

# **Foundation Sample Pack**



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# Introduction

**Busy Ant Maths Foundation** offers a complete solution for planning and delivering inspiring maths lessons. Designed to ensure mathematical confidence from the start, the new resources fully support the statutory standards of the Early Years Foundation Stage (EYFS) and extend the scope of the Busy Ant Maths scheme into the Reception year – providing full continuity for your school.

#### Busy Ant Maths Foundation includes:

- **Teacher's Guide** with a suggested medium term plan, inspiring lesson plans, a bank of adult-led and child-led activities and illustrated resource sheets.
- **Homework Guide** with activities and resource sheets. Activities are linked to lesson plans and include a feedback section for parents/guardians.
- Activity Book for children to practise and consolidate the Early Learning Goals. They can be used as a record of achievement.
- **Collins Connect** package, containing the planning tool and record-keeping tool, as well as teaching content: editable teacher resources, slides, games, tools, interactives and animated songs.



# Recognise numerals 1-20

EYFS Aspect of learning

Numbers

#### 40-60+ months Early years outcome

• Recognises numerals 1 to 20

#### Busy Ant Maths F topic

• Counting and recognising numbers

#### Vocabulary

number, numeral, one, two, three ... nineteen, twenty, how many?, count, more, less, group, set, before, after, next

### Related Areas of Learning and Development

Prime area of learning	Aspect of learning	Early years outcome
Communication and language	Listening and attention	Listens to stories with increasing attention and recall
	Understanding	Responds to instructions involving a two-part sequence
Physical development	Moving and handling	Handles tools, objects, construction and malleable materials safely with an increasing amount of control
Personal, social and emotional development	Making relationships	Can play in a group, extending and elaborating play ideas, for example, building up a role-play activity with other children

Specific area of learning	Aspect of learning	Early years outcome
Literacy	Reading	Enjoys rhyming and rhythmic activities
	Writing	Gives meaning to the marks they make as they draw, write and paint
Understanding the world	The world	Comments and asks questions about aspects of their familiar world, such as the place they live or the natural world
Expressive art and design	Being imaginative	Engages in imaginative role play based on first-hand experiences
		Uses available resources to create props and support role play

#### Prerequisites for Learning

- Children need to be able to recite the number names from zero to twenty in the correct sequence.
- Children need be able to count sets of up to at least 20 objects in a variety of situations. Some children may have strategies for counting larger groups of numbers, such as counting in groups.
- They need to be able to recognise the numerals 1–10 and have some experience of recording numbers.

#### **Overcoming Barriers**

- Children may have difficulty identifying the corresponding number to label a set, although they may be able to say the correct numeral. Either their inability to recall the corresponding symbolic representation of the number or their level of pencil control may hinder their recording. Provide opportunities for children to match numbers and sets of objects. Allow them to use number cards to provide an initial answer, encouraging them to write the numeral alongside, if appropriate.
- Children become less reliable in counting larger numbers. Continue to support them in their counting by encouraging different counting strategies, such as arranging objects into groups of ten. Ask them to say numerals aloud to reinforce their recognition of numerals.
- Some children will confuse '-teen' numbers and '-ty' numbers. They might count "twelve, thirty, forty". Overcome this with number rhymes and chants to reinforce number names.



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#### **EYFS Profile Assessment**

#### Look, listen and note

• Observe the child as they read numerals 1–20. Does the child them confidently and accurately? When working with groups of objects are they likely to talk about the quantity, 'lots of/more/less'. How likely are they to assign a numeral to a set of objects if not prompted?

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- When engaging in independent play, do they engage with the numerals around them? Which numerals do they recognise? Do they ask questions when they see numerals that they are not familiar with (20+ or three-digit numbers)? Do they relate unfamiliar numbers to ones they are familiar with?
- Is the child beginning to record their own numerals? Do they draw, tally or use numerals? Are they now more likely to use numerals?

#### Characteristics of Effective Learning

#### Playing and exploring

• Does the child involve numerals in their play and allow their play to be directed by the numerals they encounter?

#### Creating and thinking critically

• Does the child use what they know about recognising numerals 1–10 to help them become familiar with the numerals 10–20?

#### **Related Early Learning Goal**

• Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

#### Exceeding Development

• Children estimate a number of objects and check quantities by counting up to 20. They solve practical problems that involve combining groups of two, five or ten, or sharing into equal groups.

#### Next Steps

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- Children should now be familiar with the numerals 1–20 and be able to recognise them in a variety of contexts.
- Continue to give children opportunities to reinforce their recognition of the numerals 1–20, progressing to recording numerals. They should work towards recording the numerals they identify with a group of objects with increasing pencil control.

#### Related units

 N10 – Select the correct numeral to represent 1–5, then 1–10 objects Homework Guide: Unit N4: Numbers 1 to 20

# Adult-led activities

#### EYFS Aspect of learning

Numbers

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#### 40-60+ months Early years outcome

• Recognises numerals 1 to 20

#### Busy Ant Maths F topic

• Counting and recognising numbers

## Activity I: Finger counting to 20 🚑 or 👥

#### Objective

• Consolidate numerals 1-10 and become familiar with numerals 11-20

#### Resources

variety of counting rhymes

#### What to do

- Count together with the class, reciting the number sequence from zero to 20.
- Display: the Number Cards tool on the board, arranging the numbers 1–20 in order. Say: When I point to one of these numbers I want you all to say the number.

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- Point to each number 0-20 in random order. The children say each number name aloud as you point to it.
- Point to the number 13 and ask if anyone can hold up 13 fingers. Do children say 'No we don't have enough fingers'? Ask one child to stand up and hold their ten fingers. Say: **Ben is holding up ten fingers.** Ask: **Can anyone add to Ben's fingers so that we have 13 fingers in total**?
- Say: Let's count the fingers together. One, two, three, ... ten, eleven, twelve, thirteen. Start the count with the child with ten fingers.
- Repeat several times using different numbers greater than 10. Each time select one child to show ten fingers and another to complete the number.
- Continue to provide opportunities for the children to listen to, and participate in, stories, rhymes and songs that involve counting.

## Activity 2: Counting to 20 🛖 or 👥

#### Objective

• Consolidate numerals 1–10 and become familiar with numerals 11–20

#### Resources

variety of counting rhymes

#### What to do

- Count together with the class, reciting the number sequence from zero to 20.
- Display: the Number Cards tool on the board, arranging the numbers 1–20 in order. Say: When I point to one of these numbers I want you all to say the number.
- Point to each number 0-20 in random order. The children say each number name aloud as you point to it.
- Point to the number 13 and ask if anyone can hold up 13 fingers. Do children say 'No there are not enough'? Ask one child to stand up and hold their ten fingers. Say: **Ben is holding up ten fingers.** Ask: **Can anyone add to Ben's fingers so that we have 13 fingers in total**?
- Say: Let's count the fingers together. One...two...three... ...ten...eleven...twelve...thirteen. Start the counting with the child with ten fingers.
- Repeat several times using different numbers. Each time select one child to show ten fingers and another to complete the number.
- Continue to provide opportunities for the children to listen to, and participate in, stories, rhymes and songs that involve counting.

Activity 3: Engine counting 🛃 or 👥

#### Objective

• Count and recognise numerals 11 to 20.

#### What to do

• Display: The Engines interactive showing the numbered engines. Pointing to the engines on the board, say: Here are some engines. Each one has a different number.

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- Explain to the children that you are going to point to a number and ask them to make a train with that number of carriages.
- Point to an engine, 11, for example, and say: **Put up your hand if you can make a row of this number of carriages behind this engine.**
- Choose a child to count out 11 carriages, arranging them in a row behind engine 11.
- Ask the rest of the group to identify the number.
- Say: Let's check together. Ask: Are there 11 carriages for engine number 11?
- Count together with the group.
- Repeat the activity until all of the engines have been matched with the corresponding number.
- You may choose to focus on 11–15 in one session, then 16–20 in another.

### Activity 4: Acrobats 🛃 or 👥

#### Objective

• Recognise numerals greater than ten

#### Resources:

number cards 1-20 (per group)

#### What to do

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- Divide the children into small groups. Distribute 1–20 number cards to each group.
- Tell the children you are going to say a number between 1 and 20 and they are to hold up that number.
- Display: Slide 1 showing the acrobats and ask the children to count the number of acrobats. Support the children in counting the numbers bigger than ten by pointing out that each pyramid is ten acrobats.
- Children hold up that number card as quickly as possible.
- Ask each group to say the number aloud.
- Repeat the activity for the remaining slides.

#### Variation

• Children work in pairs to hold up the number. Each child holds up one digit, in the correct order, 1 and 4, for example, to create the number 14.

# Activity 5: Make the number 🚑 or 👥

#### Objective

• Recognise numerals greater than 10

#### Resources

number cards 1-20 (per class); multilink cubes (20 per child)

#### What to do

- Tell the children you are going to hold up a number between 10 and 20.
- Hold up a number between 10 and 20 (as appropriate for the class) and say: **Put up your hand if you can tell me the name for this number.**
- Tell the children to make the number using their multilink cubes.
- Repeat the activity several times.
- Observe children's methods as they create their numbers. Do they start from ten multilink cubes each time, or do they count from one each time? Discuss with the children their methods for counting the cubes as quickly as possible. Remind them that the 'ten' part is not changing each time, so they can keep a 'ten' ready each time.

# Activity 6: Remembering numbers 💂 or 👥

#### Objective

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• Recognise numerals 1-20

#### What to do

- Display: the Number Card tool on the board.
- Tell the children that you are going to show them three numbers. They have ten seconds to look at the numbers and memorise them, in order.
- Select any three numbers between 1 and 20 and put them into a row on the board. After ten seconds hide the numbers.

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- Ask if anyone can remember the three numbers in order.
- Encourage children to share any strategies they had for remembering the numbers.
- Adjust the quantity of numbers to remember and the timings, as appropriate for the class.

40-60+ months Early years outcome

• Recognises numerals 1 to 20

# Explore and play

EYFS Aspect of learning

Numbers

#### Busy Ant Maths F topic

• Counting and recognising numbers

Activity I: Human number line 💑 or 👥

#### Objective

• Sequence numbers 1–20

#### Resources

1-20 number cards (per class)

#### What to do

- Give each child a number between 1 and 20, as appropriate for each child.
- Ask them to arrange themselves in order between 1 and 20.
- If there are more than 20 children, give the others the task of checking the number line and rearranging children if it is wrong.

#### Variation

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• Hang a washing line across the room and ask children to peg numbers onto the washing line in turn.

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- Start with several numbers already positioned, using chairs or teddy bears.
- Omit some numbers from the 1 to 20 number range, e.g. 4, 11 and 16. Can the children identify the missing numbers and still place the other numbers in order from 1 to 20?

### Activity 2: Our street **22** or **2** or **2 e** or **3** or **3** or **3**

#### Objective

• Recognise the numerals 1-20

#### Resources

number cards 1–20 (per class); 20 shoe boxes (per class); variety of decorating materials to create a house, such as windows, trees, little people (per child)

#### What to do

- Children work as a class to produce a street of houses from 1 to 20. Children can work in pairs or individually, as appropriate.
- Lay out the number cards and ask each child/pair to come and select a number. (You can choose to assign numbers if more appropriate.)
- Children stick their numbers onto their box, and then decorate their box according to their number. For example, a child with box 6 might have six windows, six people and six trees.
- When the houses are finished, discuss how the houses might be arranged on the street.

### Activity 3: Sorting 💵 or 🔩 or 👁 or 🔄 or 🐼

#### Objective

• Recognise numerals 1–20

#### Resources

variety of sorting resources, for example beads/buttons and laces; counting keys (per child/pair/group); sorting tray (per child/pair/group); 1–20 number cards (per child/pair/group)

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#### What to do

- Set up a variety of simple sorting activities, differentiated according to individual needs.
- Place the 1–20 number cards in the sorting trays and ask the children to make sets of each number.
- Some children may need to focus on only one or two numbers at a time. In this case, only provide them with the relevant number cards.
- You may choose to concentrate on 10-15 one lesson and 16-20 in the next lesson.

#### Activity 4: Bingo 💁 🐼 or 🖃 or 🔅

#### Objective

• Recognise and name numerals 11-20.

#### Resources

Resource 9: Acrobats (one set per group); strip of paper divided into four (per child)

#### What to do

- Children work in groups of three or four.
- Display: the Number Cards tool showing the numbers 10–20. Ask each child to choose four numbers between ten and 20. Support them in writing the numbers on their piece of paper where necessary.
- The acrobat cards are put face down on the table in the centre of the group.
- Children take turns to take a card from the centre of the table and count the acrobats. They read the number aloud to the group.
- Children cross off the number if it is written on their piece of paper.
- The winner for each group is the first child to cross off every number on their paper.

### Activity 5: Hunt the number! **22** or **22** $\odot$ or $\odot$ or $\odot$

#### Objective

• Recognise numerals 11–20

#### Resources

11–20 number cards (per class/group); five hoops (per class/group); a selection of counting resources/counters, for example, beanbags, building blocks, plastic dinosaurs (per class/group)

#### What to do

- Hide the number cards 11-20.
- Arrange the five hoops in a row on the ground. Place between 11 and 20 objects into each one, to match the number cards you hid earlier.
- The children count the set of objects in the first hoop then look for the hidden number card that matches. Any other number cards they find must be left where they are.
- When the correct card is found, the children place it in the hoop.
- They then move on to the next set of objects, and so on, until all five number cards have been found.

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### Activity 6: Caterpillar stickers 22 (\*) or (\*) or (\*)

#### Objective

• Sequence numerals 11-20

#### Resources

stickers of the numbers 1-20 (per child); Resource 10: Caterpillars (per child); box (per group)

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#### What to do

• Children work in groups of five or six.

- Put the stickers for each group in a box in the centre of the table. Children take turns to choose a sticker from the box without looking.
- They then put their sticker on the corresponding circle on their caterpillar.
- If they pick a sticker they already have, they put it back in the box.
- Children who finish first could decorate their caterpillar.

#### Variations

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- Children keep any duplicate stickers and use them to trade with other children in the group.
- Start with several stickers already on the caterpillar.

### Activity 7: Role-play area 💵 or 🔩 ⊙ or 🔄 or 🛞

#### Objective

• Recognise numerals in the world around them

#### Resources

role-play areas set up to allow opportunities for children to engage in counting activities and mathematical language (per class/group)

#### What to do

- Set up role-play areas that will allow the children to engage in counting 0–20 and recognising corresponding numbers. For example:
- Garden shop:
  - Making seed packets and labelling them with 1 to 20 seeds. Then making modelling clay 'seeds' and counting the seeds into the packet.
  - Illustrating posters, for example, flower illustrations such as a '12-petal daisy'.

#### • Farm shop:

- Putting 'eggs' into egg boxes and labelling them.
- Counting out 1-20 'tomatoes' into a bag and labelling them.
- Writing prices for various 'produce'. Counting out the correct number of pennies to pay for an item costing 17p.
- Supermarket:
  - Use real-world packaging showing numerals, e.g. egg cartons. Encourage the children to make their own items of packaging, including numbers to show weight, price, how many and so on.
  - Ask the children to write their own shopping lists using numbers 1–20 and drawings as well as writing, if they choose to include it. Can they give their list to a friend so they can do the shopping? Do they buy the correct quantity of items? How can we check?
- Number recognition:
  - Set 'tasks' that involve number recognition, for example, notices saying 'Only put 8 cakes in each box', 'Set the table for 4 people'. Support the children in reading the information, but allow them to identify the numerals used.

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#### Objective

• Sequence numbers 1–20

#### Resources

a popular story book with up to 20 pages, photocopied onto single-sided pieces of paper, with numbered pages (per group); large display board (per group); sticky tack (per group)

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#### What to do

- Tell the class that you are going to read them a story, but all your pages are in a muddle. They are going to help you put the pages in the correct order.
- Each group uses the page numbers to put the story in the correct order, attaching it to the display board with sticky tack.
- Read the story to the group, emphasising which page of the book you are reading and when you move to the next page.

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#### Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Numbers I to 20

# • I can read numbers from 1 to 20

The children have been learning to recognise numbers from 1 to 20. Although they may be familiar with counting and number names, sometimes children may find it difficult to recognise a number when it is written down.



#### What to do

Homework Sheet 1 helps your child to recognise numbers from 10 to 15.

First help your child to cut out the numbers from the bottom of Homework Sheet 1.

Ask them to count on from 10 to 15 with you, and ask them to arrange the numerals in the same order in the empty row below the pictures. Help them to glue these into place once they are correct.

Then ask your child to look at each number in turn, and colour the same number of objects in the column above it, e.g. above '13' they colour 13 ladybirds out of the 15 that are shown.

### You will need: • glue

- scissors (with adult supervision only)
- colouring pencils/ crayons/felt-tipped pens

#### What to do



Homework Sheet 2 helps your child to recognise numbers 16 to 20.

Complete the activity on Homework Sheet 2 in the same way as described for Homework Sheet 1, to arrange numbers 16 to 20 in the correct order, then colour the corresponding numbers of objects.

#### What to do

Homework Sheet 3 helps your child to recognise the numbers between 1 and 20, and involves completing the sequence of numbers from 1 to 20. Help your child to cut out the numbers at the bottom of the sheet, asking them to name each number in turn. Ask your child to position the numbers in the correct place in the sequence. If they are finding it difficult to identify the next number in the sequence, give them some support, focusing on recognising the numeral. For example, ask: **The number 17 is next. Which** 

#### number is 17? Help them to glue the numbers in place once they are

correct. Ask your child to recite the number sequence from 1 to 20 using their completed sequence. What to do



Support your child in recognising numbers. Check first that they can recognise numbers 1 to 10 and then focus on numbers 10 to 20. Use a book with page numbers and say: **Turn to page 6. Can you find page 8? What happens on page 4 of the book? What page is after page 10? Find page 18.** Encourage your child to repeat the number aloud while pointing to the page number.

#### Feedback

Use this box to record any observations, comments or questions for your child's teacher.



# Numbers 10 to 15

- I can count up to 15 objects
- I can read numbers from 1 to 15
- You will need:
- glue

Date:

- scissors
- colouring pencils/ crayons/ felt-tipped pens



- What to do
  - Cut out the numbers from the bottom of the sheet. Count on from 10 to 15. Arrange the numbers in this order in the empty row at the bottom. Glue these into place. Look at each number in turn, and colour the same number of objects above it.

\_\_\_\_\_

13

10 15 12

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Name: \_

# Numbers 16 to 20

- I can count up to 20 objects
- I can read numbers from 1 to 20

Date:

- You will need:
- glue
- scissors
- colouring pencils/crayons



#### What to do

• Cut out the numbers from the bottom of the sheet. Count on from 15 to 20. Arrange the numbers in this order in the empty row at the bottom. Glue these into place. Look at each number in turn, and colour the same number of objects above it.

\_\_\_\_\_

17 20 15 18 16

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Unit N4 Recognises numerals 1 to 20 Homework 3



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Activity I

# Date: Numbers I to 10 I can say numbers in order from 1 to 10 .... Teacher's notes The train is starting from the engine shed at 0, and will be calling at all of the stations from 1 to 10. Trace the number on each station waiting room to find out the number of each station. Then, draw a

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line to show which way the train travelled from 0-10.

#### Activity 2



Foundation Activity Book.indd 3









To find out which garden each bee visits, count the number of flowers shown in each set. Join each garden to the bee that shows this number.



























# Interested in seeing more of Busy Ant Maths?

Visit <u>www.collins.co.uk/busyantmaths</u> for more information about our resources, and details about how we are supporting teachers when it comes to lesson planning and assessment.

To keep up to date with the latest releases, primary maths news and free class activities and resources, sign up to our email list here: <u>http://newsletter.collins.co.uk/</u>

To arrange a demonstration of Busy Ant Maths, or to discuss packages and pricing, please contact your school rep. Find your local rep at **findarep.collins.co.uk** 

