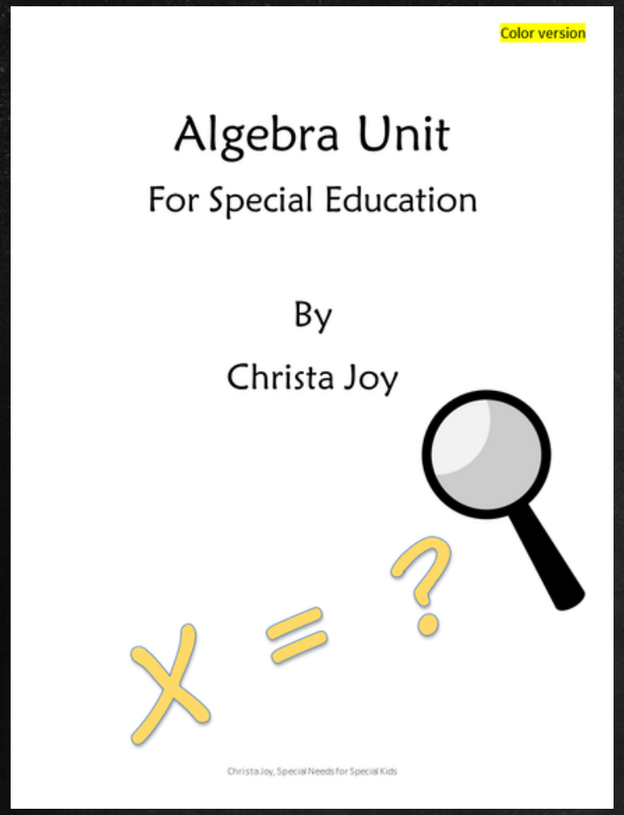
SPECIAL ED

Introduction to Algebra
What is X?

$$6 + x = 10$$

INCLUDES GOOGLE SLIDES

This unit was created with this guy in mind. He has autism and an intellectual disability. He is a non-reader, has a very short attention span, and has a few foundational math skills. With some support, he is able to do this unit and enjoys the challenge. He is my tester!!



Introductory unit

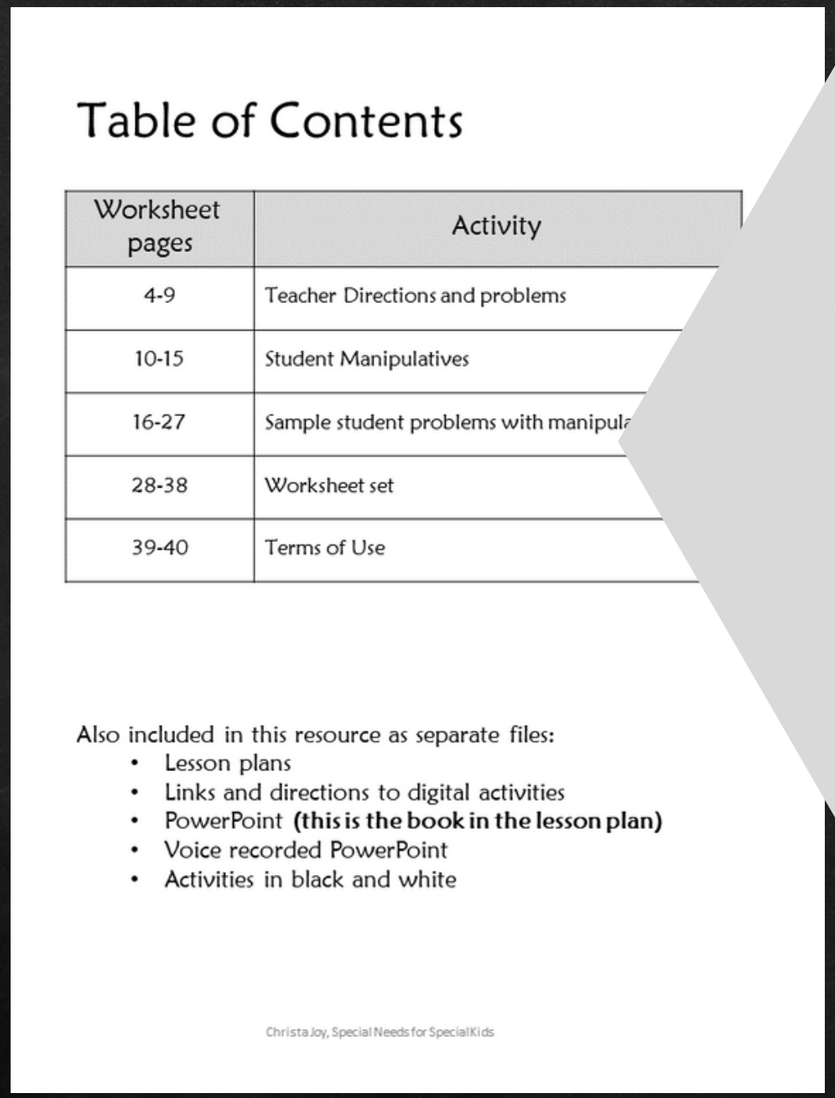


Table of Contents

Also included in this resource as separate files:

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

Christa Joy, Special Needs for Special Kids

This unit contains over 100 pages of material and 62 google slides. I have a lesson plan to help you make the most of everything in this unit including how to add some group activities.

Intro to Algebra Lesson Plan

Preparation

- Book
  - Print out, laminate, and bind
  - OR your students can listen to the pre-recorded v show or mp4 file (see digital activities)
- Group activities
  - Print out problems on cardstock and laminate (pa activities)
  - Print out the equation (scale) worksheets used wi 11-12 in pdf of activities)
  - Print out, cut apart and laminate number cards ar in pdf of activities)
    - NOTE: You can use round plastic counters have them in your classroom
  - Print out, cut apart and laminate template cards (activities)
- Review
  - Spend time reviewing yourself the sample probler included so you understand how to use the mani work through a problem.

Teaching Tips

1. *Color Coding*: this is a really easy way to add more stru activity. The color version of the activities have some cc students who need more support.
   a. For more info, read more here: https://specialneedsforspecialkids.org/2015/09/05 differentiation/
   b. I also have a blog post on differentiating one acti https://specialneedsforspecialkids.org/2018/10/22/ 3-ways-easily-and-effectively/
2. *Make you own copies of the activities*: Every day I revie yesterday. For that reason:
   a. I often complete the activity myself and often lar that I could use year after year.

Each day follow this format: (continue until you feel students can solve equations on their own but still using manipulatives)

Activity	Notes	Materials
Read or listen to the movie version of the book (15 minutes)	• Read through the story, asking lots of questions ○ Continue to make connections between book and previous knowledge	• Book
Group Activity (15 minutes)	• Using the large-scale equation worksheets work through as many problems as a group that feels appropriate ○ Use the equation worksheet that is differentiated with dashed lines for students who need more support. • Option 1: give each student their own equation worksheet and a set of manipulatives. Each person works through the problem themselves but in a group setting. • Option 2: teacher has the equation worksheet and students have manipulatives. Work as a group to solve the problem on one equation sheet.	• Equation worksheet • Problem • Numbe • X ma rou
Review (5 minutes)	• Review any worksheet or problem done yesterday	• Completed worksheet from yesterday
Solving for X (10 minutes)	• Each student will complete one worksheet or 2 problems per day. • Cut apart the pages if students are easily overwhelmed and give them just one problem at a time. • Give students access to manipulatives or they can draw the problem out. • Make sure students check their answers, ensuring both sides are the same and the equation is balanced	• Worksheet • Pencils • X markers or counters (optional)
Sharing (10 minutes)	• Each student shares one of their finished worksheets with the group using the communication method of their choice	• Completed worksheets • Communication devices

The lesson plans contain:

- Preparation needed
- Overall tips for teaching students with significant needs
- Daily flow of the lesson including individual and group activities

1. Both sides of the equation must have the same value.

The equation must be balanced to be true.

So for this problem, we know that the left and right side of the equation must both be equal to a value of 12.

$$\underbrace{8 + x}_{12} = \underbrace{12}_{12}$$

There is a 36 page book using simple text and photos. It walks students through the steps to solve for x by balancing both sides of the equation.

- PowerPoint
- voice-recorded PPT
- mp4 movie format

practice problems for group activity

$x + 14 = 10 + 2x$

$x + 15 = 5 + 2x$

$x + 3 = 1 + 2x$

$2x + 2 = 8 + x$

$2x + 9 = 12 + x$

$2x + 6 = 18 + x$

$2x + 2 = 5 + x$

$2x + 5 = 20 + x$

$2x + 4 = 13 + x$

$4 + 3x = 7$

$5 + 3x = 11$

$3 + 3x = 15$

$2 + 3x = 17$

$9 + 3x = 18$

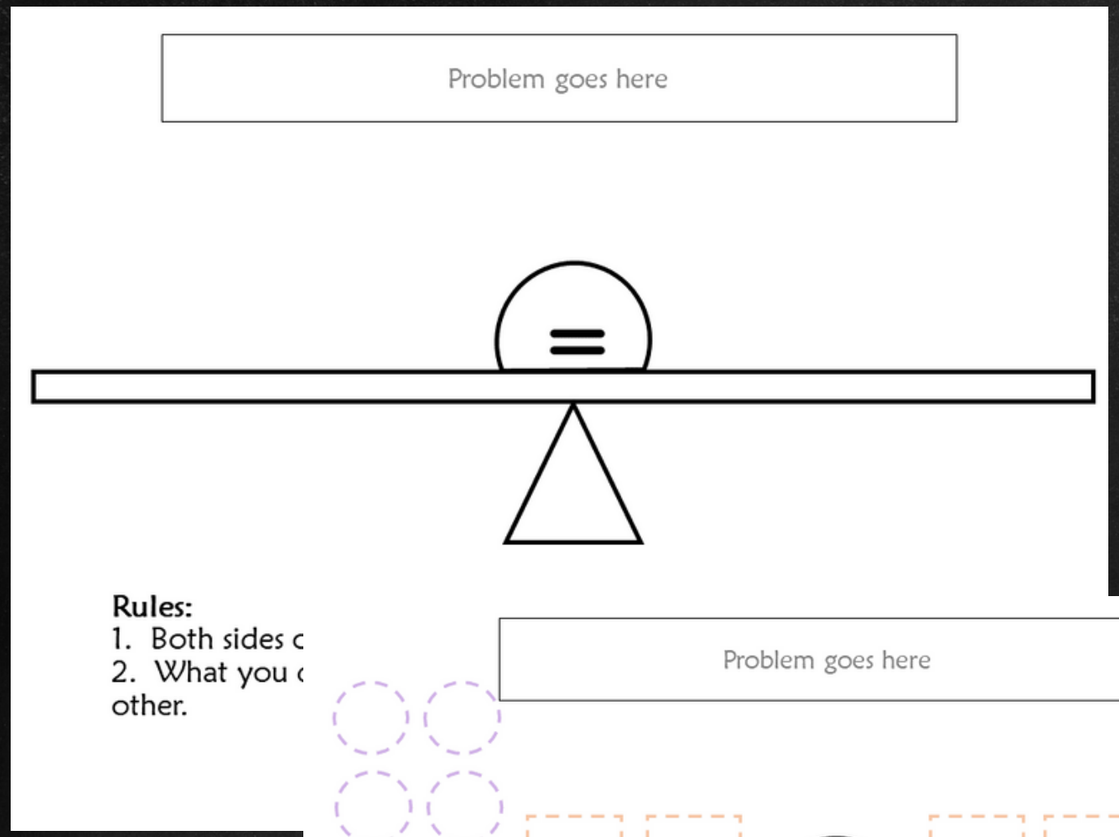
$3x + 6 = 12$

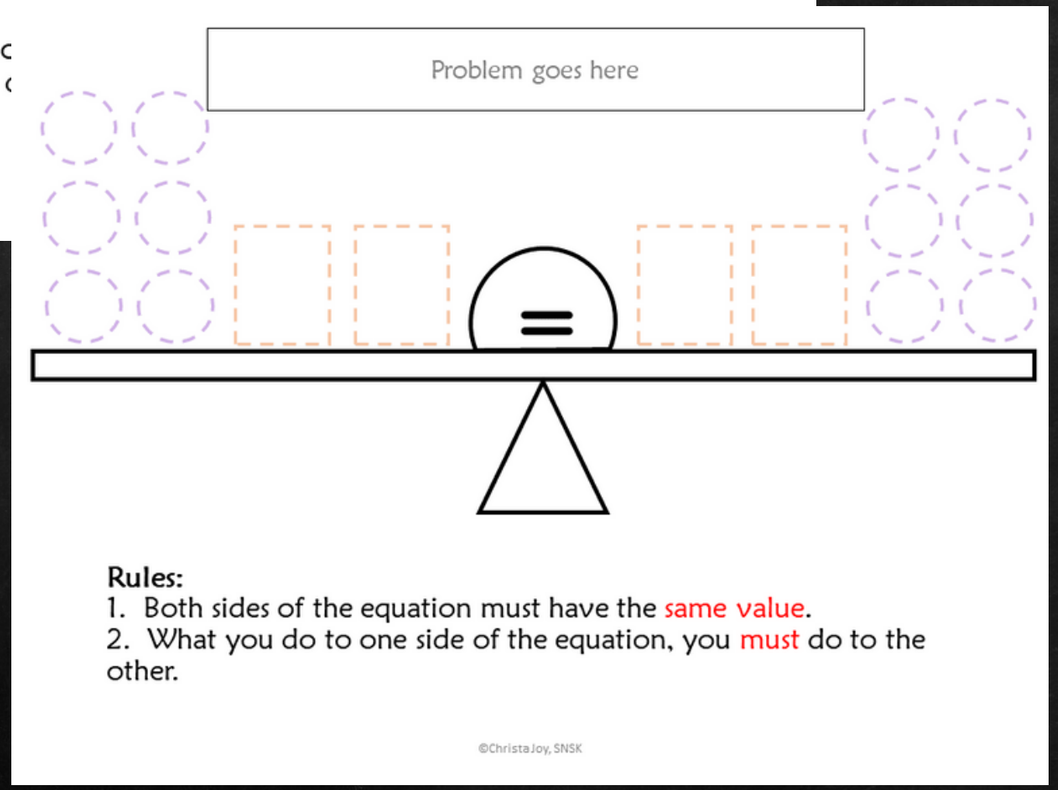
$3x + 12 = 15$

$3x + 10 = 19$

$3x + 12 = 15$

There are teacher directions and 45 practice problems to use for group activities. You will cut out and laminate these.

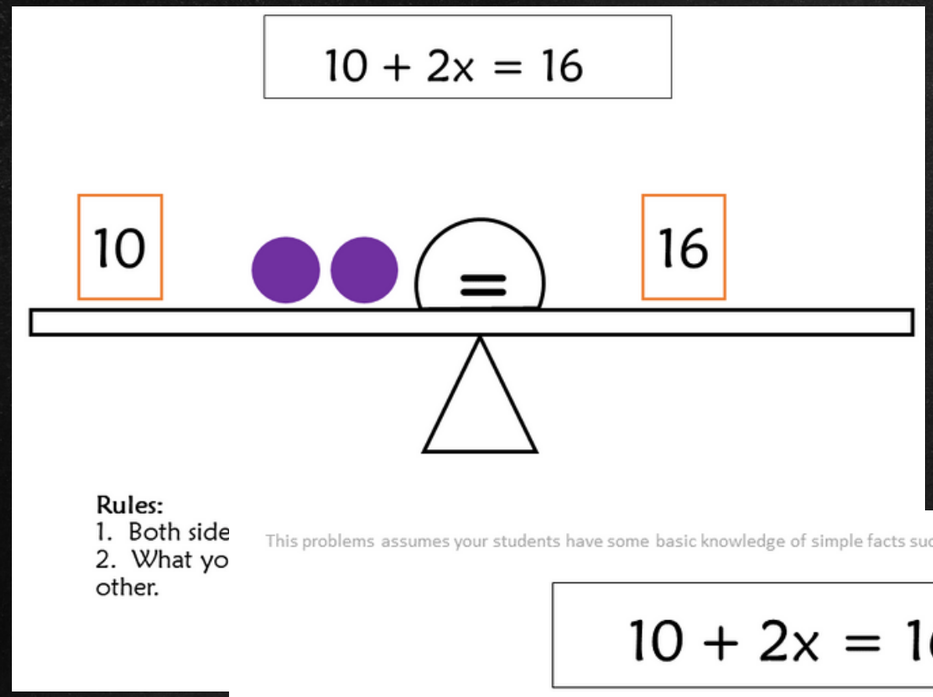


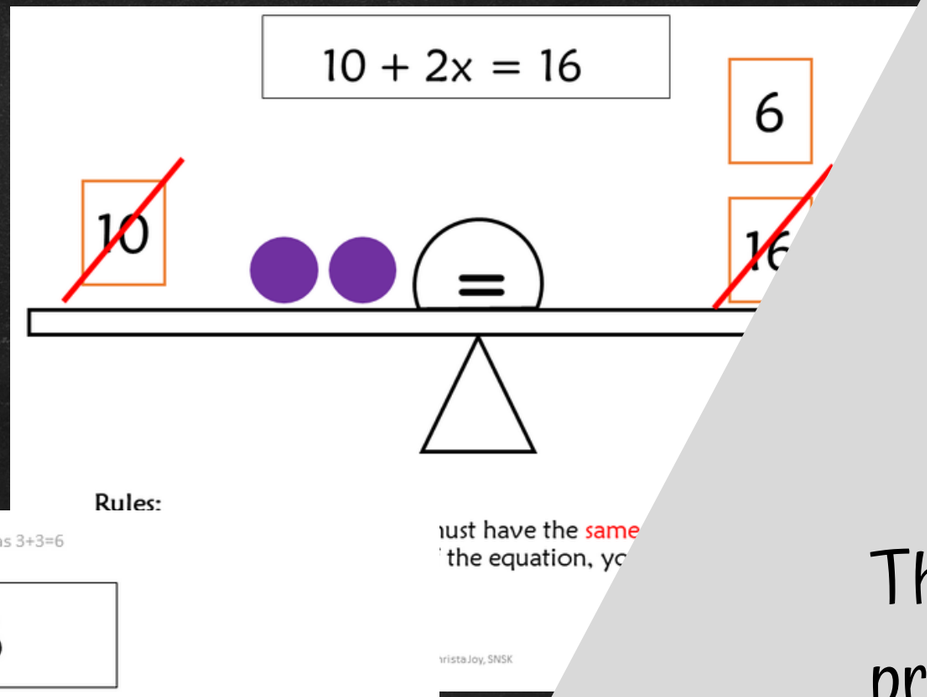


Equation scales to use in group activity

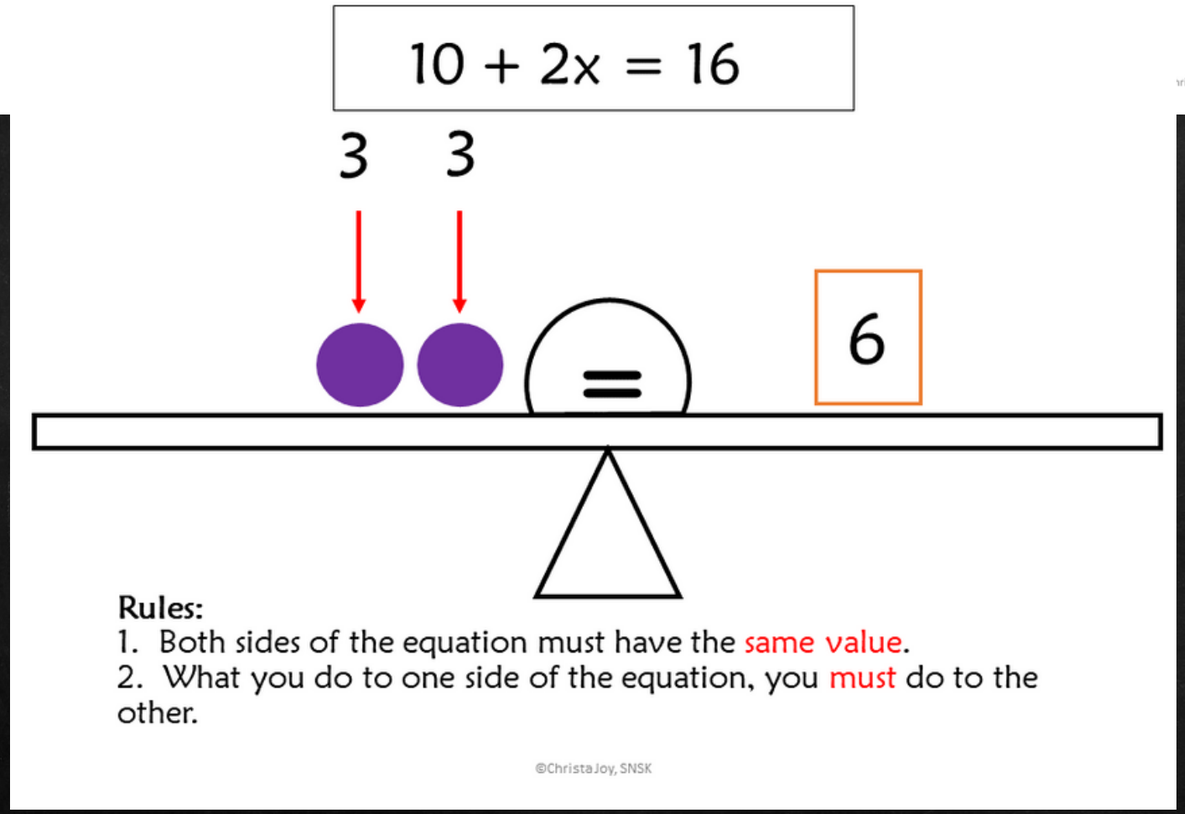
There are manipulatives the students will use to solve the problems.

- Equation scales (includes differentiated version)
- Number cards
- X markers
- template cards



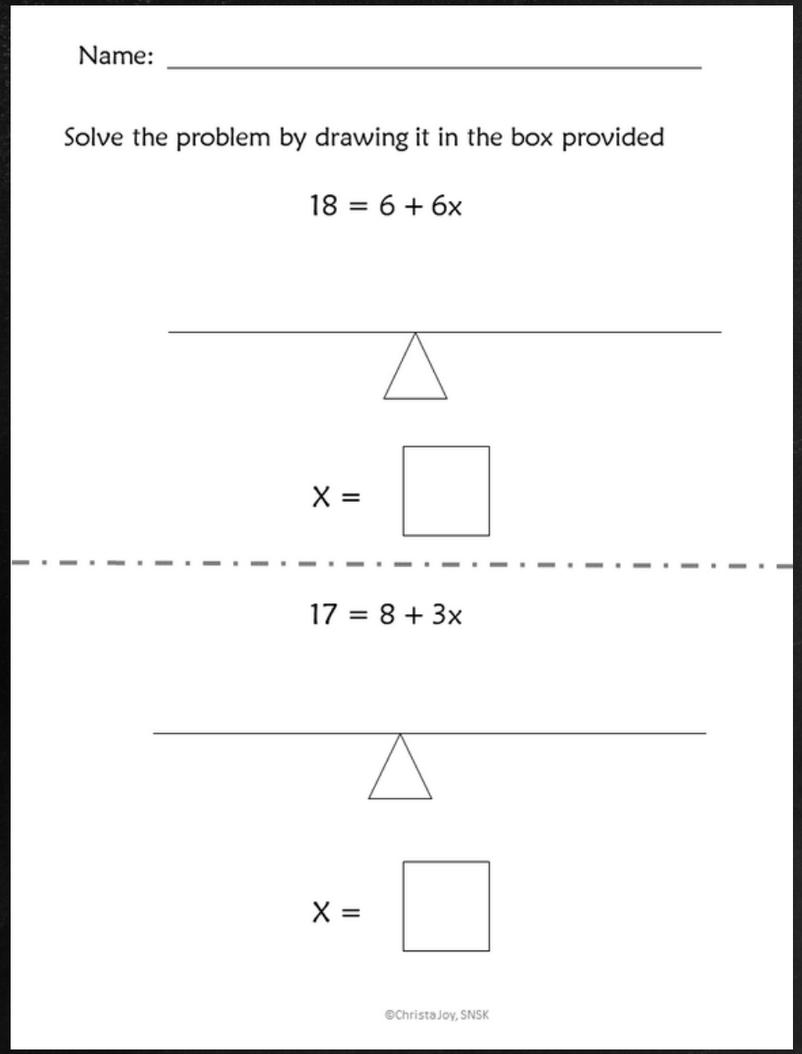


This problems assumes your students have some basic knowledge of simple facts such as 3+3=6



There are 2 sample problems worked out step by step to guide teachers through the process.

worksheets



Name: _____

Solve the problem by drawing it in the box provided

18 = 6 + 6x

X = ☐

17 = 8 + 3x

X = ☐

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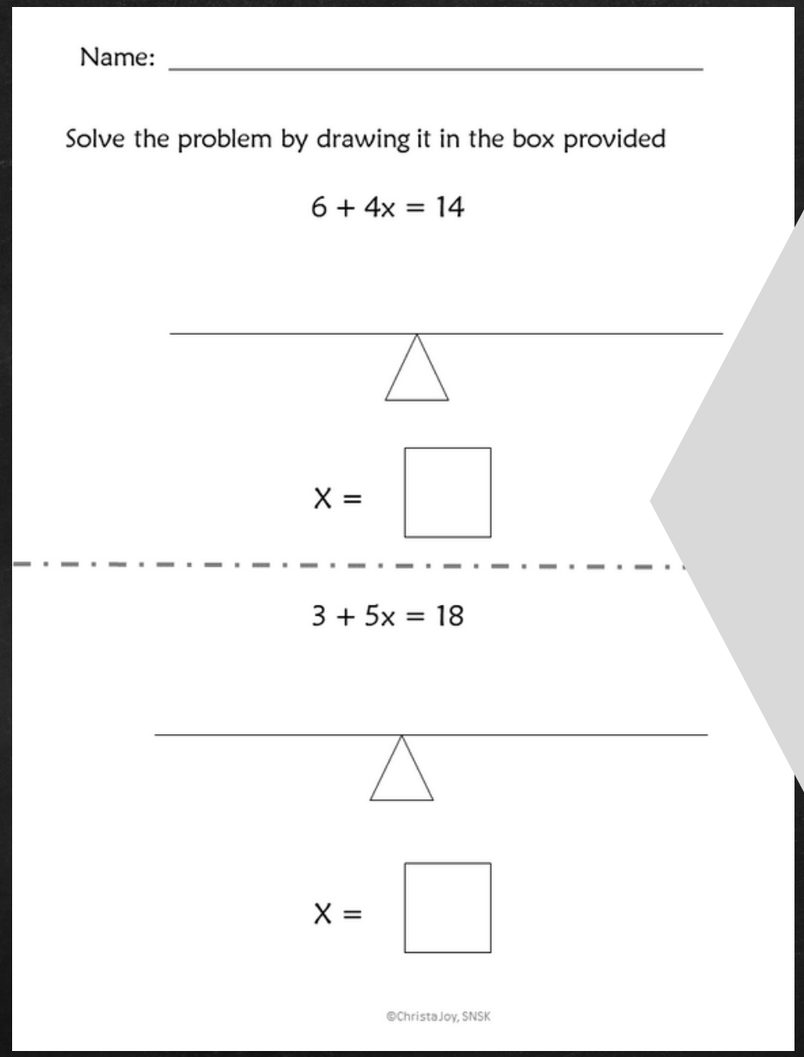

Name: _____

Solve the problem by drawing it in the box provided

6 + 4x = 14

X = ☐

3 + 5x = 18

X = ☐

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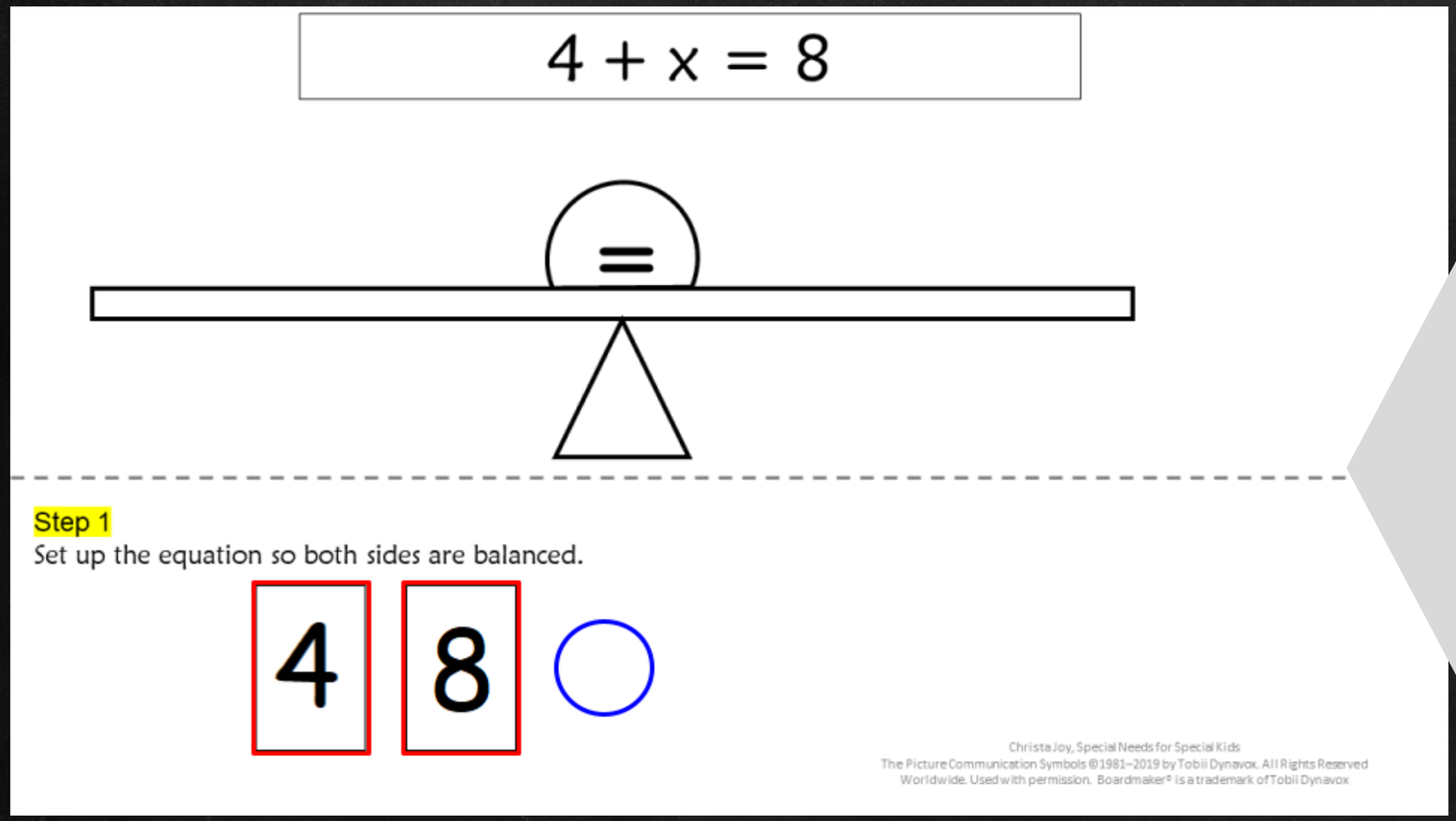
There are 20 problems meant for students to solve individually using the manipulatives.

Watch the movie on solving for X

This unit also has digital activities. There is a movie version of the book students can listen to read aloud.

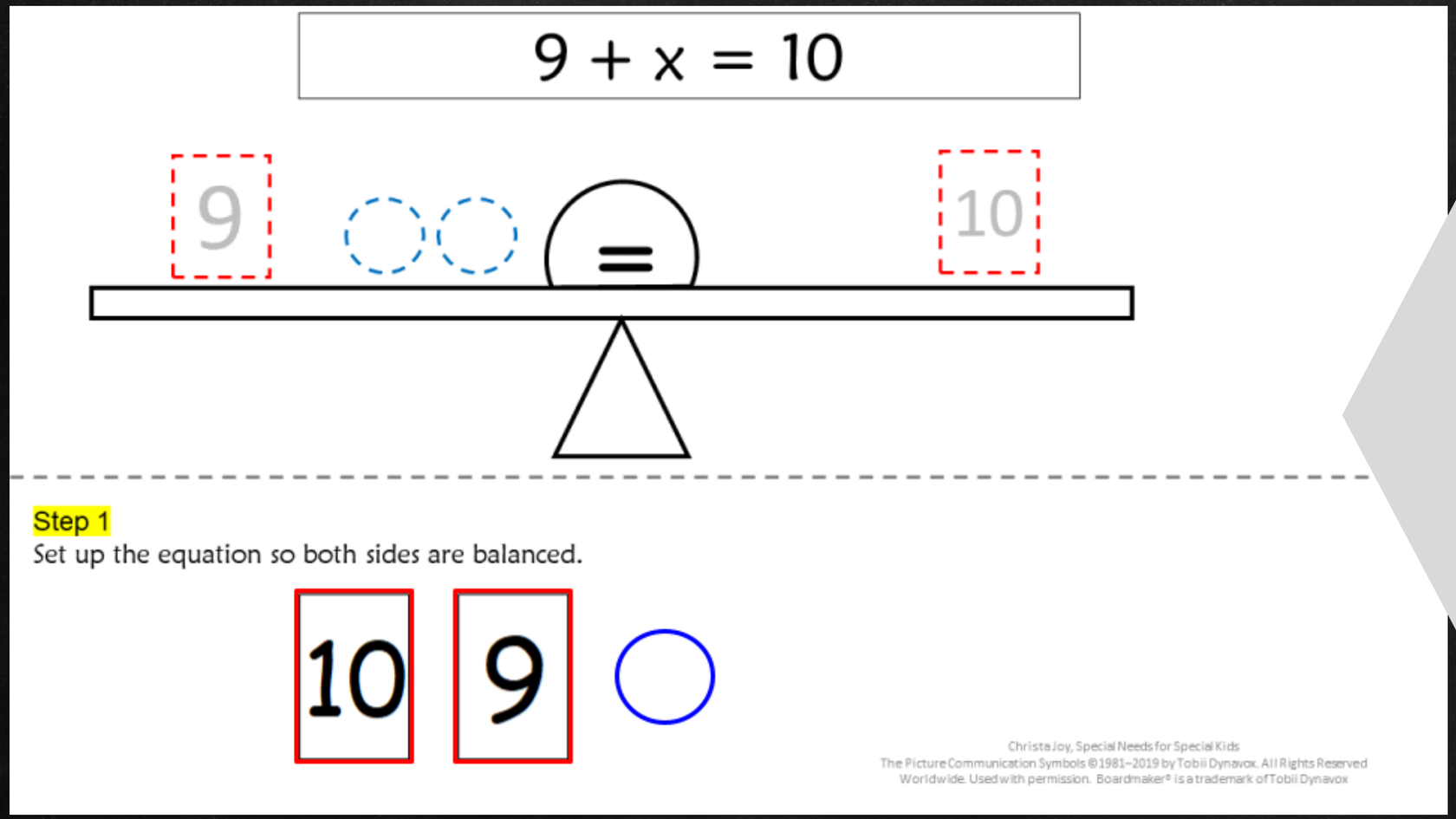
Great for review



The digital activities have students click and drag their answers.

There are 2 sets slides.

Perfect for all learning levels



The second set of slides is differentiated using either color or numbers for students to match to.

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

- Lesson plan
- Algebra activities in BW
- Algebra activities in color
- What is X? book (PowerPoint) to use with activities
- Links and directions to digital activities

Save money and get this unit in a bundle with more advanced algebra units.

Algebra Bundle