

# DIVISION

Special Ed



8 ÷ 2 = 4

The image shows a division equation constructed from colorful plastic blocks on a light-colored surface. The number 8 is a large green block, the division symbol is a blue block with a dot above and below, the number 2 is a large red block, the equals sign is a green block with two horizontal bars, and the number 4 is a large yellow block.

ALSO INCLUDES GOOGLE SLIDES



*This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader and lacks many prerequisite math skills needed for math. With some support, he is able to do this unit and enjoys the challenge. He is my tester!!*

# Division Unit



By  
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Special Needs for Special Kids

## Table of Contents

Pages	Activity
4-7	Group activity 1: make equal sets
8-12	Worksheet set 1: draw equal sets
13-20	Group activity 2: make arrays
21-25	Worksheet set 2: draw arrays
26-33	Group activity 3: match equivalent expressions
34-40	Worksheet set 3: match equivalent expressions
41-53	Solving division problems step-by-step
54-55	Terms of Use

Also included in this resource as separate files:

- Lesson plans
- Links and directions to digital activities
- PowerPoint (this is the book in the lesson plans)
- Voice recorded PowerPoint
- Activities in black and white

This unit contains over 50 pages of material. But, don't worry!! I have included an **9 day lesson plan** to help you make the most of everything in this unit.

This unit comes in 2 files, one in color and one in black and white.

# Division Lesson Plan

## Preparation

- Book
  - Print out, laminate, and bind
  - OR your students can listen to the pre-recorded version as a PowerPoint show or mp4 file (see digital activities)
- Group activities
  - Print out cards and laminate for activities

## Teaching Tips

1. *Color Coding*: this is a really easy way to add more structure to a matching activity. The color version of the activities have some color-coding added for students who need more support.
  - a. For more info, read more here:  
<https://specialneedsforspecialkids.org/2015/09/05/using-color-coding-for-differentiation/>
  - b. I also have a blog post on differentiating one activity 3 ways:  
<https://specialneedsforspecialkids.org/2018/10/22/differentiating-1-activity-3-ways-easily-and-effectively/>
2. *Make you own copies of the activities*: Every day I review the activity we did yesterday. For that reason:
  - a. I often complete the activity myself and often laminated it for easy review that I could use year after year.
  - b. My copies were also helpful as either a model for students who needed more support or as a way for more advanced students to self-check their work.
3. *Worksheets*
  - a. There may be more worksheets included than you need.
  - b. For students who need more support, try using the worksheet with color-coding one day and the one without color-coding the next day

The lesson plans contain:

Overall tips for teaching students with significant needs and who may lack some pre-requisite skills.

## Quick Look

Day	Activity	Day	Activity
1	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 1</li><li>• Making equal sets</li></ul>	6	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 3</li><li>• Matching equivalent expressions</li></ul>
2	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 1</li><li>• Making equal sets</li></ul>	7	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 3</li><li>• Matching equivalent expressions</li></ul>
3	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 2</li><li>• Making arrays</li></ul>	8	<ul style="list-style-type: none"><li>• Book</li><li>• Solving equations step by step</li></ul>
4	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 2</li><li>• Making arrays</li></ul>	9	<ul style="list-style-type: none"><li>• Book</li><li>• Solving equations step by step</li></ul>
5	<ul style="list-style-type: none"><li>• Book</li><li>• Group activity 3</li><li>• Matching equivalent expressions</li></ul>		

*The lesson plans contain:*

*A quick look at what you will do each day.*

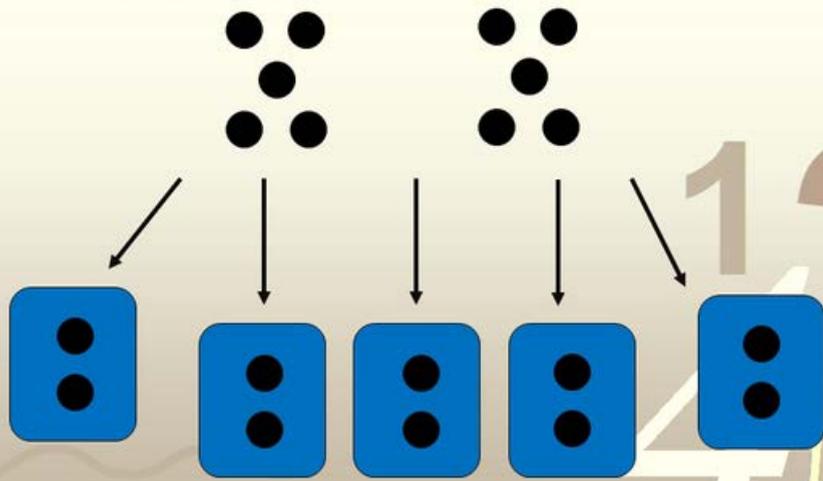
## Day 5-7

Activity	Notes	Materials
Read or listen to the movie version of the book	<ul style="list-style-type: none"><li>• Read through the story, asking lots of questions</li><li>• Continue to make connections between book and vocabulary board</li></ul>	<ul style="list-style-type: none"><li>• Book</li><li>• Vocabulary board</li></ul>
Group Activity 3 (15 minutes)	<ul style="list-style-type: none"><li>• Matching equivalent expressions</li><li>• See activity for ideas on different ways to play this game</li></ul>	<ul style="list-style-type: none"><li>• Activity cards</li></ul>
Review matching equivalent expressions worksheet (5 minutes)	<ul style="list-style-type: none"><li>• Review the worksheet completed yesterday</li></ul>	<ul style="list-style-type: none"><li>• Equivalent expressions worksheet</li></ul>
Match equivalent expressions (10 minutes)	<ul style="list-style-type: none"><li>• Do one of the worksheets drawing a line to the equivalent expression</li><li>• There is a differentiated version included with dashed lines to trace if needed</li><li>• See worksheet for suggestions on different ways to complete these worksheets</li><li>• If students use differentiated worksheets, see if they are able to complete the same worksheet without the differentiation</li><li>• <i>Students are not solving the problems</i></li></ul>	<ul style="list-style-type: none"><li>• Worksheet</li><li>• Pencils</li></ul>
Sharing (10 minutes)	<ul style="list-style-type: none"><li>• Each student shares one of their finished worksheets with the group using the communication method of their choice</li></ul>	<ul style="list-style-type: none"><li>• Completed worksheets</li><li>• Communication devices</li></ul>

The lesson plans contain:

Detailed instructions on how that day's lesson should run including group and individual activities.

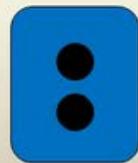
10 divided into 5 groups looks like this:



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Now we can finish the math sentence.

Count how many are in each group.



$$10 \div 5 = 2$$

©Christa Joy, SNSK

This unit contains a book that is 20 pages and covers what it means to divide numbers.

It comes in a PowerPoint version as well as an mp4 version that is animated and narrated.

## Group Activity 1: Making equal groups and identifying remainders

- Supplies
  - Ice cube trays
  - Egg cartons ( I like these because you can cut them down to different sizes)
  - Other divided storage containers
  - Pieces of colored constructions paper
  - Large colored index cards
  - Small things to sort
    - Novelty erasers
    - Pom poms
    - Counters
    - Candy (skittles, m&ms, etc)
    - Cereal
  - Optional: remainder container
- Set up
  - Print and laminate cards
  - Decide what container or sorting mat to use
- **Objective:** To divided the number of objects (on card) into the number of groups (on card) place any remainders to the side
- To play
  - Students draw a number card
  - Students draw a group card
  - Students will count out the number of objects on the group card and divided them into the number of groups on group card
  - Place remainders to the side or in a special container

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Number Cards

2	3	4	5
6	7	8	9
10	11	12	13
14	15	16	17
18	19	20	21

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Group Cards

2 groups	3 groups	4 groups
5 groups	6 groups	7 groups
8 groups	9 groups	10 groups
11 groups	12 groups	

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There are 3 group activities.  
The first one has students practice creating equal sets of objects.

There are several different variations on how to do this group activity to keep students engaged.

## Group Activity 2: Making arrays

- Supplies
  - Small things to sort
    - Novelty erasers
    - Pom poms
    - Counters
    - Candy (skittles, m&ms, etc)
    - Cereal
  - Optional: remainder container
- Set up
  - Print and laminate cards
    - Choose which set is best for your students or print both.
    - I have 2 grids you can use if needed as a template.
- **Objective:** To place the number of objects into an array shown
- To play
  - Students draw a card (There are 2 versions)
    - Easy: total number given and picture of array to be made
    - Challenge: total number given and the array written in a x b format (where a equals number of rows and b equals number of columns)

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Easy Cards

6		8		10	
12		14		16	
18		20		6	
8		10		12	

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Challenge Cards

6	8	
3 x 2 array	4 x 2 array	5 x 2 array
12	12	16
6 x 2 array	3 x 4 array	8 x 2 array
16	18	18
4 x 4 array	9 x 2 array	6 x 3 array
18	20	20
3 x 6 array	10 x 2 array	4 x 5 array

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The second group activity has students practice making arrays.

Again, there are several different variations on how to do this group activity to keep students engaged.

### Group Activity 3: Find Matching Sets

- Do this as a group activity.
- Print cards and laminate.
- Students will find all four cards that have the same meaning or value, for example:

1. 

2	2	2
---	---	---

2.  $\begin{matrix} \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet \end{matrix}$

3. 3 groups of 2

4.  $6 \div 3$

- To differentiate, outline each set in a different color
- Options:
  - Rather than find all 4 in the group, give students decrease the options to 3 in a group
  - Give students pairs of cards to match

<table border="1"><tr><td>2</td><td>2</td><td>2</td><td>2</td></tr></table>	2	2	2	2	4 groups of 2
2	2	2	2		
$\begin{matrix} \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet \end{matrix}$	$8 \div 4$				
<table border="1"><tr><td>3</td><td>3</td><td>3</td><td>3</td></tr></table>	3	3	3	3	4 groups of 3
3	3	3	3		
$\begin{matrix} \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet \end{matrix}$	$12 \div 4$				

The third group activity has students finding equivalent expressions.

Again, there are several different variations on how to do this group activity to keep students engaged.

## Division worksheet set 1: making equal sets

- Students will practice making equal sets
- Options for use:
  - Use dot markers
  - Draw dots, lines, or other shape
  - Use stickers
  - Use q-tips or pencil erasers dipped in paint
  - Laminate and use dry erase markers
  - Laminate and cut apart and use as task cards or in centers
  - Use manipulatives that you used in the group activity
- To differentiate
  - Draw lightly colored circles/dots with something like a highlighter, that students can mark over
  - Cut problems apart so it is less visually overwhelming
  - Eliminate the larger numbers and those with remainders

Draw equal groups of each amount shown.

6

--	--

8

--	--

10

--	--

12

--	--

14

--	--

## 4 worksheets

Draw equal groups of each amount shown. Put any remainders in the circle.

7

--	--	--	--

11

--	--	--	--

14

--	--	--	--

19

--	--	--	--

21

--	--	--	--

There are 4 worksheet sets. The first one has students drawing equal sets into designated groups.

## Division worksheet set 2: drawing arrays

- Students will practice making arrays
- There are 2 options:
  - Easy: there is a graphic provided where students place one dot in each box
  - Challenging: no graphic is provided. Students can choose how to draw the array.
- Options for use:
  - Use dot markers
  - Draw dots, lines, or other shape
  - Use stickers
  - Use q-tips or pencil erasers dipped in paint
  - Laminate and use dry erase markers
  - Laminate and cut apart and use as task cards or in centers
  - Use manipulatives that you used in the group activity

Circle the groups in the array to match the equation. Sometimes you will circle rows, and sometimes you will circle columns. **READ CAREFULLY!!**

*sample*

10 divided into 5 groups of 2



8 divided into 2 groups of 4



6 divided into 3 groups of 2



16 divided into 4 groups of 4



14 divided into 2 groups of 7



# 4 worksheets

Draw an array for each number. Place a dot in each box.

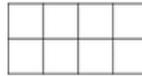
6



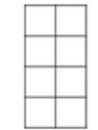
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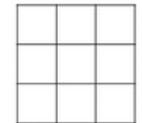
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8



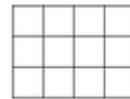
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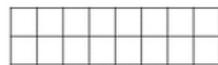
12



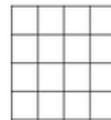
12



16



16



Draw the array for each number based on the directions.

6

2 X 3 array

8

4 X 2 array

9

3 X 3 array

12

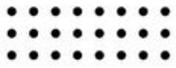
2 X 6 array

12

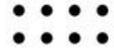
4 X 3 array

The second set has students practice drawing arrays with different levels of visual support.

Draw a line to the matching expressions.



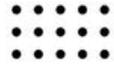
5 5 5



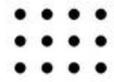
7 7 7 7



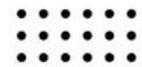
2 2 2 2



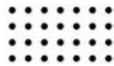
6 6 6



4 4 4 4



8 8 8



3 3 3

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# 3 worksheets

Draw a line to the matching expressions.

3 groups of 2

10 10

4 groups of 8

3 3 3 3 3 3 3

7 groups of 3

5 5 5 5 5

6 groups of 9

2 2 2

5 groups of 5

2 2 2 2 2

4 groups of 6

8 8 8 8

2 groups of 10

9 9 9 9 9 9

5 groups of 2

6 6 6 6

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Draw a line to the matching expressions.

4 groups of 10

14 + 2

3 groups of 5

40 + 5

5 groups of 4

40 + 4

5 groups of 8

12 +

6 groups of 3

20 +

2 groups of 7

15 + 3

4 groups of 3

35 + 7

7 groups of 5

18 + 6

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The third set has students practice finding equivalent expressions. There are differentiated versions with lines for students to trace.

## Division worksheets

- Students will practice each step to solve the division problem using the method shown in the book.
- The first one is done as an example.
  - In the color version, you will see how you can add color-coding for students who need more support.
- They designed to focus on one small skill at a time and then build from there.
  - Students identify the total number you would start with.
  - Students draw how many groups they are dividing the total into.
  - Students draw equal sets
  - Students solve the problem
- I have included a blank template in the end if your students need more practice.

Sample

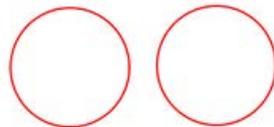
How many counters do you need?

$$4 \div 2 = 2$$

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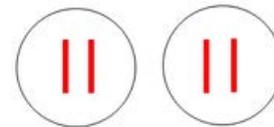
Draw the number of groups are you need?

$$4 \div 2 = 2$$



Draw lines in each group?

$$4 \div 2 = 2$$



Solve the equation

$$4 \div 2 =$$

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# 10 worksheets

How many counters do you need?

$$15 \div 3 = 5$$

Draw the number of groups are you need?

$$15 \div 3 = 5$$

Draw lines in each group?

$$15 \div 3 = 5$$

Solve the equation

$$15 \div 3 =$$

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The fourth set has students go through each step to solve simple division problems.

There is a blank template included so you can make more problems if students need more practice

*Please note, that this unit does not include a formal assessment or fill-in-the-blank worksheets often found in my other units.*

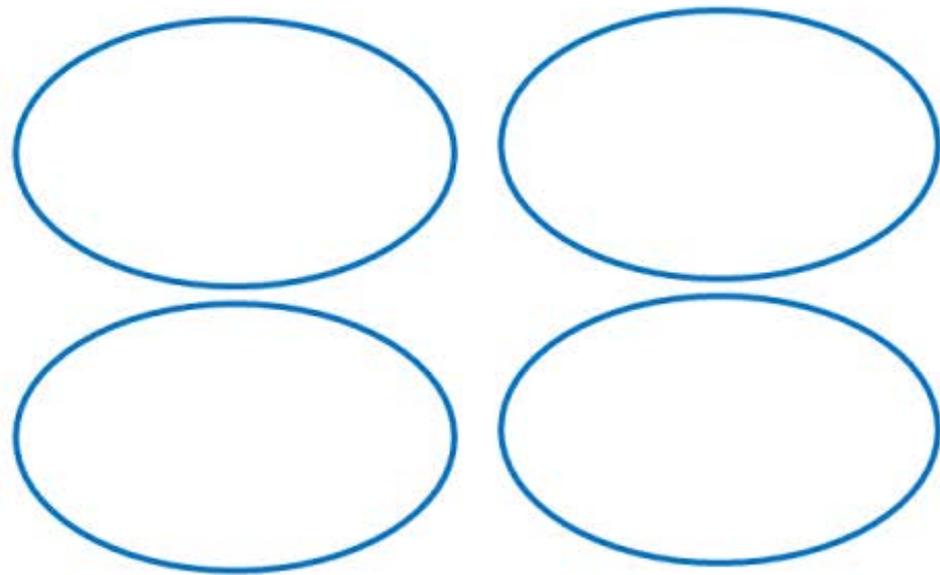
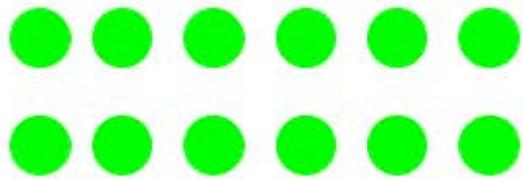
Watch the video  
on Division.



This unit includes digital activities. Part of that is a movie version of the book you can play in a google slide. This movie is animated and narrated.

Move the dots into the groups (ovals) equally until they are gone. Then, answer the questions.

$$12 \div 4 = 3$$



How many TOTAL do you have?

How many groups do you have?

How many are in each group?

4

12

3

There are 2 sets of google slides that include practice problems. There are 17 slides in this set.

$$9 \div 3 = 3$$

How many TOTAL do you have?

How many groups do you have?

How many are in each group?

Place the numbers in the correct boxes about the math sentence.

*One set is differentiated with color for students who need more support. There are 12 slides in this set.*

***This resource comes in a zipped folder. You will need to unzip the folder to access all the contents which include:***

- ***9 days of lesson plans***
- ***Division activities in color***
- ***Division activities in black and white***
- ***Voice-recorded PowerPoint show***
- ***Division book (PowerPoint) to use with activities***
- ***Links and directions to digital activities***