

100 Worksheet collection

MathsAccess4All



Worksheets

100 worksheet were collected

50 for Primary school

50 for High school

In average the topics in the school math curriculum are classified by subject include:

Algebra

Data

Measures

Shape & Space

Number

Function

Geometry

Skills

The mathematical subjects are selected designed to improve students skills such as:

- Problem Solving
- Communicating and expressing
- Integrating and connecting
- Reasoning
- Implementing
- Understanding and recalling

Objective

100 worksheet collection plays the role of a quick guide:

- For representing most visual topics in a different style
- To assist teachers in mainstream schools who work with vision-impaired students.

Collection Rule

To provide a useful reference series for teachers initially requires to categorize all topics as Text-based or Visual-based.

There is no difference in representing text-based material to sighted and Vision-Impaired as long as following equivalent text description does not have heavy cognitive load for vision -impaired student.

Visual-based Topics

- 2D shape: circle., square, triangle
- 3D shapes: cylinder, cone, pyramid, cube, sphere
- pattern
- number line,
- Chart: Pie chart, Bar chart
- Plot: Line plot, Box plot
- graph,
- diagram,
- picture,
- table
- stem & leaf

Solution

Two avenues were found to make an alternative for visual-based heavy cognitive load text-based topics

- Extracting visual aspects and make an equivalent detailed descriptive alternative. The drawback of this approach is generating too much cognitive load, this approach is suitable for lower level
- Utilizing assistive technology as screen reader with Desmos appropriate for the higher level.

JR & SR Infants

At pre-primary level maths education, teaching particular vocabularies is essential such as left, right, up and down. Most concepts and maths vocabulary is learned through physical activity and environment observation

Whereas the worksheet collection suggests

- organising group activity
- tactile perception of the hands , feet, face as an available resource
- using audio player assistive technology

Samples for Infants Activities

- 1) “Bracelet making” is designed to teach pattern extending and 3D shapes (cube and sphere)
- 2) “Horse come sfrom left side Car comes from right side” to understand Left/Right Concepts
- 3) “4cards 4seasons for all & clothes pegs for each” can be designed at different levels to teach
 - table
 - adding
 - comparing
 - counting
 - and memorising skill

Desmos

- Desmos is an external application
- Compatible with Assistive technology
- Presents a graphical calculator.

Worksheets collections developed more than 40 Desmos stand alone samples.

All developed samples run in a browser and provide Desmos interactive environment to assist teachers and students in the following topics

- Circle
- Coordinates points
- Cube
- Decimal vs Fraction
- Derivatives
- Empirical Rule
- Enlargement vs Dilation
- Exp Vs Linear
- Fraction
- FreqTable Chart
- Graphs Symmetry Line
- Histogram
- Integral
- LeftRightUpDown
- Line Plot
- Logarithmic
- Midline & Amplitude Sinus period
- Move Graph
- Outliers
- Parallelogram

- Parallel & Perpendicular
- Pie chart
- Proportional Relationships
- Quantitative Graphs
- Right Triangle
- Rotation vs Reflection
- Scatter
- Sound Collection
- Stem & Leaf
- Symmetry vs Skew
- Table from Equation
- Table from Graphs
- Tangent Line
- Translate, Enlarge, Rotate and Reflect
- Trigonometric

Suggestion for teacher

- This collection has been provided to emphasize practice and encourage teachers to be creative as much as possible.
- Asking students to repeat the process will be a great tool to know if students are understanding the concept
- It would also help lower-level students to hear steps several times.

Adaptations for each individual student will be needed.