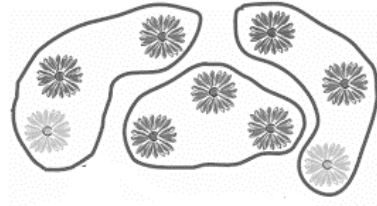
Resources: Pictures of teddies, spinner (Resources p. 15 & 11).

Use a 6-sided spinner with the numbers 4, 6, 8, 10, 12 and 14. Ask students to spin and read the number. Show them the teddies. Explain that the number on the spinner tells us the number of teddy’s arms. Ask them to collect the number of teddies needed to make that number of arms. Repeat.

Activity 7: Making groups

Ask the students to:

- a) Make a group of 3
- b) Make another group of 3
- c) Make another group of 3



Ask: How many groups? How many in each group? How many altogether?

Repeat with similar examples, with totals no higher than 20.

Activity 8: Test

Instructions for Teacher

Ask students to:

- a) Put 2 teddies in 4 carriages on the train. Ask how many groups of teddies? How many teddies altogether?
- b) Make 3 groups of 4 with counters. How many altogether?
- c) Draw 4 bags of 5 bananas. How many altogether?