A TEACHER'S GUIDE TO

THE NUMBERLYS

WRITTEN BY WILLIAM JOYCE
ILLUSTRATED BY WILLIAM JOYCE
AND CHRISTINA ELLIS

ABOUT THE BOOK

From the team who brought you *The Fantastic Flying Books of Mr. Morris Lessmore* comes an alphabet tale extraordinaire!

Once upon a time there was no alphabet, only numbers...

Life was...fine. Orderly. Dull as gray paint. Very...numberly. But our five jaunty heroes weren't willing to accept that this was all there could be. They knew there had to be more.

So they broke out hard hats and welders, hammers and glue guns, and they started knocking some numbers together. Removing a piece here. Adding a piece there. At first, it was awful. But the five kept at it, and soon it was...artful! One letter after another emerged, until there were twenty-six. Twenty-six letters—and they were beautiful. All colorful, shiny, and new. Exactly what our heroes didn't even know they were missing.

And when the letters entered the world, something truly wondrous began to happen...Pizza! Jelly beans! Color! Books!

Also an Academy Award–nominated animated short film and app, this is William Joyce and Moonbot Studios's *Metropolis*-inspired homage to everyone who knows there is more to life than shades of black and gray.

ABOUT THE AUTHOR AND ILLUSTRATOR

William Joyce does a lot of stuff—films, apps, Olympic curling—but children's books are his true bailiwick (*The Numberlys*, *The Man in the Moon*, *Nicholas St. North and the Battle of the Nightmare King*, *Toothiana*, and the #1 *New York Times* bestselling *The Fantastic Flying Books of Mr. Morris Lessmore*, which is also an Academy Award–winning short film, to name a few). He lives with his family in Shreveport, Louisiana.

Christina Ellis is an illustrator, telling fantastic stories through her characters and their worlds. Christina joined the legion of Moonbots after studying illustration at Ringling College of Art and Design. She lives in Shreveport, Louisiana, and *The Numberlys* is her picture book debut.

LET'S MAKE SOME WISHES!

(This activity to be adapted for different age levels, ages 3–7)

List the numbers vertically, from 1–20. Then, beside each number, have children write or draw pictures of what they would wish for if they could have that many of what they are writing or drawing. (For example: Beside the "1," have students draw or write what they would like to have one of. Beside the "2," students should write or draw what they would like to have two of.) They should continue through the number twenty. Adapt this activity to a smaller number of wishes for younger children. For instance, when doing this activity with younger children, the child (or group of children) could tell the adult what they wish for, and then the adult could write their wishes and corresponding numbers on a chart paper, modeling how to write and make a list.

THUMBPRINTS

Explain to children that their thumbprint, and each of their fingerprints, is very special. In fact, we say each one of us has ***unique*** fingerprints.

Using an ink pad, help each child make a thumbprint. Then, after the thumbprint dries, enlarge it, using a copy machine. Preferably enlarge each thumbprint to a full 8 ½" x 11" size. Then, give each child the enlarged print of his/her thumbprint and have them write and/or draw a story about the things that make him/her very special. Children can also be encouraged to draw a picture of themselves, or even to use a digital camera to photograph themselves and include the picture with what they write.

HANDPRINTS

Help each child trace their hands onto a sheet of construction paper. Then, beginning with the thumb, write sequential numbers on the fingers, 1–5. Then have the child add decorations to each finger. Each finger should have as many decorations on it as the number on the finger. For example, if the thumb is labeled 1, then there should be one decoration on that thumb; then the index finger would have a 2 and so it would have two decorations on it. This will help young children conceptualize about "how many" each number represents, and it will also help them with one-to-one matching. The decorations can be drawn, or since young children love stickers, they could use stickers in the appropriate quantity to decorate their handprint.

USING SIMPLE SIGHT WORDS TO WRITE A STORY

(This activity is for children ages 5–7)

Onto circles of construction or duplicating paper, write 40–50 simple sight words, or words that the children have learned to read and write.

Place the sight words in a box, and let each child draw ten words from the box. (Ten words correspond to the number 10 in *The Numberlys*.) Then let the children use those ten words to write a story. Encourage the children to write their story about numbers or letters, demonstrating their understanding of *The Numberlys*.

After children have written their stories, encourage them to read their stories to the class. They can also be encouraged to use different forms of the words they drew (adding endings, prefixes, or suffixes to the words).

USING A CODE TO WRITE WORDS AND SOLVE PUZZLES

Vertically, write the numbers 1–26, and beside each number, write the alphabet letters, A–Z.
So, 1 = A, 2 = B, and so forth.

Help children understand that numbers can be represented by a letter, and then they can solve a puzzle or unlock a secret code.

To help children learn to do this, begin by writing their names. For each letter, help them find the corresponding number for that letter. Have them find a number for each letter of their name. (It is important to separate each number with a comma, since some letters will be represented by 2-digit numbers. This will avoid having children confuse a two-digit number with two other numbers written together.)

Then try the mystery code game with children in reverse. Turn a word or phrase into a number code, and have the children identify and write the letter for each number until they have written a word or a series of words.

Examples:

H A P P Y B I R T H D A Y
8, 1, 16, 16, 25 2, 9, 18, 20, 8, 4, 1, 25
G O O D M O R N I N G
7, 15, 15, 4 13, 15, 18, 14, 9, 14, 7

Other suggestions for clues would include:
It is time to get up
It is time to go to bed
What time is It?

See the *Numberlys Code to Solving Puzzles* worksheet at the end of this guide to practice decoding numbers to make words.

TALKING ABOUT IDEAS

Using *The Numberlys* as a starting point for a discussion, ask the children: If they could change their name to a number, what number (or numbers) would they choose and why?

1. What number would you choose?
2. Why did you choose that number?
3. What does that number mean to you?
4. Beside the number you chose, draw a picture of something special to you that helps other people know your number.

DISCUSSION IDEAS

What if there were no numbers? How could we know how many we have of something? What would some of the problems be if we didn't have numbers? How would we know what time it is? How would we know how old we are?

Then continue the discussion with the children. What would happen if we didn't have letters? How would we know what the names of things are? How would we know our names? This will help children understand the significance of the representational nature of numbers and letters to communicate important information and ideas.

SCAVENGER HUNT

Have a scavenger hunt for numbers.

The Numberlys teaches children the importance of numbers and letters. Have the children look for numbers in their environment (house numbers, streets that have numbers for their names, telephone numbers on the sides of trucks).

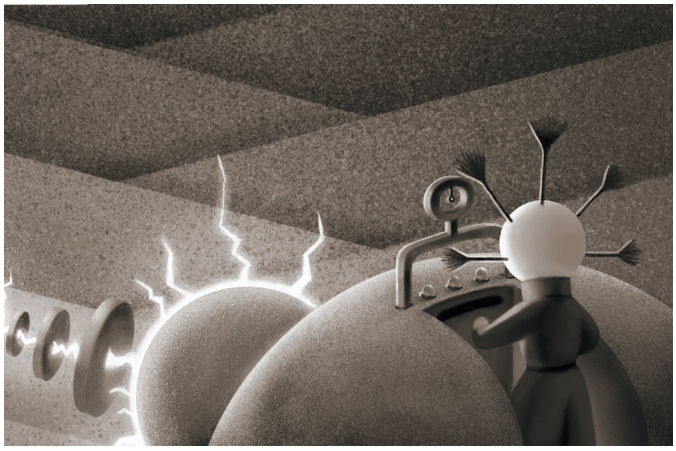
See how many numbers the children can find. Help them to be alert and "number conscious" as they look around their school, house, and neighborhood.

You could also do this by handing each child a newspaper or magazine and asking them to find all the numbers they can. Then have the children share which numbers they found and where they found them.

Try also having a scavenger hunt for letters.

Help children find letters in unexpected ways!

One good way children will find some letters is in the architectural designs of buildings around them. Have them look carefully to see if they see letters that are part of designs. Then they can also look for letters written on walls, automobiles, and signs. This will help children become more observant and will also help them with their vocabulary and word recognition. What letters can you find?



BUILDING WORD LADDERS

Word ladders are a kind of word game, in which a beginning word is given and an end word is given. The objective is to change the "start" word to the "end" word, but you can only change one letter on each line at a time, and each time you make a change, the change must also yield a real word. This type of word game was historically credited to Lewis Carroll.

Example:
Changing *cold* to *warm*!

Cold
Cord
Card
Ward
Warm

Here's another example:

Change *toy* to *bag*

Toy
Tog
Tag
Bag

Give children some word ladders, and help them create new words! Use the *Word Ladder* sheet at the end of this guide for more examples.

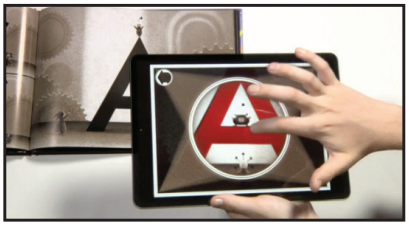
USING TECHNOLOGY IN THE CLASSROOM

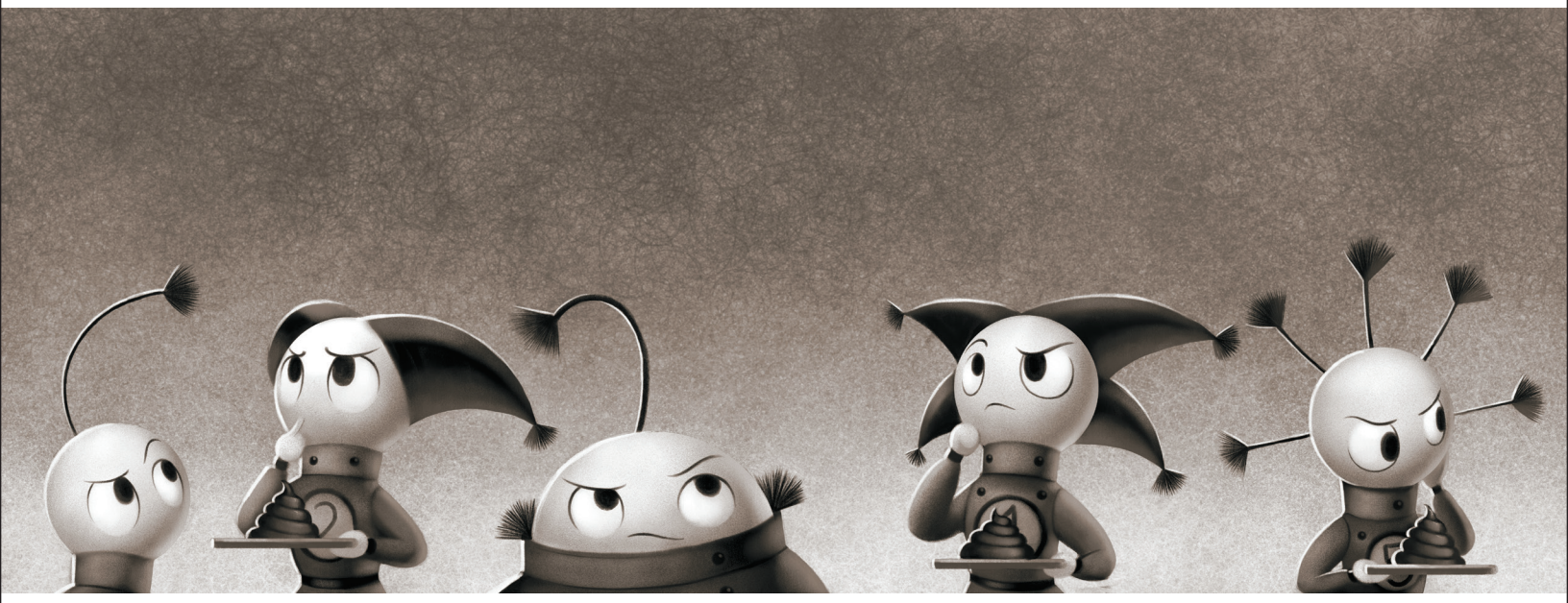
THE NUMBERLYS
IMAG·N·O·TRON!
NOW WITH STORY·O·SCOPE
BY MOONBOT STUDIOS LLC

If you have a Kindle HDX, Android, or iOS device, you can use the companion augmented reality app called **IMAG·N·O·TRON: Numberlys Edition** with *The Numberlys* book:

- Point your device's camera at the pages of the book to discover letters, numbers, and toys.
- Assemble letters and numbers to learn their shapes and sounds.
- Play with toys like floppy pizza, jiggly food gloop, and whirring helicopters in your Toy Box.
- Learn words like jellybean, piston, and clock with your found letters.
- Count up to 20 in a fun numbers game.

Download the app: http://Book.Numberlys.com





Atheneum Books for Young Readers
Simon & Schuster Children's Publishing
1230 Avenue of the Americas, New York, NY 10020
TEACH.SimonandSchuster.net • KIDS.SimonandSchuster.com

Guide created by Dr. Donna L. Knoell. Donna is an educational consultant and author. She works with educators from Pre-K through grade 12 to help increase learning outcomes and engagement. She has spoken at numerous conferences and has expertise in both reading/language arts and mathematics.

THE NUMBERLYS CODE TO SOLVING PUZZLES

1=A
2=B
3=C
4=D
5=E
6=F
7=G
8=H
9=I
10=J
11=K
12=L
13=M
14=N
15=O
16=P
17=Q
18=R
19=S
20=T
21=U
22=V
23=W
24=X
25=Y
26=Z

Using the number – letter code below, try solving these number puzzles so that they make words about *The Numberlys*.

3 15 12 15 18

_____

12 5 20 20 5 18 19

_____

14 21 13 2 5 18 19

_____

6 21 14

_____

2 18 9 7 8 20

_____

8 1 16 16 25

_____

What's your name? _____

Write the numbers that form your name on the line below.

_____

Answer Key: COLOR, LETTERS, NUMBERS, FUN, BRIGHT, HAPPY

WORD LADDER ACTIVITY SHEET

Directions: Change just one letter on each line to make a new word!

1. Change **READ** to **BOOK**

READ

___ ___ ___ ___

___ ___ ___ ___

___ ___ ___ ___

___ ___ ___ ___

BOOK

2. Change **RAIN** to **WIND**

RAIN

___ ___ ___ ___

___ ___ ___ ___

___ ___ ___ ___

___ ___ ___ ___

WIND

3. Change **FIND** to **LOVE**

FIND

___ ___ ___ ___

___ ___ ___ ___

___ ___ ___ ___

LOVE

4. Change **RED** to **HUG**

RED

___ ___ ___

___ ___ ___

___ ___ ___

HUG

Now come up with your own word ladders. Try using words from *The Numberlys*!

Answer Key: 1. Read/Bead/Beat/Boat/Boot/Book 2. Rain/Raid/Said/Sand/Wand/Wind 3. Find/Fine/Line/Live/Love 4. Red/Bed/Beg/Bug/Hug