

## Overview of Garden Approach Content ( Page 1 )

- @ **Traditional Math uses a Linear Approach while Garden Math uses a Non-Linear Approach @**
- @ **Garden Approach advocates Traditional Math while structured around Standards Math @**
- @ **Curriculums and Schedules of Today's Teachers requires an effective & efficient approach @**

**Describe Basic Concepts:** W,D,F,M,E,R,P,P with simple **Definition(s)** supported with **Example(s)**.

Students using current textbooks will locate concepts **then** read and write on required concepts.

**Student Teams** (Leader & Members) collaborate with all sorts of **communication** ( Read, Write, Talk )  
**Communication & connections while representing concepts in their own comfort zone!**

**Computation with All Number Types:** Students are **responsible** to **Grade, Correct, Collaborate !!!**

Teacher(s) select from **A,B,C,D** activities to **assess then** also **assess** from **E,F,G,H** activities.

**Students, Teachers and Parents** will view **Garden Approach Videos on Computation & Concepts**  
**thus** working together in a **united collaborative effort** to provide a **21<sup>st</sup> Century Math learning.**

### Numbers & Operations

#### Whole Numbers

Addition, Subtraction, Multiplication, Division, Place Value (Large & Small), Reading & Writing  
**Times Table Facts, Rows & Columns Facts,** Calculator (Binary) Operations with A, S, M, D, Es, Rs  
Expand & Exponent Notation, Scientific Notation, Rounding & Estimating, Comparing & Ranking  
Ratios: 2/3, 2 to 3, 2:3, Proportion: Equal Ratios Percents: Simple Ratio, Percentages to Proportions,  
Factors & Multiples, Counting & Whole, Even & Odd, Prime & Composite, Order of Operations  
Carry & Borrow with A,S,M,D, Numeral (Number), Relations, Operations, Properties: C,C,A,I,I,D  
Integers (Signed): A, S, M, D, Absolute Value, Natural, Integers, Rational, Real Number Systems.

#### Decimal Numbers

#### Fraction Numbers

Addition, Subtraction, Multiplication, Division, Multiples & Factors, Common Multiple, LCM & LCD  
Numerator & Denominator, Types of Fractions (P&I), Reduce & Raise, Change I to M & Change M to I  
Change: Fs to Ds, Ds to Fs, & Fs to Ps, Ps to Fs, & Ds to Ps, Ps to Ds, Number Line Placement

#### Mixed Numbers

#### Exponent Numbers

BEN: Base, Exponent, Number,

Use Sequences & Patterns to Understand

#### Radical Numbers

Radical, Radicand, Root,

Reinforcement of Multiplication Facts

$$4^3 = 64 \quad 4^2 = 16 \quad 4^1 = 4 \quad 4^0 = 1$$

$$\sqrt{1} \text{ to } \sqrt{100} \quad \& \quad \sqrt{121} \text{ to } \sqrt{1000}$$

**Binary** Addition, Subtraction, Multiplication, Division, with both **Exponents & Radicals**

#### Proportions

Definition & Example(s) of Ratio

Determine Missing Part: W to X = Y to Z

Increase in Difficulty with Levels 1,2,3

#### Percentages

Definition & Example(s) of Percents

Change Percentage to Proportion

Increase in Difficulty with Levels 1,2,3

@ **Applications (Word Problems) permeate all levels of Numbers also all topics of Non-Numbers. @**

## Overview of Garden Math Content ( Page 2 )

Overall thematic theme is **Problem Solving, Reasoning & Proof, Representation of Concepts**  
**Connection among Abstract & Concrete, Communication & Collaboration with Peers**

### Geometry

Study of Shapes and their relationships    Draw, Name, Describe via properties 2D & 3D shapes  
Categorize or Classify 2D & 3D by their properties    Investigate combining & dividing 2D & 3D  
Explore Similarity & Congruence of 2D & 3D shapes    Make Conjectures & Reasoning with Logic  
Open & Closed, Concave & Convex, Similarity & Congruence    Special Angles: Triangles & Lines

### Algebra

Identify, Name, Describe Elements of Algebra    Analyze & use Patterns & Sequences to explain  
Understand & use Tables and Graphs to describe    Usage of words to describe values & relationships  
Identify Functions as Linear or Non-Linear ( DR or IR ) using Tables, Graphs and Equations  
Evaluation of Expressions, Solutions for Equations & Inequalities and maybe some Not so Simple

### Data Analysis & Probability

Collect, Organize & Display Data using Tables & Charts    Create & Answer Questions about Data  
Categorize & Classify Data as to Properties and Values    Represent Data in Tables & Charts  
Use Methods to describe & represent Data ( M,M,M,R )    Recognize Similarity & Differences Data  
Probability & Odds of simple Experiments    Use Reason & Logic to support Conjectures on Data

### Measurement

Understand & use measures of Standard Units (English & Metric)    Recognize attributes of Measures  
Understand & Use instruments with Linear & Angular measures    Be able to convert measures  
Understand Measurement is an estimate!    Precision & Accuracy    Understand Percent of Error  
Understand and Calculate: Perimeter, Area, Surface Area and Volume of 2D & 3D objects

@ Applications (Word Problems) permeate all levels of Numbers also all topics of Non-Numbers. @