



1.

# WHAT ARE THE SIGNS?



## MY STUDENT HAS TROUBLE WITH...

- ✗ Counting Backwards
- ✗ Remembering 'basic' facts
- ✗ Fast Calculations
- ✗ Place Value
- ✗ Estimating
- ✗ Visual spatial concepts





## DIAGNOSTIC PROCESS LOOKS LIKE....

- ✘ Record Students Performance
- ✘ Meet with Parents and Admin
- ✘ Optometry Check
- ✘ Hearing Check
- ✘ Learning Specialist Testing
- ✘ Psychological Testing





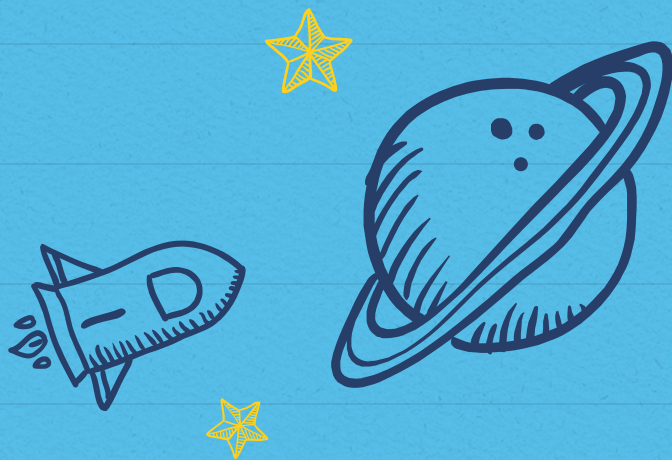
## WAYS TO SUPPORT OUR STUDENT....

- ✘ Learning Support classes
- ✘ IEP Development
- ✘ Extra math practice
- ✘ Resource teacher support
- ✘ Supply Resources for student ( number line, graph paper, calculator)



"AN ESTIMATED 5-10% OF THE  
POPULATION MAY HAVE DYSCALCULIA "  
-UNDERSTOOD.ORG





# MINECRAFT FOR MATH?

Investigating [Minecraft.edu](https://minecraft.edu)

# WHAT ARE THE BENEFITS

**Creative**

**Scaffolded**

**'Gameify'**

**Simple**

**Engaging**

**Cross-Curricular**



# MINECRAFT FOR MATH

## Step One:

Introduce minecraft and use a training world to build comfortability.

## Step Two:

Pick a grade appropriate lesson plan, or make your own.

## Step Three:

Have the students solve math equations through minecraft lesson plans.



# EXAMPLE LESSON:

- Comprehensive lesson plans
- Clear objectives
- Cross curricular potential

The screenshot displays the Minecraft Education Edition website interface. At the top, there is a green navigation bar with a 'GET STARTED' button and social media icons. Below this is a dark green header with navigation options: 'HOW IT WORKS', 'CLASS RESOURCES', 'COMMUNITY', 'SUPPORT', and 'MY CLASSROOM'. A dropdown menu under 'CLASS RESOURCES' is open, listing 'DISTANCE LEARNING', 'GET TRAINED', 'FIND A LESSON', 'FIND WORLDS', 'FIND CHALLENGES', and 'HOUR OF CODE'. The main content area features a lesson titled 'DECIMAL/FRACTION GARDEN' by Mark Grundel. The lesson is categorized for '8-10 yrs old', '11-13 yrs old', 'Art and Design', and 'Math & Economics'. It includes a description: 'Students will demonstrate understanding a fractional and decimal relationships using a 10 x 10 garden.' Below the description are icons for 'Distance Learning', download, print, and share. The lesson was submitted on December 21, 2020. The 'Learning Objectives' section lists three points: relating fractions and decimals using base ten, constructing a 10 x 10 grid, and creatively designing and labeling a garden. The 'Guiding Ideas' section asks three questions about visualizing fractions, relating them, and representing parts of a whole. The 'Student Activities' section describes a process where students plan a garden on graph paper, build it in Minecraft, and label it with signs or slates. On the right side of the page, there are buttons for 'Download Assets', 'Share or Assign', and 'Print Lesson', along with a 'Skills' list (Communication, Creativity, Critical Thinking) and a 'Supporting Files' section with a 'Decimal Garden World File'.

GET STARTED →

MINECRAFT EDUCATION EDITION

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HOW IT WORKS CLASS RESOURCES COMMUNITY SUPPORT MY CLASSROOM

LESSONS

DISTANCE LEARNING

GET TRAINED

FIND A LESSON

FIND WORLDS

FIND CHALLENGES

HOUR OF CODE

DECIMAL/FRACTION GARDEN

8-10 yrs old 11-13 yrs old Art and Design Math & Economics

Students will demonstrate understanding a fractional and decimal relationships using a 10 x 10 garden.

403 Distance Learning

Submitted By: [Mark Grundel](#) December 21, 2020

**Learning Objectives**

- Students will be able to relate fractions and decimals using base ten.
- Students will be able to construct a 10 x 10 grid.
- Students will be able to creatively design a "garden" and label their work.
- Students will be able to present their work to their peers.

**Guiding Ideas**

How can we visualize fractions and decimals in the real world?

How do we relate fractions and decimals?

How can we represent parts of a whole?

**Student Activities**

Students should have a basic understanding of the relationship between fractions and decimals in base ten and base 100. However, the NPC has a link to a YouTube video that demonstrates this. Therefore, this activity may be used as an introductory or review activity.

Students may view the sample world, *Decimal\_Garden*. Students will then use graph paper to plan out a basic 10 x 10 grid and color with crayons, markers, etc. Students will then go into Minecraft and build their decimal gardens. Students may choose to plant flowers, vegetables, ores, or other blocks.

Students will label their work using signs or slates. Students should use the camera and portfolio to document their work. If using the *Decimal\_Garden* world, these are already set in the fixed inventory slots.

Download Assets

Share or Assign

Print Lesson

**Skills**

- Communication
- Creativity
- Critical Thinking

**Supporting Files**

Decimal Garden

Sample Picture of Decimal Garden

Decimal Garden World File

This is the compressed .mcr-world file. Map is flat.

## WHY MINECRAFT?

- Students with dyscalculia showed significant increase in understanding and engagement when using an online virtual simulator.



# LET'S REVIEW SOME KEY SUPPORTS

Graph Paper

Number Chart

Extra Practice Sheets

Calculator

Number Line

Extra Time

