AGES
3+

MathLink® Cubes
Numberblocks 1–10 Activity Set
Activity Guide

Numberblocks, the friendly characters from the global hit math series, help children see how numbers work. These Numberblocks MathLink® Cubes bring a new dimension to exploring the characters and mastering early math skills.

Character Cards

Use the Character Cards to get to know the Numberblocks. Build the characters and compare them to their large image on the front of each card. Count the number of blocks each character is made from, and notice that the black number hovering above them (their 'Numberling') matches it. (See **Building the Numberblocks***)

For the back of the cards, use the following suggested prompts:

Zero

"I'm the number for nothing, I'm one less than one. If you've nothing of something, then I'm the number for none! When there's nothing there to count, none is the amount!"

- When there are no cakes left on the plate you have…?
- When all the birds have hatched and flown away you have…?
- Practice tracing the number Zero with your finger.

One

Numberblock One is the first little block that ever there was. She's the smallest and the bravest, has lots of ideas, and is always first to come up with a plan.

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. 2 − 1 = ?
- How many balls can you count? How many cupcakes? How many flowers?
- Practice tracing the number 1 with your finger.

Two

Numberblock Two is always there when you need a friend, and together, the two of you can do anything! He's very proud of his magic dancing shoes, and he loves to dance with a *one-two, one-two!*

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. 1 + 1 = ?
- How many magic shoes can you count? How many gloves? How many socks?
- Copy the pictures of Two with your Numberblocks MathLink Cubes.

Three

Numberblock Three is a real performer. Always juggling, putting on a show, telling a tall tale, or doing magic tricks to keep the others entertained with a *1, 2, 3, look at me!*
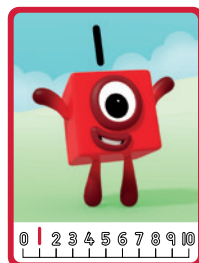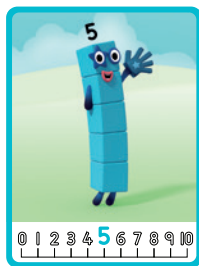
- Recreate the Number Magic with your own Numberblocks MathLink Cubes. 2 + 1 = ?
- Look at Three's juggling balls arching through the air! They form a triangle! Can you count how many points there are? How about sides?
- Copy the pictures of Three with your Numberblocks MathLink Cubes.

Four

Numberblock Four is the friendly block who's solid as a rock. He's always ready to help, he loves to laugh, and he is very, very excited to be a square!

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. 3 + 1 = ?
- Four loves to be square! Can you count how many corners there are? How about sides?
- Four can be lots of fun shapes! Copy the pictures of Four with your Numberblocks MathLink Cubes. (Just be careful not to make any tickly Terrible Twos by mistake!)

⚠ WARNING:
CHOKING HAZARD - Small parts.
Not for children under 3 years.

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Five

Numberblock Five is a real star and the leader of the band. She's always got a high five and friendly encouragement for the others, and she loves to count to five on her fingers.

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $4 + 1 = ?$

- Can you copy the pictures of Five with your own Numberblocks MathLink Cubes? Now you can see that Four plus One and Two plus Three are the same as (or equal to) Five! How else could you make Five?

- Count the fingers on Five's glove. Now count the points on the star! 1, 2, 3, 4, 5… Numberblocks!

Six

Numberblock Six loves to roll her magic die and get everyone playing games. She loves to rhyme and she's pretty handy too—she can split into Ones, Twos, Threes, or one of each!

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $5 + 1 = ?$

- Look at the faces of the die. Count the dots and match them to your Numberblocks Cubes.

- Copy the pictures using your own Numberblocks MathLink Cubes. Each shows different ways of making Six! Can you think of another way to make Six?

Seven

Lucky Numberblock Seven was hit by a rainbow and turned all seven colors! Somehow, everything just falls into place and turns out nicely when he's around. How lucky is that?

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $6 + 1 = ?$

- How many scoops of ice cream can you count? Which Numberblock do you think would enjoy which scoop?

- How many colors can you count in the rainbow? How many colors in the layer cake?

- Line up Numberblocks One to Seven to copy the picture.
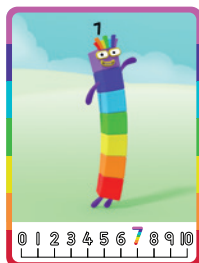
Eight

Numberblock Eight is known by his superhero name: Octoblock! He's got eight arms (or are they legs?). When he needs to run fast, swim a long way, climb up high, knit in a hurry, or more, he changes shape to activate a unique, special power each time.

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $7 + 1 = ?$

- Your mission, if you choose to accept it, is to find each of the superpowers on the card in your favorite Numberblocks episodes. When you find it, point to it and say it like Octoblock! *"Octoblock Climb! 1-2-3-4-5-6-7-8 Climb!"*

Nine

Numberblock Nine is a square like Four but bigger and stronger. He often gets a tickly nose, and if he doesn't get to a hankie just in time, his middle block shoots out in a giant sneeze! He has nine hankies, just in case.

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $8 + 1 = ?$

- Nine can split into the three Threes! Can you make three Threes using your Numberblocks MathLink Cubes? This shows that three Threes make Nine!

- When a shape is the same number of blocks across as it is tall, it makes a square. Make Four and Nine using your Numberblocks MathLink Cubes. Compare them. Who is bigger? Count the corners and then count the sides on their fronts. How many does Four have? How about Nine?

- Look at the picture of Nine sneezing out his middle block. Can you copy this with your Numberblocks MathLink Cubes? You will be left with two new Numberblocks, but who are they?
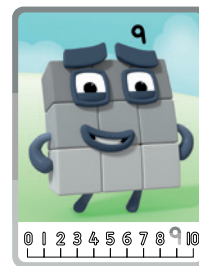
Ten

Numberblock Ten is simply amazing. She's got two Numberlings: a 1 and a 0. She's got two starry eyes with ten points and two big hands so she can count to ten on her fingers. She can even turn into a rocket and blast off into space by counting down from ten!

- Recreate the Number Magic with your own Numberblocks MathLink Cubes. $9 + 1 = ?$

- Use your Numberblocks MathLink Cubes to make a long, straight Ten. Count down from 10, 9, 8…. When you get to 0, lift off and fly Ten around the room before coming back down to land in Numberland.

- Look at the image of Ten. When she makes this shape, she looks like a set of stairs! Can you recreate the shape using your Numberblocks MathLink Cubes?

- Count the fingers on Ten's gloves. Now count the points on the stars! How many fingers? How many points on the stars?

- Use your Numberblocks MathLink Cubes to make two Fives. Stand them one on top of the other. Now they are as tall as Ten. Stand them side by side. Can you also make Ten match this shape? Now you know that two Fives are the same as (or equal to) Ten!

Building the Numberblocks

Either/Or

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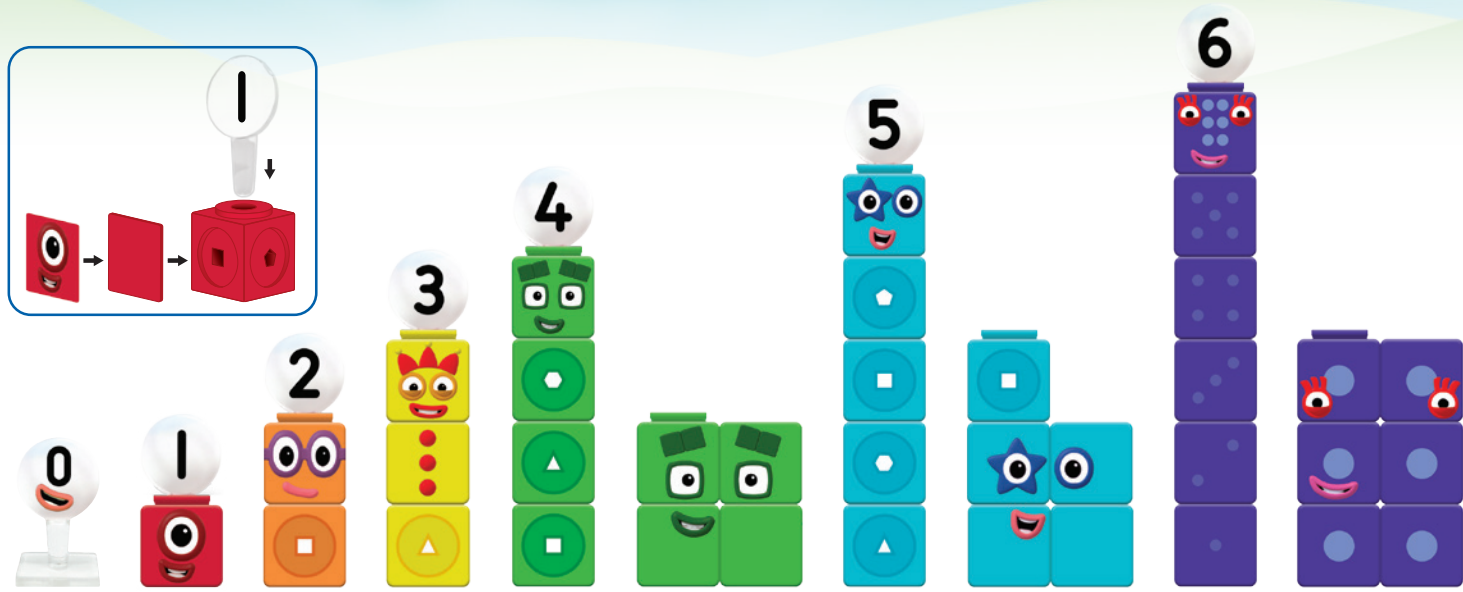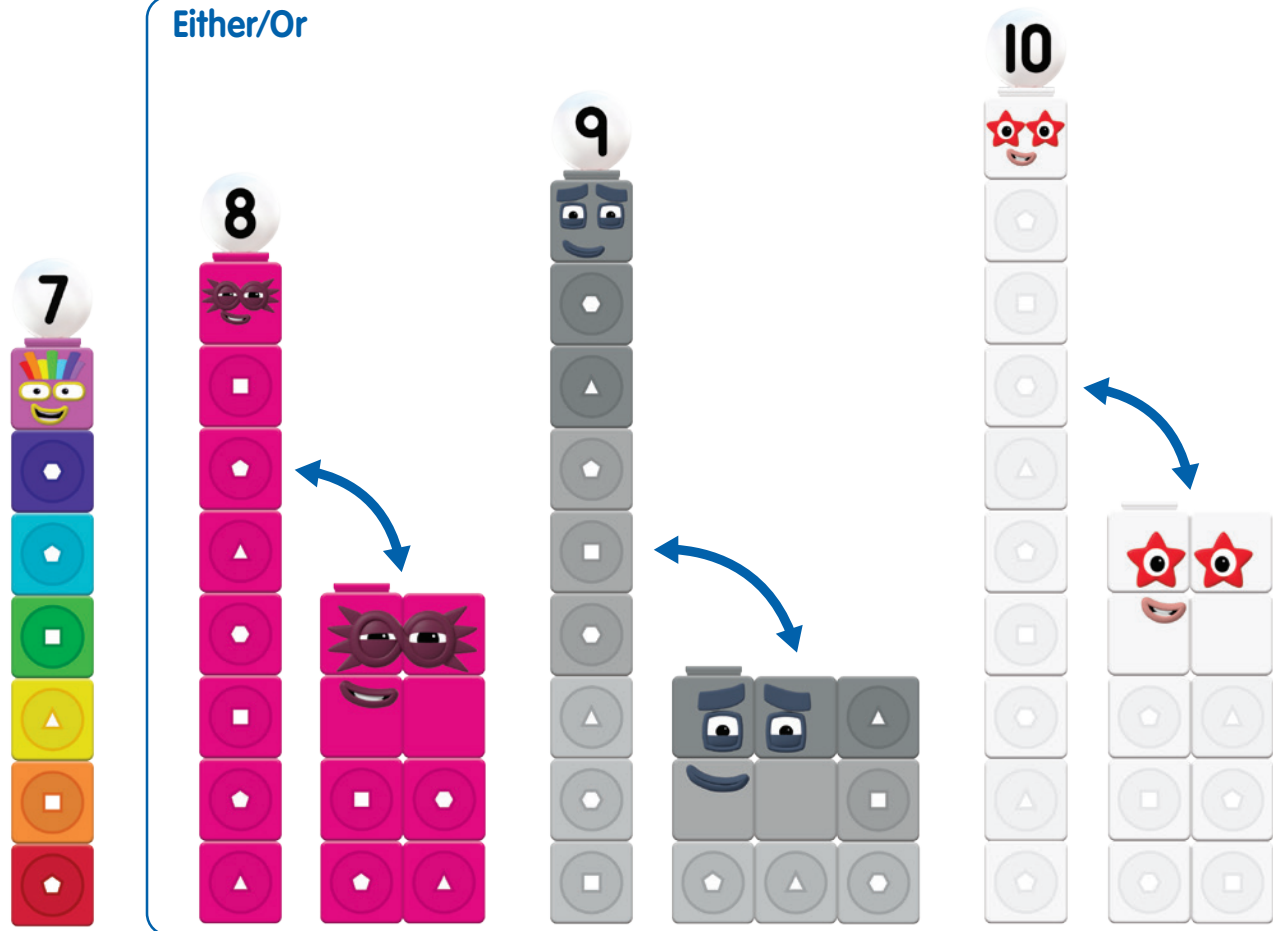
Activity Cards

The activities closely follow a number of the episodes from series 1–3.
Try watching the episodes as you do these activities for an added learning reinforcement. It will double the fun!

Note: the cards are color coded by level. The first 11 are red, relating to numbers 1-5.
The remaining cards are orange, covering numbers 6-10.

1

Episodes: (Click the episode title)

- **One** ▶
- **Another One** ▶
- **Two** ▶

Skills:

- counting to 1
- 2 is more than 1
- counting to 2

You will need:

- 2 x Numberblock Ones
- 1 x Numberblock Two

Activity Card 1

Look at the left-hand side of the card. What can you see? (One sun, bee, ant, whale, tree, and bird.) Compare the objects, paying attention to their size. Note that the whale and tree are much bigger than the rest, yet their quantity (one) is still the same. Place Numberblock One on the red square. Discuss how she might feel, being all alone.

Now look at the right-hand side of the card. Identify the objects (tandem bicycle, shoes, socks, tennis rackets) and observe that there are two of them—they are in pairs. (Note for the tandem bicycle, this is in terms of the seats and wheels.)

Move Numberblock One over to the bottom orange space. What do you notice? Can One ride the tandem bicycle or play tennis alone? No, she needs a friend. Find another One. Can she fit in the other orange space? Count the two Ones. What do they make?

Swap Numberblock Two for the two Ones. Explore how One and another One combine to make Two. They are equivalent in value. Also, Two can be separated into One and another One (this is known as **partitioning**).

Now that One and Two are placed on the card, Numberblock One will no longer be lonely—she has a new friend!

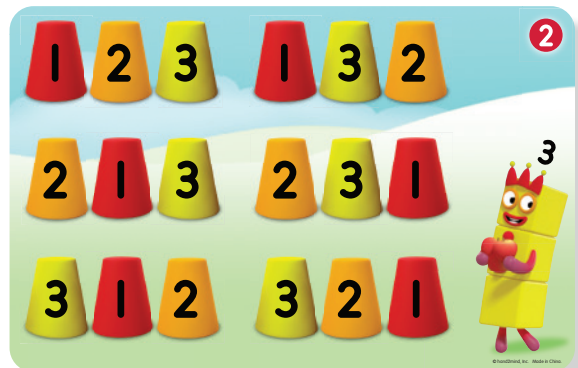## 2

Episodes: (Click the episode title)

- **One, Two, Three!** ▶

Skills:

- counting to 3
- comparing and ordering numbers 1, 2, and 3

You will need:

- Numberblocks One, Two, and Three

Activity Card 2

This activity builds on the episode where Three picks three apples from a tree and makes a game by hiding one under a numbered cup.

Look at the sequences of cups on the card. Practice laying Numberblocks One, Two, and Three side by side to match the order of the cups in each sequence.

Notice that Two is bigger than One; Three is the biggest. In the correct formation, One is first, Two second, and Three third; like this they take on the form of a staircase.

③ **Episodes: (Click the episode title)**

- **Four** ▶

Skills:

- counting to 4
- the structure of 4 as a square number
- recognition of 4 items without counting (this is known as *subitizing*)

You will need:

- 7 x Numberblock Ones
- 3 x Numberblock Twos
- 1 x Numberblocks Three and Four

Activity Card ③

In the episode, Numberblocks One, Two, and Three meet Four while admiring the clouds. Three complains that she is no longer the tallest, so Four reconfigures to make himself shorter—this is when he discovers he can become square!

Recreate this sequence, first line up the Numberblocks standing tall in height order. Now turn Four into a square and observe how Three is tallest again.

Next fill the clouds with different combinations of Numberblocks that together make four (four Ones, two Twos, one Two and two Ones, one Three and one One).

Four is very proud to be a square! Note his four sides that are all the same length, and his four corners.

Note: an outline of four squares can also be used alongside the episode **Terrible Twos**, in which two naughty Twos tickle other numbers, making them split apart. Three and Two break into Ones, while Four can be four Ones or two Twos.

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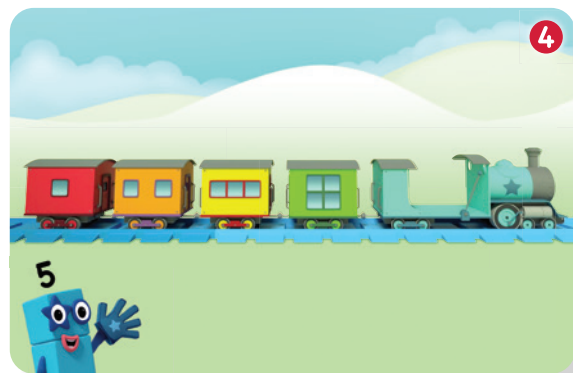
④ **Episodes: (Click the episode title)**

- **The Numberblock Express** ▶

Skills:

- composition of 5
- partitioning and combining 5 in different ways

You will need:

- 5 x Numberblock Ones
- 2 x Numberblock Twos
- 1 x Numberblocks Three, Four, and Five

Activity Card ④

This card features Five's multicar train from the episode. See how the cars are color coded and have the corresponding number of windows for Numberblocks One to Four, while Five's front section features a five-pointed star.

In the epsiode, Five falls off the train. The other Numberblocks must try to make Five in order to bring the moving train to a halt—only she can stop the train!

To recreate this, have Five 'stand tall' and place her in the front car. Pretend to start the train before moving her off the card. Now move five Ones into play, placing them in the One car. Explore and describe how these can add together to create Five ('One plus One is Two,' etc).

Next, the puffs of steam from the train break Five down cube by cube. Recreate this by removing an individual One until there are no cubes left. Again, describe this as you go ('Five minus One is Four,' etc).

Just like in the episode, bring Numberblocks Two, Three, and Four into play with the Ones. (Place them in their appropriate car for reinforcement.) Explore how they can combine (using addition) to total Five in order to stop the train, then break back down again into their starting numbers (using subtraction).
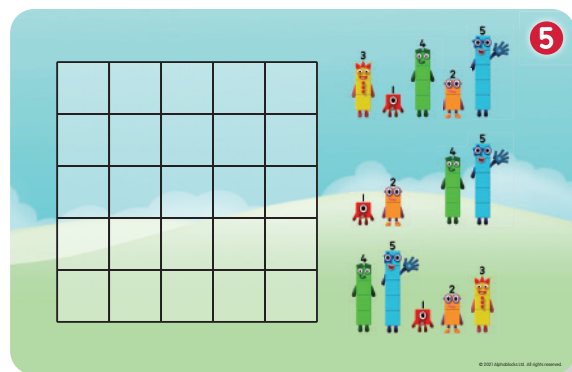
❺ Episodes: (Click the episode title)

- **Off We Go!** ▶

Skills:

- counting to 5
- line up 1 to 5 in the correct order
- identify missing numbers within a lineup

You will need:

- 1 x Numberblocks One to Five, all standing tall
  An opaque bag or sheet of card stock

Activity Card ❺

Hide the Numberblocks in the bag or under the card. Reach inside and explore the characters using your sense of touch—can you find the tallest block? Which is smallest?

Now remove the characters and place them on the right place on the 5x5 grid, starting with One on the left-hand side. Talk about which character comes before or after another.

Have someone set up the characters in the wrong order. Try to reorder them correctly, swapping them with a character immediately by their side (don't be afraid to sing the 'I'm bigger/smaller than you, diddly-diddly-do' song from the episode!).

Extend the activity by only putting four of the characters in the bag—can you still place the Numberblocks correctly?

Note: the grid also offers a perfect platform for exploring the different shapes Numberblocks One to Five can make! Try using a dry-erase marker to draw a particular outline for a character (see the **Stampolines** episode for inspiration) then match it by reconfiguring your characters!
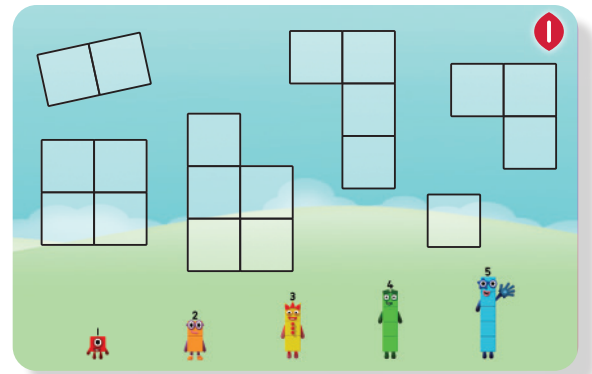
Episodes: (Click the episode title)

- **Stampolines** ▶

Skills:

- subitizing numbers 1 to 5
- different ways of arranging blocks to 5
- *conservation of number* (the number remains the same despite a different arrangement of blocks)

You will need:

- all Numberblocks One to Five

Activity Card

The card ties in with the episode in which Three has opened a Stampoline park where the Numberblocks can bounce on inky trampolines and leave an image on a white canvas.

Study the arrangements and try to figure out which one represents which Numberblock. How do you know? Check by reconfiguring the Numberblocks on top—are they a perfect fit?

Using a dry-erase marker, draw a line to match each one to the correct Numberblock. (You will notice there's a sneaky second image for one of the characters!)

Explore some more shapes that the Numberblocks can make. These include:


Notice that One can only make one shape. Two can make two arrangements, although they are the same shape turned around. Three can make two different shapes; Four several; and Five the most.

The more blocks a number has, the more arrangements it can make.

Now explore how different Numberblocks can combine to make the different block arrangements—which two different Numberblocks together make Five? How many Twos make Four?

Extend the activity by placing the Numberblocks in these new arrangements into a bag. Reach into the bag and try to identify them now!
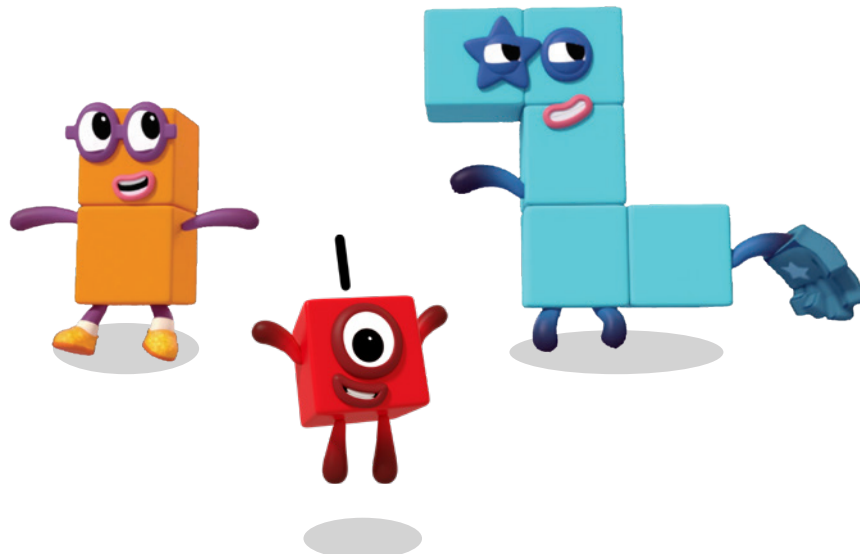
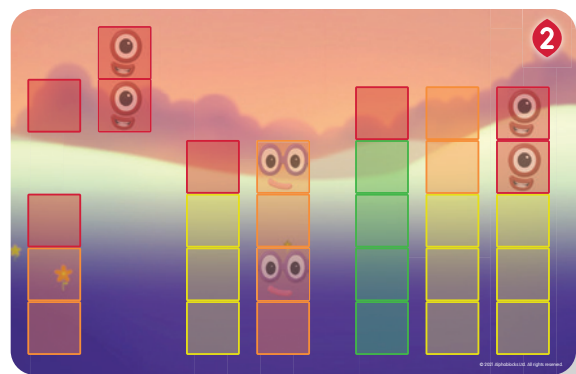**2** **Episodes: (Click the episode title)**

- **The Whole of Me** ▶

Skills:

- composition of numbers 1 to 5
- introduction to the part-part-whole structure of number (the two parts that combine to make a whole); partitioning a whole number; conservation of number (a number can be partitioned but the whole remains the same)

You will need:

- all Numberblocks One to Five

Activity Card 2

This card follows the episode where the Numberblocks put on a song and dance about how their bodies split apart in different ways. For example, Five is shown split into One and Four, and also Two and Three.

Look at each of the towers of blocks on the card and add up the total (except for One of course, as the whole of her is one!). Select the right Numberblock that equals the 'whole' component and lay it on top for comparison—they should match perfectly in size.

It would be fun to do this alongside the episode, while the Numberblocks sing their songs:

- *I'm Number One, and this is fun, I've got one block to play with, and the whole of me is One.*
- *I'm Number Two. How do you do? I've got two blocks to play with, and the whole of me is Two. One is a part of me and One is a part of me, and the whole of me is Two.*
- *I'm Number Three. Now look at me! I've got three blocks to play with, and the whole of me is Three. One is a part of me and Two is a part of me, and the whole of me is Three.*
- *I'm Number Four, and I am sure. I've got four blocks to play with, and the whole of me is Four. One is a part of me and Three is a part of me, and the whole of me is Four.*
  Followed by *Now here is something more, that's different from before. Two is a part of me and Two is a part of me, and the whole of me is Four.*
- *I'm Number Five. I am alive. I've got five blocks to play with, and the whole of me is Five. One is a part of me and Four is a part of me, and the whole of me is Five.*
  Followed by: *But now I feel alive, going into overdrive! Two is a part of me and Three is a part of me, and the whole of me is Five.*

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3 **Episodes: (Click the episode title)**

- **Holes** ▶

Skills:

- the number of a group can be changed by adding to or taking away from it; addition and subtraction of 1; number bonds to 5 (that is, the pairs of numbers that together make 5: 1 and 4; 2 and 3; 3 and 2; 4 and 1)

You will need:

- 1 x Numberblocks One to Five

Activity Card 3

The card shows a scene from the episode in which Five happens across a curious sparkly hole in front of a large boulder. As she leans in to take a look, One falls off and down the hole, leaving Four behind.

Recreate this by placing Five standing tall to the left of the boulder. As One falls off Five, break one cube from the top of Five and move it underneath the boulder and up through the second sparkly hole. Five has decreased by one, leaving a tower four tall. Replace the cubes with Four to the left of the boulder, and One on the right. Describe what is happening: first there was a tower of *five* cubes. Then one cube fell into the hole. Now the tower is *four* cubes tall.

Repeat the play pattern, until no Numberblocks stand to the left of the boulder. Observe that every time someone gets one smaller, someone else gets taller.

Extend the learning by using one colored block from each of One to Five to represent the birds that fly between the trees in the episode. Start with them on the left-hand tree. Then, move the birds in the correct order (One's red first, Two's orange second, Three's yellow third, etc) each time a One falls down the hole.

4

Episodes: (Click the episode title)
- **Blockzilla** ▶

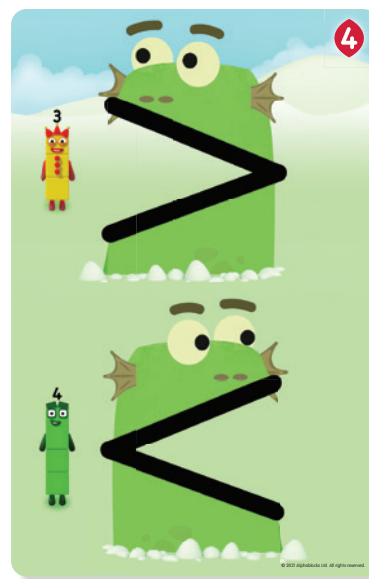### Skills:
- compare numbers 1 to 5
- greater than/less than

You will need:
- Numberblocks One to Five, standing tall

Here's a colossal creature who really, really likes bigger numbers!

Just like in the episode, Blockzilla wants to play with the biggest Numberblock. Look at the examples on the card. Notice the Numberblocks in place, and the direction Blockzilla's mouth is pointing (it always opens towards the bigger number). Now try placing Numberblocks characters to correctly complete the equations. While doing so, say just like Blockzilla 'Four has more blocks than Two. Four is greater than Two. Greater means bigger, so me like Four!'

Have you noticed that there are two possible answers to the top challenge? Both One and Two are smaller than Three! What happens if One and Two combine; how does that number compare to Three? Having seen the episode, what do you think would happen to Blockzilla's mouth if Three stands in the space? (It would turn into an equal sign, as Three is equal to Three.)

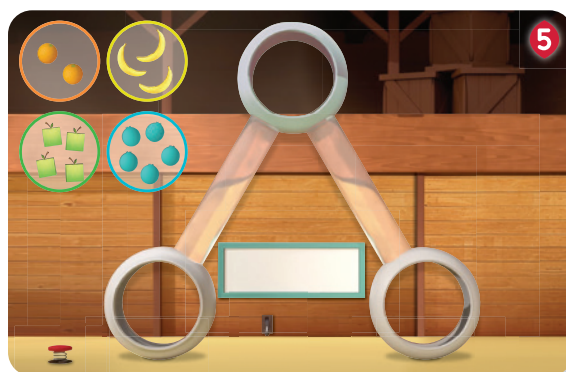**Activity Card 4**

5

Episodes: (Click the episode title)
- **Fruit Salad** ▶

Skills:
- composition of numbers to 5
- using the part-part-whole model to partition and combine numbers to 5

You will need:
- All Numberblocks One to Five, plus single MathLink Cubes to represent the fruit
- two orange cubes for the oranges
- three yellow cubes for the bananas
- four green cubes for the apples
- five blue cubes for the blueberries.

Activity Card 5

The card shows Three's Fantastic Fun Fruit Factory from the episode, in which the machine shares out fruit.

To recreate this, stack the 'fruit' in the top section of the machine, and the corresponding Numberblock character standing above. Next, move the fruit through the machine (for example, three bananas could be shared into 1 and 2 or 2 and 1.) As this happens, move the Numberblock into the top section of the machine, and break them down into the corresponding characters (in this case, Numberblocks One and Two).

Complete number sentences for each fruit in the white section of the machine, using a dry-erase marker (for example, $3 = 1 + 2$).

Just like the episode, pretend the machine is now sucking everything back up: the math is now reversed as the fruit regroups into its original quantity (for example, $1 + 2 = 3$). You can draw arrows on the two chutes the fruit travels through with a dry-erase marker to show in which direction the machine is working.

Note that the more pieces of fruit, the more ways there are to share them.

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Activity Card ⚠️

1

Episodes: (Click the episode title)

- **Zero** ▶

Skills:

- 0 is one less than 1 and an absence of something

You will need:

- Numberblocks Zero to Three

The card features images from the episode that help show that zero is the absence of something.

Count the numbers of cakes on each plate. Notice that the bottom plate doesn't have any cakes at all! Now try and match the Numberblock character to the corresponding plate of cakes.
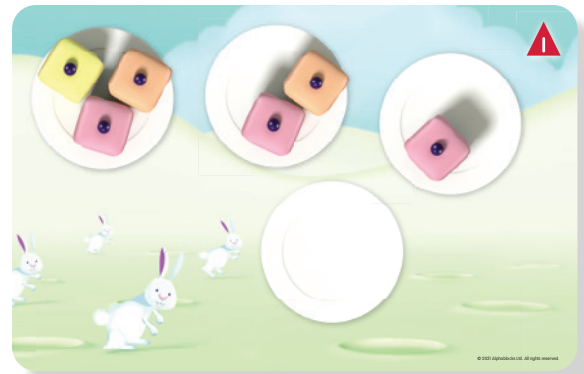
Talk for the Numberblocks:

Three would say, 'Three cakes for me.'

Two would say, 'One less than three is two; two cakes for me.'

One would say, 'One less than two is one; one cake for me.'

Zero would say, 'One less than one is… oh; no cakes for me!'

The surrounding artwork shows a scene from the episode – see on the left-hand side a field full of bunnies? When all those bunnies have hopped (right-hand side of the card), how many bunnies are left? Zero!)

Activity Card 2

2

Episodes: (Click the episode title)

- **Counting Sheep** ▶

Skills:

- exploring equivalent ways to represent 6
- partitioning 6 into equal groups; factors of 6

You will need:

- 1 x Numberblock Six
- 2 x Numberblock Threes
- 3 x Numberblock Twos
- 6 x Numberblock Ones

Six has six sheep who won't fall asleep! In trying to make them sleepy, she herself falls asleep and the sneaky sheep escape. The activity follows the episode, where Six splits into different groups of Numberblocks to try to catch all the sheep and return them to the pen.

Recreate this by first of all using Six to try and herd the sheep in. Can one Numberblock Six catch all six sheep at once? No, because they can all run off in different directions! She needs more Numberblocks.

Next, Six splits into quantities that are the same as (equivalent to) her. Six splits into two Threes (say, 'Six is the same as 3 and 3'). How many sheep does each Three have to try and catch? Is this an easier way to herd the sheep?

Now try three Twos (say, 'Six is the same as 2 and 2 and 2') and finally six Ones ('Six is the same as 1 and 1 and 1 and 1 and 1 and 1'). Again, consider how many sheep each Numberblock will have to try and catch.

In the episode, six Ones manage to catch all the sheep as they can hold on to one sheep each.

As an extension activity, challenge children to split the sheep into groups of 1s, 2s, 3s and 6, by drawing line(s) on the card using a dry-erase marker.

3

Episodes: (Click the episode title)

- **Seven** ▶

Skills:

- 7 is more than 6
- counting to 7

You will need:

- Numberblocks One to Seven

Activity Card 3

This scene follows the episode, in which Numberblocks One to Six sit down for a picnic just as it begins to rain. When sharing her umbrella, One accidently lands on Six, to make Seven (6 + 1 = 7). Seven is an incredibly lucky number, who not only makes the sun shine, but is also bathed in the colors of a rainbow!

Explore the new picnic scene. Identify the colors of the rainbow. How many are there? Compare the colors of Seven to Numberblocks One to Six; can you notice a pattern?

Count the objects in front of each Numberblock. Use a MathLink Cube in the corresponding color to count along.

Can you place your own Numberblocks MathLink Cubes on their corresponding character?

What shape do the Numberblocks make when laid flat in number order? Which Numberblock is the tallest? Which number is one more than Five? Talk about which Numberblock comes first, second, third, fourth, fifth, sixth, and seventh.

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4

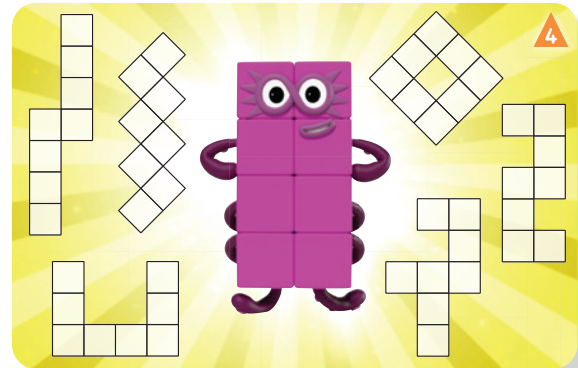**Episodes: (Click the episode title)**

- **Eight** ▶

Skills:

- counting to 8
- subitizing

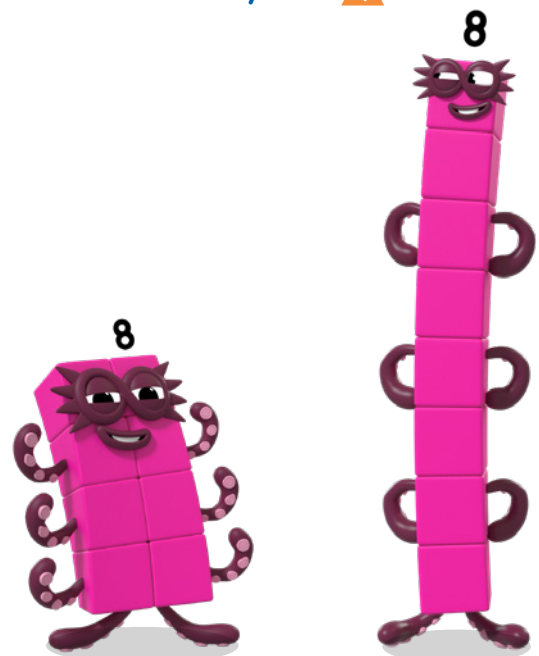**You will need:**

- Numberblock Eight

Activity Card 4

Numberblock Eight's alter ego, Octoblock, is having fun transforming into lots of shapes!

Explore the large image of Octoblock. Can you create him using your own Numberblocks MathLink Cubes? Count his blocks and tentacles. How many spikes are there on his 8-shaped mask?

Consider the name Octoblock—can you think of other words that begin with 'oct' (octagon, octopus). What do these words all have in common? (They relate to the number eight.)

Now look at the outlines of the different shapes Octoblock has transformed into. Recreate each one using your Numberblocks MathLink Cubes.

5

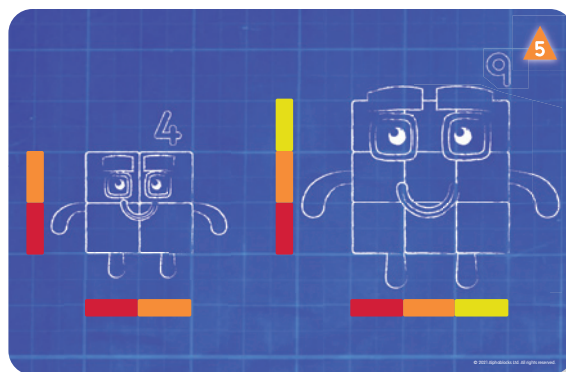**Episodes: (Click the episode title)**

- **Nine** ▶

Skills:

- counting to 9
- the structure of square numbers (4 and 9)
- partitioning and combining 9

You will need:

- Numberblocks One to Five
- 1 x Numberblock Nine

Activity Card **5**

Compare Numberblocks Four and Nine (both built as squares). Notice that their front faces both have four corners and four sides. They both are as tall as they are wide—no matter which side they're turned on. Explore this by using individual red, orange, and yellow MathLink Cubes. Lay them to the left and above the squares, observing how Four is two blocks tall and two blocks wide, while Nine is three blocks tall and three blocks wide. You can also show this by using Numberblocks Two and Three!

See how Four is made of two groups of two, while Nine is made of three groups of three; model this using individual MathLink Cubes.

Take Four and Nine for adventures around the room, looking for other square objects!

Now explore Nine further, by laying combinations of two different Numberblocks on top, to find the number bonds of 9 (8+1; 7+2; 6+3; 5+4).

6

Episodes: (Click the episode title)

- **Ten** ▶

Skills:

- counting to 10
- 10 ones is equivalent to one 10

You will need:

- 10 x Numberblock One
- 1 x Numberblock Ten, Zero
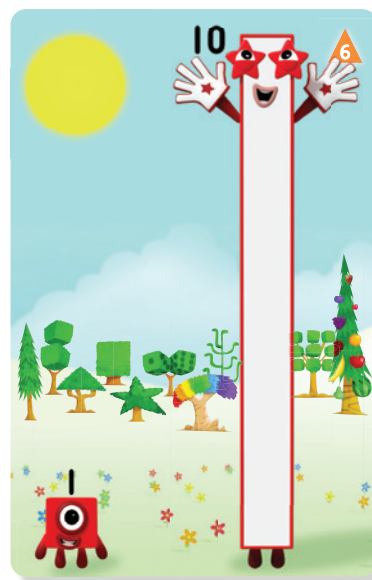

Activity Card **6**

This episode introduces a key concept of our number system (base ten): ten is both ten ones, and one unit of ten. This card helps visualize the equivalence between the two.

Look at One and Ten on the card. Compare the two. What's the same? They both have the digit 1 in their number. They both have a red outline. They have the same number of arms and legs.

What's different? Ten has a 0 as well. The 0 keeps the 1 in the right place (next to 0) to mean one ten.

Notice that Ten looks different than normal—compare her to your own Numberblock Ten. See how she has one big white block, rather than ten small ones. Ten is ten blocks or one ten block! Connect ten Ones and lay them over the top of the image of Ten for comparison.

As an extra activity, study the trees—can you see how each one relates to a particular character from One to Ten?

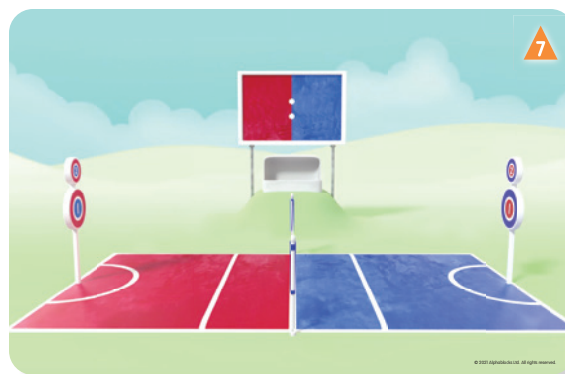### 7 Episodes: (Click the episode title)

- **Odds and Evens** ▶

Skills:

- odd and even numbers
- equal groups

You will need:

- Numberblocks One to Ten
- spare Numberblocks One and Two
- An opaque bag or sheet of card stock

Activity Card 7

The Numberblocks are playing bounceball! The card features a scene of the bounceball court from the episode.

Set up the Numberblocks so they stand 2 blocks wide, lined up in numerical order. What do you notice about them? Can you see that the even numbers have a flat top, whereas odds have one odd block at the top? This demonstrates that an odd number is an even number 'plus one'. An even number is made of twos. Which type of number would be better at balancing a ball on the top of their head? (An even number, as it has a flat top.) Notice that when lined up, there is an odd number on either side of each even number.

Place the Numberblocks in a bag or under a sheet of card stock. Now using just your sense of touch, reach out for a Numberblock and say if it is an odd or even number.
Now lay the block on the correct side of the stadium (left-hand side Odd Blocks, right Even Tops).

With the players correctly placed, can you see another pattern? Note that each number increases by two, whether odd or even. Try splitting each Numberblock character in half lengthwise. What do you notice? (Evens can be split evenly; with odds, one half is always bigger than the other.)

Think about the part of the episode when each number jumps up to bounce the ball—during the slow motion playback, they are broken down into Twos (with a One on top where necesssary). Do this alongside each of the blocks—seeing how many lots of Two (and a One if applicable) they are made of.

Can you come up with a final score for the game? Choose an even number and an odd number for the right team!

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8 Episodes: (Click the episode title)

- **Blast Off** ▶

Skills:

- count back from 10 to 1
- number bonds of 10

You will need:

- Numberblocks One to Ten

Activity Card 8

Find out which pairs of numbers add together to make ten. During this episode, One wishes she could go to the moon and Ten promises to take her, transforming into a rocket.

Look at the image of Ten as a rocket on the card. Now lay your own Ten block on top, counting down from the top to bottom the number of blocks (ten, nine, eight, seven… one, finished with a blastoff!)

Now for the number bonds. Ten is partitioned into 9+1; 8+2; 7+3; 6+4 and 5+5. Explore this by using Numberblocks One to Nine, all standing tall. Try laying two different characters at a time directly on top of the image of Ten, seeing which combine to total ten. Each time you find a correct combination, place each into one of the spaceships and launch them back home to Numberland!

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9

Episodes: (Click the episode title)

- **Numberblobs** ▶

Skills:

- counting to 10

You will need:

- all individual MathLink Cubes

Activity Card 9

These spherical little creatures are the Numberblocks' favorite friends! In the episode, they sing along with the Numberblocks, counting different objects as they go.

Count each group of Numberblobs. Can you correctly identify the Numberblock that each group represents? Place a MathLink Cube on each blob as you go, for a physical reinforcement.

For added fun, sing along with the episode and your Numberblocks!

10

Episodes: (Click the episode title)

- **Peekaboo** ▶

Skills:

- comparison of numbers 1 to 10

You will need:

- Numberblocks One to Ten
- The Numberblocks are having a fun game of hiding behind one another!

Activity Card 10

Look at the image of Numberblock Ten. Do you notice something strange along her sides? That's right, lots of arms! All of the other Numberblocks are hidden behind her—she is large enough to hide them all. This is explored in more detail within the episode. You can recreate this by taking different pairs of Numberblocks characters (standing tall) and see who can hide whom. Notice that the ones able to hide are smaller than the characters who are hiding them. In order to hide someone, a Numberblock must be bigger than (or the same size as) the character they're trying to hide. Explore this by seeing which can hide behind Eight. Can he hide Nine and Ten? (No, because they are bigger than him.)

The card also features the 'Four Door' from the episode. See which characters can fit through the door—you may need to rearrange some characters (Three should make the L shape rather than stand tall). Can any characters combine and still fit through together? (two Twos, One and Three, four Ones).
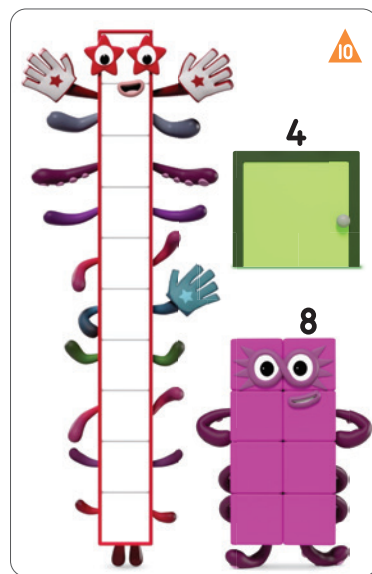
1
2

Episodes: (Click the episode title)

- **Hiccups** ▶

Skills:

- composition of numbers to 10
- partitioning and combining numbers in different ways
- number bonds of 6, 7, 8, 9 and 10

You will need:

- Numberblocks One to Ten

The next two cards follow the episode in which Numberblock One tries to take photographs of her friends. All goes well until Numberblock Nine gets the hiccups—with each hiccup his blocks break apart into combinations of two smaller blocks. The rest of the Numberblocks then start hiccuping too! Let children explore this by seeing which two numbers combine to make each of Numberblocks Six, Seven, Eight, Nine and Ten, laying them directly on top of each character's image.

For added fun, sing along with the episode and your Numberblocks!
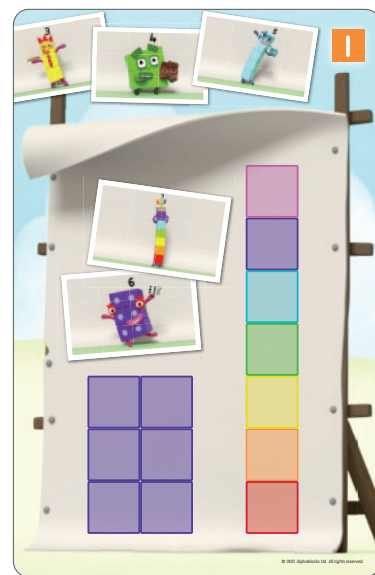
Activity Card **1**
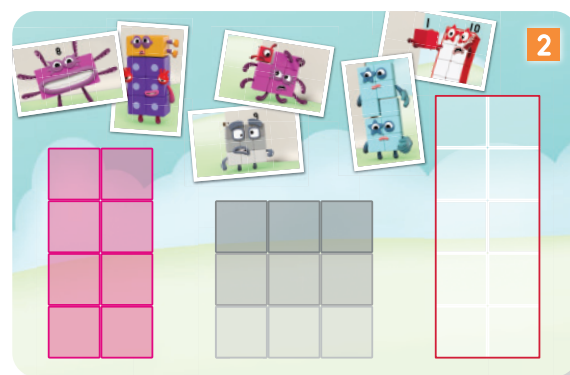
Activity Card **2**

3

Episodes: (Click the episode title)

- **Numberblock Rally** ▶

Skills:

- subtraction

You will need:

- Numberblocks One to Ten

Activity Card **3**

It's the day of the Numberblock Rally. Ten riders, ten race cars, but only one winner!

First, Ten whizzes into the lead, confident about winning as she's the biggest number in the race.

Recreate this on the card by pretending the grid is a race car. Stand Numberblock Ten tall above the left-hand grid space (in the 'driving seat'). Then place ten individual red MathLink cubes to fill in the correct number of cubes along the car itself.
You can also draw on the correct number of wheels with a dry-erase marker; one under each red cube.

In the episode, Ten's car hits a bump, and one of her blocks falls off! Recreate this by swapping Ten for Numberblock Nine, standing tall in the driver's seat. Now remove one of the red blocks from the car (and erase the drawing of the wheel beneath it if necessary). Describe what is happening: 'Ten minus one is nine'. It may be useful to write the number sentences on some scrap paper.

Work back through each number in this way, for One to finally win the race! (All the bigger numbers are made of Ones, so it's only fair that One should win, after all.)

Further the learning by removing more blocks at a time: 8 – 2 = ?, 7 – 3 = ?, 9 – 3 = ?, 6 – 3 = ?, etc.

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4
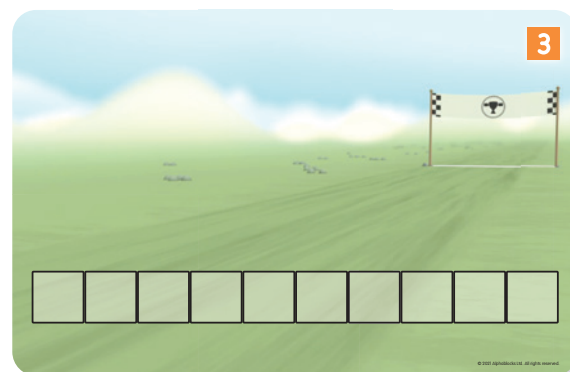
Episodes: (Click the episode title)

- **Five and Friends** ▶

Skills:

- numbers 6 to 10 are made from 5 and a 'bit'

You will need:

- Numberblocks One to Ten

Five and Friends are invited to a five-star ball at the Two Palms Dance Floor. The only problem is, some of the Numberblocks have gone missing!

First, Numberblocks One to Five are missing. The remaining Numberblocks (Six to Ten) notice that they are all made of Five and a friend. Use the image on the card to demonstrate this. First of all lay Numberblock Six next to the Five on the card. How many more blocks than 5 is 6? Repeat this process with Numberblocks Seven to Ten.

Next, Numberblocks Six to Ten go missing, but there are five Fives. Numberblocks One to Five realize that if each of them combines with a Five, they make one of the numbers from 6-10. Recreate this by placing a Numberblock One, Two, Three, Four or Five above the top of Numberblock Five on the card. Place your other Numberblock Five over her picture on the card and count the rows of cubes to check your work.

The hands in the background help reinforce this activity. Use the fingers as another aid for counting and adding. Notice how each finger corresponds with its Numberblock character. On the left hand, five fingers are up.

The right hand's fingers are all down. Can you stand them up, by laying the correct Numberblock character in the space of the correct finger? Use these as a useful counting aid!

Complete the number sentences using a dry-erase marker.

Activity Card 4

5
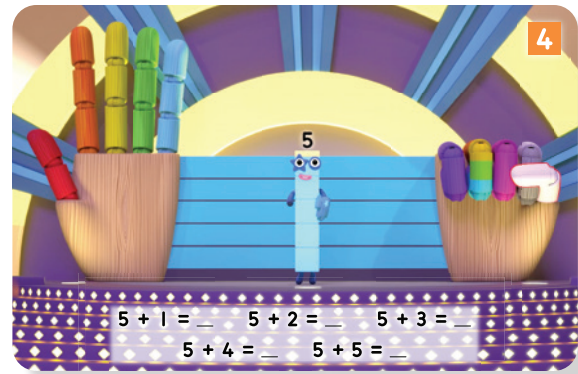
Episodes: (Click the episode title)

- **Octoblock to the Rescue!** ▶

Skills:

- number bonds of 8

You will need:

- Numberblocks One to Seven

The naughty Terrible Twos have been causing trouble again, but when Octoblock (Numberblock Eight) tries to help, he gets tied up. Sending a distress signal to his Numberblock friends, they all come to the rescue, splitting off into pairs. The card shows the combinations of the Numberblocks that split off together.

Explore each of the four sections of the card. What colors are in each section? Can you use these to help you select combinations of two Numberblocks that together make Eight? Check if you're right by laying the Numberblocks on top of the Octoblock outline—is it a perfect match?

Further the learning in line with the episode: the Terrible Twos pull out two magic mirrors. Upon looking at their reflections, two more Terrible Twos appear! Four Terrible Twos make one Octonaughty (2+2+2+2=8); model this with your own Numberblock Twos.
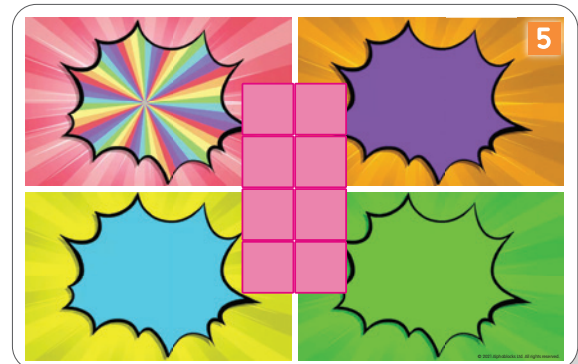
Activity Card 5

6

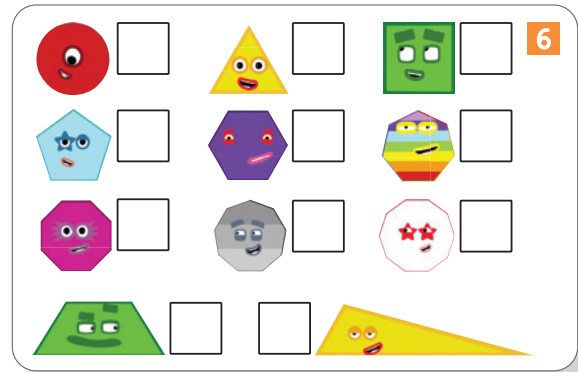**Episodes: (Click the episode title)**

- **Flatland** ▶

Skills:

- 2D shapes

You will need:

- Numberblocks One to Ten
- plus an extra Three and Four, all standing tall

Activity Card 6

Four visits Flatland, where the flat shapes live, and becomes a 2D square. Here he meets the variety of shapes shown on the card.

Explore these shapes, observing their colors and facial features. Can you match them to their corresponding Numberblocks character? Stand them tall on the space next to their shape.

Now break a character into individual cubes. Lay a cube on each of their shape's sides, counting how many cubes you have to lay. Next, do this for the corners. Repeat this for every Numberblock.

What patterns do you notice? The number of corners is equal to the number of sides. Except for the circle, which is special, as it has no corners and only one curved edge.

While the square and trapezoid have four sides and four corners, the lengths of the sides differ.
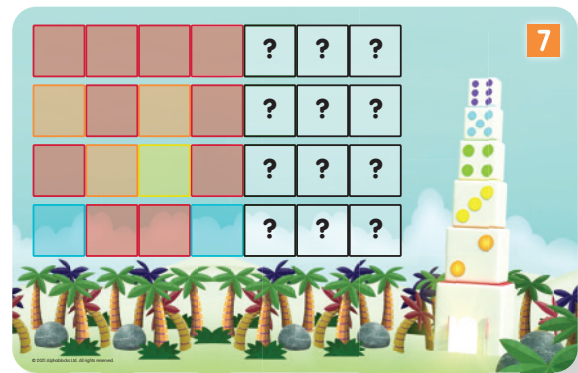

7

Episodes: (Click the episode title)

- **Pattern Palace** ▶

Skills:

- patterns

You will need:

- all individual MathLink Cubes

Activity Card 7

Help the Numberblocks get to Pattern Palace, where they can play all day! Identify and complete the patterns on the pathways to help them on their way.

In the episode, a floating speaker gives the following instructions:

'Follow the pattern!'—Look at a completed section of a pattern pathway. Note the colors. Identify which Numberblock character(s) the sequence relates to, and use them standing tall to hop across the blocks until they reach the first blank space.

'Continue the pattern!'—Now place an individual MathLink Cube of the correct color on the blank space, moving your character(s) along. Repeat with the next blank space, until your character(s) complete the pattern.

'Tell me the pattern!'—Describe the pattern in words (for example: 'red, orange, yellow').

If you are correct, the floating speaker declares, 'Pattern unlocked!'.

Now create your own patterns using your Numberblocks MathLink Cubes. Perhaps you can challenge a friend or adult to complete them!

8
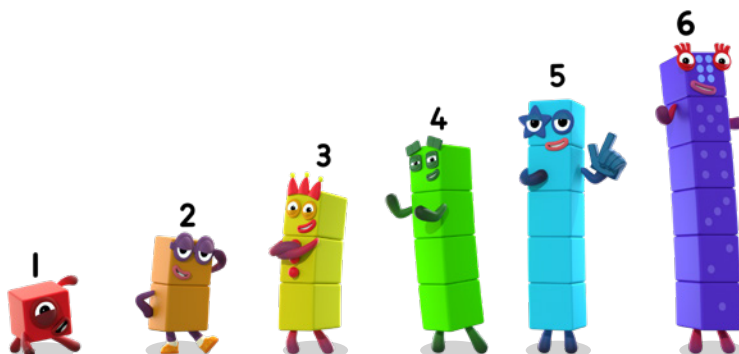
Episodes: (Click the episode title)
- **The Legend of Big Tum** ▶

Skills:
- problem solving and finding the missing number

You will need:
- all Numberblocks One to Ten

Activity Card 8

The Numberblocks are climbing Blocky Mountain in search of Big Tum, the big hairy monster who loves a puzzle! They soon notice that some Numberblocks are going missing, ending up in Big Tum's warm tummy. Can you help to figure out which characters Big Tum hides?

First, look at the number line. Notice that one number is missing; it's been replaced by a square. Can you figure out which Numberblock it is? Use your cubes to help you, by lining up the Numberblocks on top of their number. Which character do you have left? Place it on top of the square.

Now play using the image of Big Tum. Practice laying Numberblock characters to create a challenge (for example, a Two on the left-hand space, and a Five on the right). Then figure out what number should be inside Big Tum's tummy to correctly complete the number sentence. (In this case, Three).

As you do this, talk through the number sentence , saying 'yum' for Big Tum (for the above example, Two plus 'yum' equals Five').

9
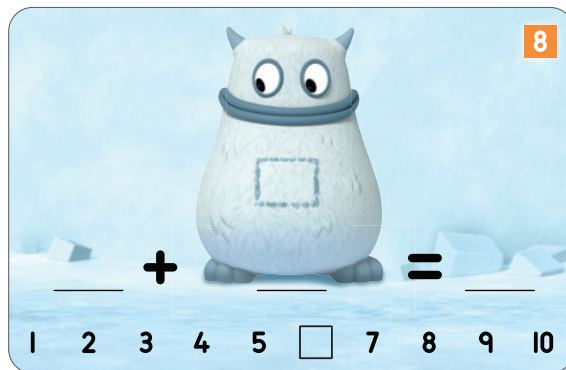
Episodes: (Click the episode title)
- **Mirror, Mirror** ▶

Skills:
- *repeated addition* (adding multiples of the same number)

You will need:
- Numberblocks One to Four

Activity Card 9

The magic mirror helps Numberblocks to double up. In this particular episode, One makes a wish that the magic mirror could make lots of friends at once, and so the mirror grows to become a multiple magic mirror.

First look at the two multiple magic mirrors on the card. Remember that a normal magic mirror would make one lot of whichever Numberblock looks into it. With a double magic mirror, two lots of them would be made; with a triple magic mirror, three lots.

Now explore the following combinations:

Double magic mirror—lay Numberblock One to the left of the mirror, as though she is looking into it. Now create the new Ones using additional cubes. Each should appear as a reflection in the mirror(s), then slide underneath, combine, and be replaced with the right Numberblock character. Talk through what is happening each time: 'two lots of One are….'. Repeat this for Numberblocks Two, Three, and Four as per the episode.

Now try this with the triple magic mirror for Numberblocks One, Two, and Three.

10

Episodes: (Click the episode title)

- **The Wrong Number** ▶

Skills:

- problem solving and reasoning about numbers

You will need:

- individual MathLink Cubes

Play detective and help Numberblock One solve the mystery! Which numbers are hiding on the card?

Study each of the shapes. Can you recreate them using some Numberblocks MathLink Cubes? (It will help to lay the cubes directly on top of each shape.) Now rearrange the cubes so they all stand two blocks wide for better comparison. What observations can you make? Can you identify the odd and even numbers? How? Which is tallest? Which numbers could hide behind it? Which ones can make a step shape like in the episode? Could these shapes be two Numberblocks in disguise?

Challenge a friend or grown-up to play detective and guess your secret number! Choose a Numberblock, and keeping it hidden, give them some numbery clues to help them try and guess what it is. For example: It is bigger than Four. When it stands two blocks wide, it has a flat head.

Have fun exploring with numbers!
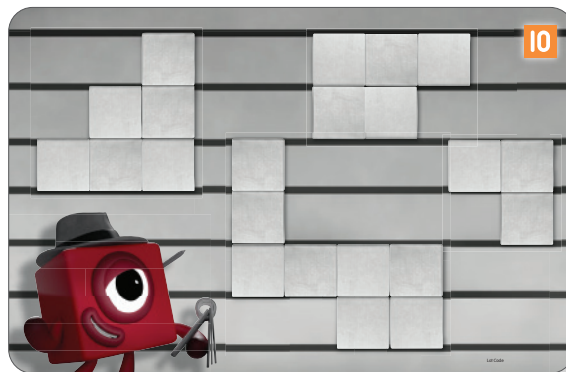
Activity Card 10

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