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Reciting number names in order

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Cardinal number

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Focus 2: To understand that numbers can be grouped in different ways and the total amount remains the same

Ordinality

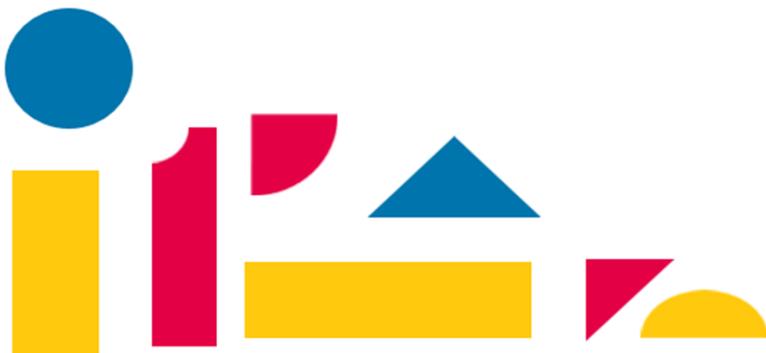
Focus 1: To understand that objects can be counted in any order

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Printable resources can be found at the back of the pack.

Guidance

Using the at home materials

This pack contains a series of tasks for you to experience with your child. Each session has been carefully designed to develop number sense and support understanding. Provide lots of opportunities to get children to use mathematical vocabulary and explain their reasoning and reveal their thinking.

We have purposefully selected these short tasks, which should last around 15 minutes, so that you can fit them around your daily lives.

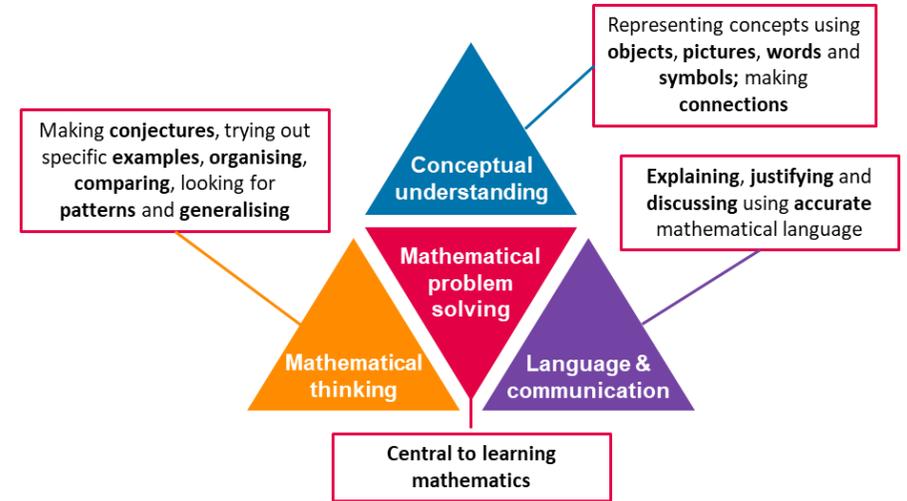
Each session begins with a short adult guided input, followed by a suggested task to complete and a suggested task to explore, which will take their learning deeper.

Success for all

We believe all children can achieve success in maths. We encourage children to have a belief that effort leads to success and that challenges are opportunities to learn.

Here are a few tips to encourage your children at home with maths:

- ✓Talk to your children about everyday maths
- ✓Play games with them
- ✓Value mistakes as learning opportunities
- ✓Recognise that there is more than one way to work things out
- ✓Praise children for effort over outcome
- ✓Avoid saying things like “I’m useless at maths”



What is ‘Mastery’?

The ‘mastery approach’ to teaching mathematics is the underlying principle of Mathematics Mastery. Instead of learning mathematical procedures by rote, we want your child to build a deep understanding of concepts which will enable them to apply their learning in different situations. To achieve this we aim to develop childrens’ **Conceptual Understanding, Mathematical Thinking** and **Language and Communication** (see diagram).

Counting Procedures Within 20: Reciting number names in order

Focus 1: To know the number names 10 to 20

About the maths

As your child learns more number names they can confuse number names 13 to 19 with multiples of ten. It is important for children to know the correct pronunciation of these numbers to help avoid this misconception in the future.

Key words

Number names for 10 to 20
say

What you'll need

Number songs, rhymes and chants involving numbers within 10
Puppet, number track

Getting started

Although children will already be familiar with number names 0 to 10 it is important to revisit these numbers and use this as an opportunity to assess your child.

Parent and child say the number names from zero to 20 in order together.

The parent says each number individually and child copies the pronunciation.

The parent and child will exaggerate each sound and the movement of the mouth when pronouncing each number.



Assess children's pronunciation and focus practising numbers 13, 14, 15, 16, 17, 18 and 19, this is where children could have more difficulty with pronunciation.

Task for Child

Display a number track.

10	11	12	13	14	15	16	17	18	19	20
----	----	----	----	----	----	----	----	----	----	----

Parent and children say a song or chant that involves reciting number names within twenty in order. When the number names are said, the parent points to them on the number track.

Include actions for numbers that your child have found problematic.

E.g. stand up for thirteen, clap for eighteen.

Suggested rhyme that includes numbers within 20:

One, two buckle my shoe.

Deepening understanding

Introduce a puppet or character.

Parent explains that the puppet is learning English and wants to know the number names.

Your child teaches the puppet or character the number names on the number track.

10	11	12	13	14	15	16	17	18	19	20
----	----	----	----	----	----	----	----	----	----	----

At times, the parent will make sure the puppet makes mistakes and child have to correct the puppet.

Mistakes could include missing initial or final sounds such as saying 'welve' instead of 'twelve, or thritee instead of thirteen.

Counting Procedures Within 20: Reciting number names in order

Focus 2: To be able to count on from zero or from one

About the maths

Your child needs to be able to recite number names in order for counting. The ability to recite number names in order does not however mean that children can count a number of objects reliably.

Key words

Number names for 0 to 20

Count on from, count on to

What you'll need

Puppet, number track, blank number line, counters or countable objects

Bead string or other resource with twenty items threaded onto string e.g. pasta tubes, buttons.

Getting started

Introduce a puppet or character.

Parent explains that the puppet is learning English and wants to know the number names.

Focus on number names that required more practice in the previous session. Child teach the puppet the number names on the number track.

Task for child

Provide each child with a twenty beaded bead string.

You and your child say a song or chant that involves reciting number names within twenty in order such as 'One, two buckle my shoe'.

When the number names are said, the parent points to them on the number track.

Include actions for numbers that child have found problematic. These may be different to the numbers from the previous day.

Deepening understanding

Provide each child with a blank number line and a counter.



Display a large blank number line and a counter.

Your child and you will practise saying the number names in increasing order starting from zero as they move their counter along the number line.



The focus for this session is to recite number names in order from zero to twenty. Your child may reach the end of the number line before saying twenty. Ensure your child continues counting until they get to twenty.

Counting Procedures Within 20: Reciting number names in order

Focus 3: To be able to count back from a given number to zero.

About the maths

Counting on and counting back are key skills required for early addition and subtraction and for developing your child understanding about increasing and decreasing order.

Key words

Number names for 20 to 0
Count back from, count back to

What you'll need

Puppet, number track, blank number line, counters or countable objects

Bead string or other resource with twenty items threaded onto string e.g. pasta tubes, buttons.

Getting started

Parent and child say each of the number names starting at twenty and counting back to zero.

Starting with twenty, the parent says each number individually in decreasing order and children copy the pronunciation.

Introduce the puppet.

Your child will teach the puppet the number names in decreasing order.

Task for child

Provide your child with counting items (example: beads, coins)

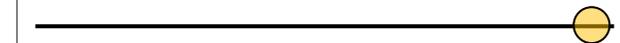
You and your child say a song or chant that involves reciting number names in decreasing order from twenty. When the number names are said, the parent points to them on the number track.

Include actions for numbers that child have found problematic.

E.g. stand up for thirteen, clap for fourteen.

Deepening understanding

Provide your child with a blank number line and a counter.



Display a large blank number line and a counter.

Children and parents will practise saying the number names in decreasing order starting from any given number within twenty as they move their counter along the number line.



The focus for this session is to recite number names in order from any number within twenty to zero. Your child may reach the end of the number line before saying zero. Ensure they continue counting until they get to zero.

Counting Procedures Within 20: Reciting number names in order

Focus 4: To be able to count on to twenty from a given number

About the maths

This task focuses on counting on from a number above ten to twenty to ensure that your child is confident with all numbers within 20.

Key words

Number names for 0 to 20

Count on from, count on to

What you'll need

Puppet, number cards 10 to 19, bead string or other resource with twenty items threaded onto string e.g. pasta tubes, buttons.

Getting started

Count in unison from zero to twenty.

Introduce a puppet or character.

The parent will use the puppet to start counting from zero.

Pause at a number and explain that the puppet can't remember which number comes next.

Children will tell the puppet which number comes next.

The puppet will continue counting on to twenty.

Parent repeats with the puppet pausing at different numbers within twenty.

Task for child

Parent says a number (10 to 19).

Child say which number comes next.

Repeat with different numbers using ten to nineteen.



For child who have difficulty remembering the number that comes next, encourage them to count on from zero to the number and then say the next number in the sequence.

Deepening understanding

One child selects a number card 10 to 19.

Parent says the number and shows a representation of the number using a bead string.

Child count on to twenty in unison from the number selected.

The parent moves a bead along to show a representation of each number in the sequence.

Repeat the task several times.

Counting Procedures Within 20: Reciting number names in order

Focus 5: To be able to count back to a given number

About the maths

Being able to count back to a given number demonstrates an understanding of the order of numbers in the number system. This skill will be required for solving addition and subtraction.

Key words

Number names for 20 to 0
Count back from, count back to

What you'll need

Puppet, number track, counters, number cards, bead string or other resource with twenty items threaded onto string e.g. pasta tubes, buttons.

Getting started

Count in unison from twenty to zero.

Introduce a puppet or character.

Display a number track and a counter.

Highlight the number that the puppet needs to count from twenty to a given number.

The puppet will start counting from twenty to the given number and move the counter along for each number said.

Your child will say 'Stop!' when the puppet says the given number.



Parent: "The puppet must count back from twenty to sixteen. When the puppet says sixteen you need to say stop!."

Puppet: "Twenty, nineteen, eighteen, seventeen, sixteen"

Child: "Stop!"

Task for child

Parent says a number.

Child say which number comes before the number.

Repeat with different numbers using one to twenty.



If your child has difficulty remembering the number that comes before the number said, encourage them to count back from twenty to the number and then say the next number in the sequence.

Deepening understanding

Your child will need a counting objects (beads, counters, coins)

Child selects a number card 11 to 20.

Parent says the number.

Your child will count back to ones in unison from the number selected.

Child move a bead back or counter to show a representation of each number in the sequence.

Repeat the task several times.

Counting Procedures Within 20: Cardinal numbers

Focus 1: To be able to explore different arrangements of numbers within 20

About the maths

Exploring how numbers within 20 can be arranged in different ways develops your child's understanding of the conservation of number and provides them with a strong

Key words

Arrange, same, different
Number names for the number to be focused on.
Number names within 20.

What you'll need

A range of countable objects including counters, pasta shapes, buttons, Lego bricks etc.

Getting started

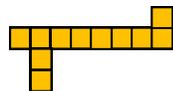
These tasks should be explored by your child focusing on a different number within 20 each day. The example for this lesson focuses on 11. Parents will need to plan and prepare opportunities for your child to explore all numbers within 20.

Provide your child with eleven multilink.

Model how to arrange the multilink as a tower.



Model how to arrange the eleven multilink in a different way.

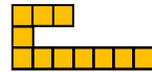
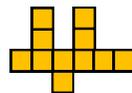
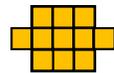


Highlight that the number of multilink has remained the same but the arrangement is different.

Task for child

Your child is to explore different arrangements for the 11 multilink.

E.g.



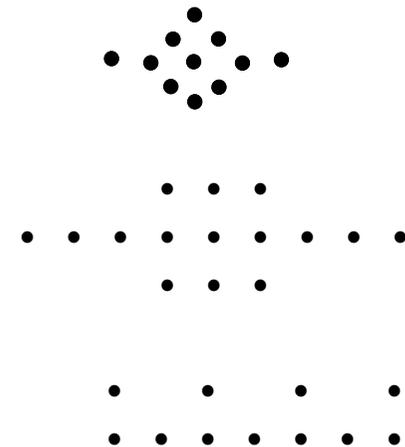
Highlight that there are 11 cubes each time. When no cubes have been added or taken away, the number of cubes remains the same.

Deepening understanding

Provide your child with a range of materials such as counters or buttons.

Ask your child to explore what patterns they can make with 11.

E.g.



Counting Procedures Within 20: Cardinal numbers

Focus 2: To understand that numbers can be grouped in different ways and the amount remains the same

About the maths

These tasks that involve grouping introduce your child to the concept of place value.

Key words

group, groups of, remaining

Number names for the number to be focused on.

Number names within 20.

What you'll need

A range of countable objects including counters, pasta shapes, buttons, Lego bricks etc.

Getting started

These tasks should be explored by your child focusing on a different number within 20 each day. The example for this lesson focuses on 11. Parents will need to plan and prepare opportunities for their child to explore all numbers within 20.

Place 11 counters on the table and tell the child that there are 11 counters on the table. Model how to place the counters in groups of two.



Say: "There are 11 counters. There are five groups of two. There is one counter remaining. There are 11 counters altogether."



Do not remove, add to or change the objects. Only rearrange them into groups.

Task for child

Give your child eleven counters each.

Ask them to place the eleven counters into groups of 3 then 4, and 5.

Each time, ask your child to say:

- how many groups there are
- how many there are in each group
- how many there are remaining
- how many there are altogether.



Assess whether your child can place the counters into groups.

Does your child recognise that the number of objects remain the same?

Deepening understanding

Provide your child with a selection of objects with eleven in each set. E.g. eleven multilink, eleven counters, eleven lollipop sticks.

Ask your child to place each set of eleven objects into groups of ten.

Each time, ask your child to say:

- how many groups there are
- how many there are in each group
- how many there are remaining
- how many there are altogether.

Each time, your child should recognise that there is one group of ten and one remaining. Children should highlight that there are eleven altogether.

Counting Procedures Within 20: Ordinality

Focus 1: To understand that objects can be counted in any order

About the maths

It is vital that your child recognise objects can be counted in any order. This requires them to make links between number names, one to one correspondence and cardinal numbers.

Key words

Order, how many, same number

What you'll need

Buttons or other countable objects e.g. pasta shapes, puppet

Getting started

Parent introduce your child to a puppet or a character.

Explain that the puppet has some buttons and wants to count them.

Place some buttons in the middle of the table and get the puppet to 'count them'



When counting, highlight that the puppet is getting confused about which buttons have been counted and which ones have not.

Ask your child to suggest how the puppet could arrange the buttons so that he/she knows all have been counted only once.



Explore suggestions which may include placing buttons in a ring, in a line or in rows.

Task for child

Provide your child with twelve buttons.



Ask your child to count the buttons and find out how many buttons there are.



When counting, your child should be encouraged to place buttons in a row and touch or move each button for each number name.



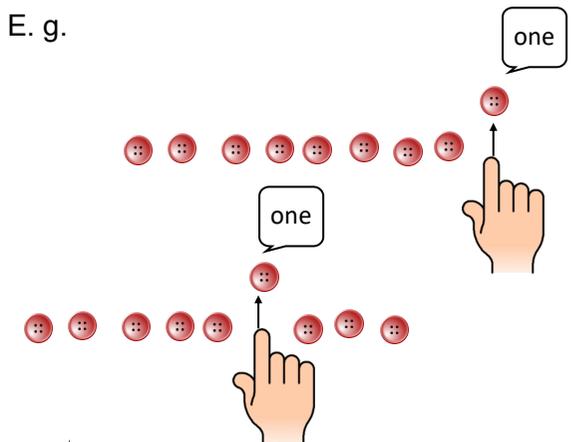
Deepening understanding

Provide your child with twelve counters.

They are to explore counting the buttons, starting from a different button each time.

Encourage them to move the button so that they know which buttons have been counted.

E. g.



Ensure your child recognise that the number of objects remains the same when counted in a different order.

Counting Procedures Within 20: Ordinality

Focus 2: To understand that objects grouped into tens and ones can be counted in tens and ones

About the maths

Your child should be able to count on from any number. This session allows them to explore how counting groups of ten and then remaining ones can be an efficient strategy for counting.

Key words

Order, how many, same number

What you'll need

Buttons, puppet, lollipop sticks or other countable objects e.g. pasta shapes

Getting started

Parent introduce your child to a puppet or a character.

Explain that the puppet has some buttons and wants to group them into groups of ten.

Place some buttons in the middle of the table and get the puppet to group them into tens



When there is one group of ten ask child to say how many there are in one group and how many there are in the other group.

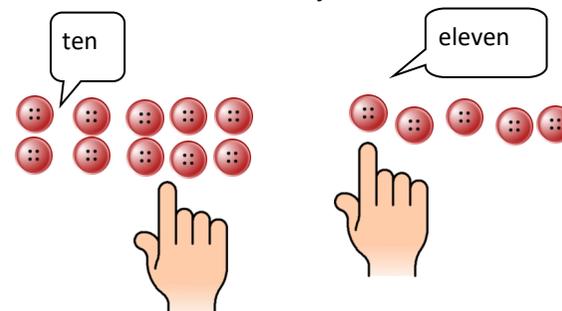
Reinforce that, if we know there are ten in a group we can start from ten and count on to find out how many there are altogether.

Task for child

Provide child with fifteen buttons.



Ask child to group the buttons into tens and ones. Ask child to count on from the ten in ones to find out how many buttons there are.

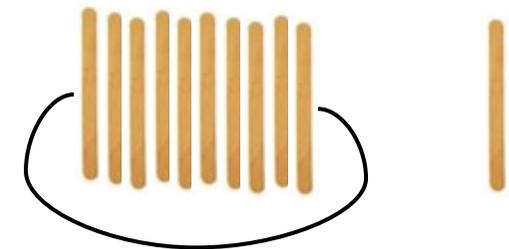


When counting, your child should begin to recognise that they can count on from ten in ones to find out how many there are altogether.

Deepening understanding

Provide child with different sets of lollipop sticks (11, 12, 13, 14, 15, 16, 17, 18, 19)

For each set, your child is to group the lollipop sticks into a group of ten and remaining ones. They are to count the lollipop sticks, from ten in ones to find out how many there are in each set.



Ensure your child recognises that the number of objects in the group of ten is ten and that the separate lollipop sticks can be counted in any order providing they are counting in ones.

Counting Procedures Within 20: Ordinality

Focus 3: To be able to order numbers on a number track

About the maths

An understanding of the order of numbers that develops your child's understanding about numbers and the number system, which is key when developing early number.

Key words

First, last
Number names one to ten

What you'll need

Left to right number tracks (numbered, pictorial and blank) countable objects e.g. buttons or pasta etc.

Getting started

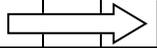
Count on in unison from 1 to 20.

Display a left to right number track with the numbers from 1 to 20 written in.

Ask child to identify which number comes first and label it 'first'.

Ask child to identify which number comes last and label it 'last'.

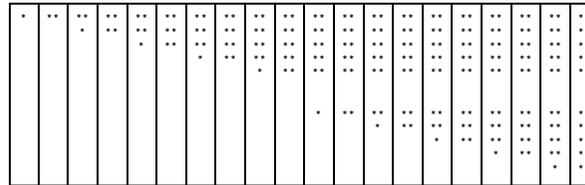
first **last**

1	2	3		17	18	19	20

Practice counting along the number track from first (1) to last (10).

Task for child

Provide child with a pictorial number track.



Ask child to place an object on one, then on two, three etc. until an object has been placed on each representation for the numbers 1 to 20.

Each time they place an object on the space, they must also say the number they are placing it on.

Deepening understanding

Provide a blank number track.

Label it with first and last and ask child to place a cube on the space that represents one.



first

last



Ensure your child knows that it is a left to right number track and that the first space is on the left hand side.

Ask your child to place an object on the space that represents two, three, four etc. until all spaces have an object on them.

Counting Procedures Within 20: Ordinality

Focus 4: To know the order and position of numbers on a horizontal number line

About the maths

This task develops your child's understanding of the position of numbers on a number line and deepens your child's understanding about numbers and the number system.

Key words

First, last
Number names zero to twenty
After, before, next

What you'll need

Horizontal number line, countable objects
e.g. Lego pieces, counters etc.

Getting started

Count on in unison from 0 to 20

Display a horizontal number line

Ask your child to identify which number comes first



first

last



Highlight that horizontal number lines always increase from left to right.

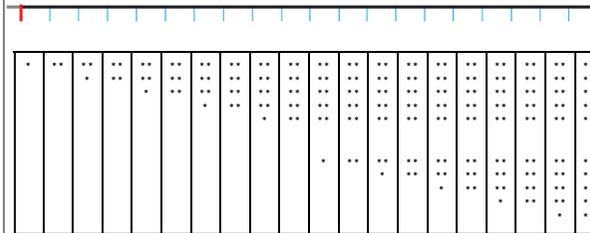
Practice counting along the number line from first (0) to last (20).

Practice counting along the number line from last (20) to first (0).

Ask your child to find number 14. Model how to find the number that comes before 14 and after 14

Task for child

Provide your child with a pictorial number line.



Ask your child to place an object on one, then on two, three etc. until an object has been placed on each representation for the numbers 1 to 20.

Each time they place an object on the space, they must also say the number they are placing it on.

Deepening understanding

Provide your child with a pictorial number line with all objects on them.

Parent gives instructions for your child to follow.

Children must respond with the number that they have taken the object off.

"I have taken an object off the number zero."

Suggested instructions:

Remove the last object. (twenty)

Remove the object that comes before twenty on the number line. (nineteen)

Remove the tenths object. (ten)

Remove the object that is after ten. (eleven)

Remove the object that comes before nineteen. (eighteen)

Etc.

Continue until all objects have been removed.

Counting Procedures Within 20: Ordinality

Focus 5: To know the order and position of numbers on a vertical number line

About the maths

This task develops your child understanding of the position of numbers on a number line and deepens the understanding about numbers and the number system.

Key words

First, last
Number names zero to twenty
After, before, next

What you'll need

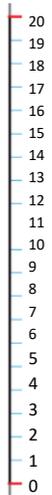
Vertical number lines (both numbered and blank), bead string or other resource with twenty items threaded onto string e.g. pasta tubes, buttons.

Getting started

Count on in unison from 0 to 20.

Display a vertical number line.

Ask your child to identify which number comes first and last, and label it.



Highlight that vertical number lines always increase as the numbers go upwards.

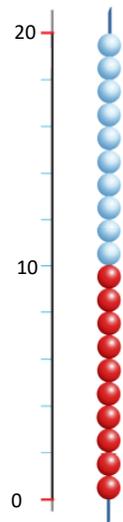
Practice counting on and back along the number line.

Task for child

Provide your child with a partially scaffolded number line e.g. some numbers covered.

Ask your child to estimate where the numbers 10, 16 and 18 would go and discuss why.

Provide child with a counting items to support estimations.



Highlight that vertical number lines always increase as the numbers go upwards.

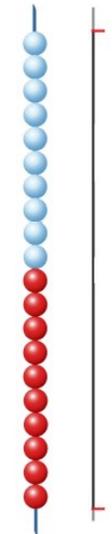
Deepening understanding

Provide your child with a different partially scaffolded number lines.

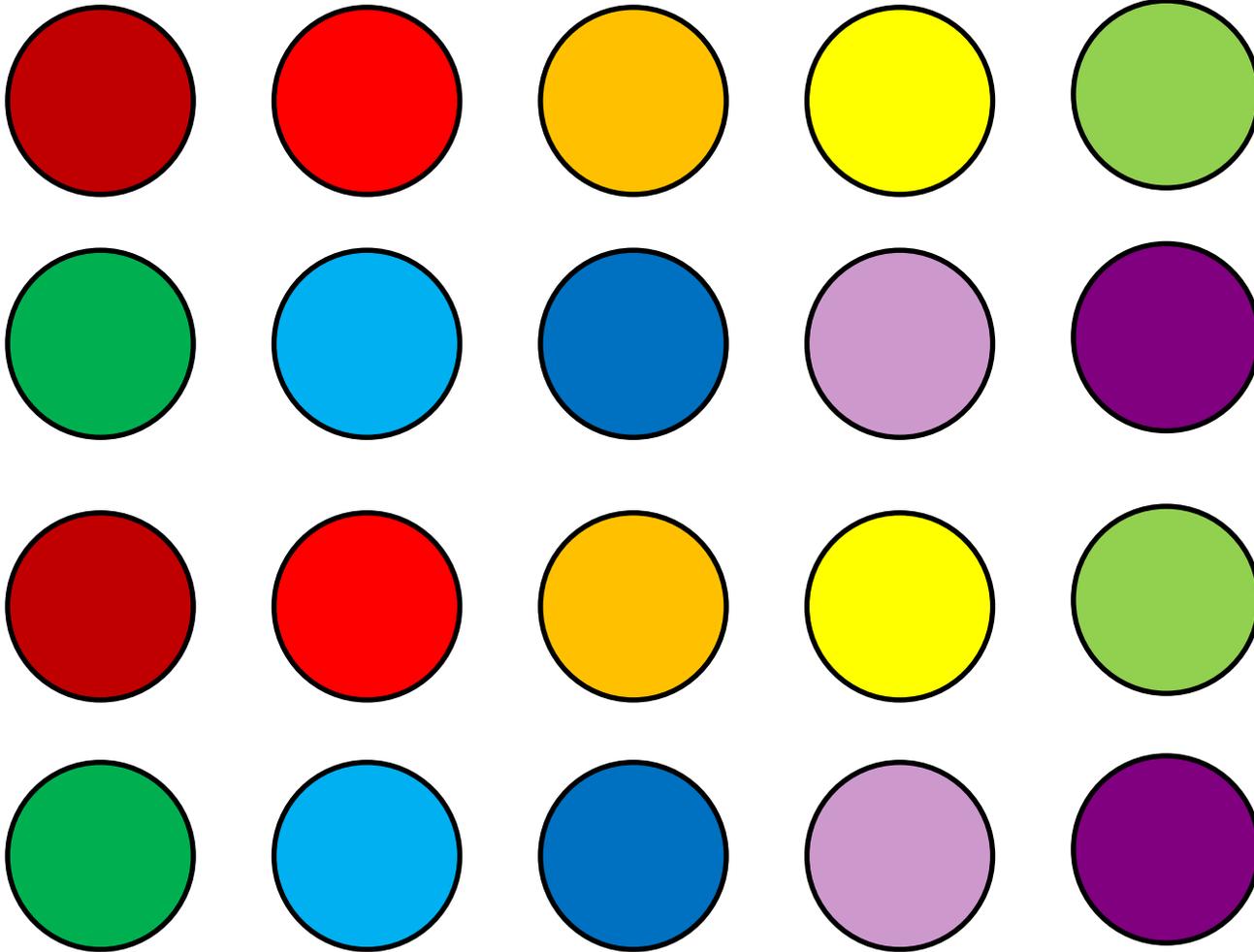
Ask your child to estimate where the numbers 0 to 20 would go and discuss why.

Provide your child with a bead string to support estimations.

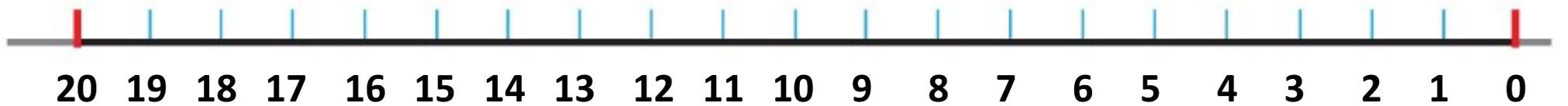
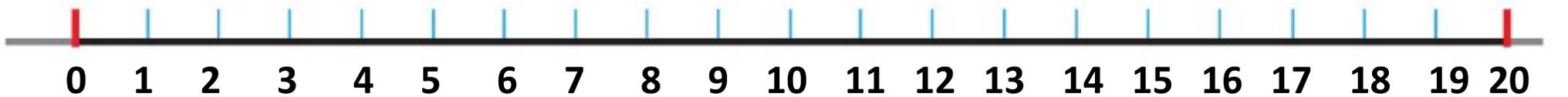
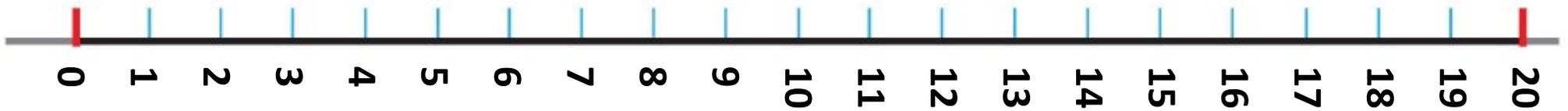
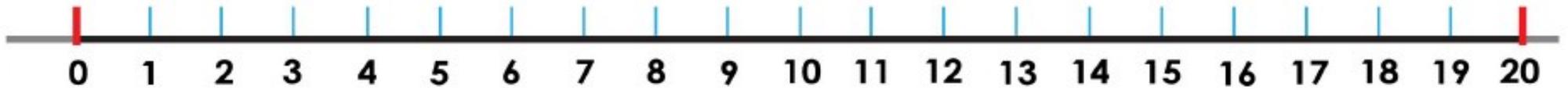
Regular practice exploring and working with the number line can develop your child understanding of numbers within 20 and the value of the numbers in relation to each other.



20 Counters



Number lines 0-20 vertical, horizontal, forwards, backwards and blank



Number cards 1-25

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

