

Math Pathways

Description and Report



Math Pathways - What are they? Why have them?

What:

- Differentiated path of courses that fit each student's needs in math
- Flexible program where students are re-evaluated each year
- Standards based curriculum to meet all the demands of students

Why:

- Prepare students for mathematics in high school and college
- Meet current students' needs in their development in math
- Supply maximum support for students on all levels
- Provide avenues of extension for students who excel at math and may want to pursue a career in the math field

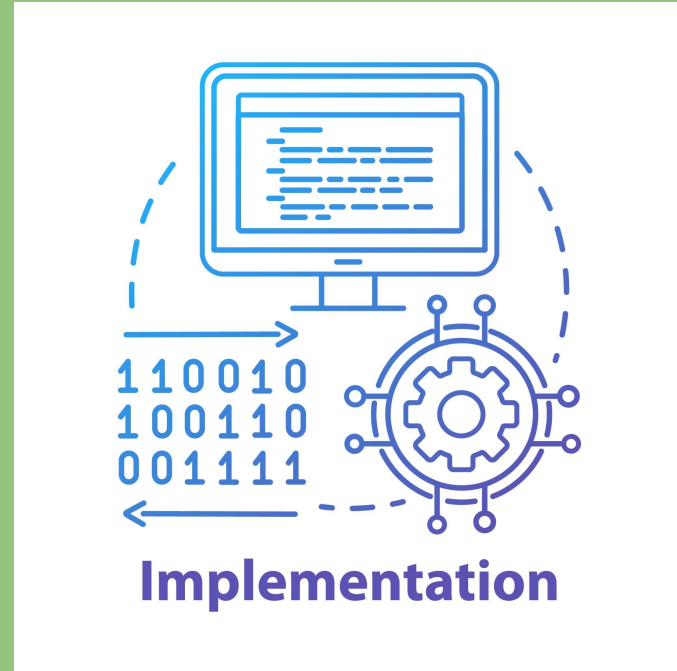
The Pathways

Ashford School Math Pathways								
Grade	5	6	7	8	9	10	11	12
Pathway 1	5th grade IM standard curriculum	6th grade IM standard curriculum	7th grade IM standard curriculum	8th grade IM standard curriculum	Algebra 1	Geometry	Algebra 2	Elective Math
Pathway 2	5th grade IM standard curriculum	6th grade IM standard curriculum w/ enrichment	7th grade standard IM curriculum w/ enrichment	Algebra 1	Geometry	Algebra 2	Pre-Calculus	Calculus or AP Stats
Pathway 3	5th grade IM standard curriculum w/ enrichment	6th/7th grade Accelerated IM Math	Algebra 1	Geometry	Algebra 2	Pre-Calculus	Multi-variable Calculus	Uconn Math Course or AP Stats
Important Notes:								
	* IM - Illustrative Math Curriculum							
	* A student can move up a pathway freshman year by taking Geometry and Algebra 2 at the same time							
	* both pathway 2 & 3 will allow students to take AP & AD (Uconn specific) classes							

How is it going?

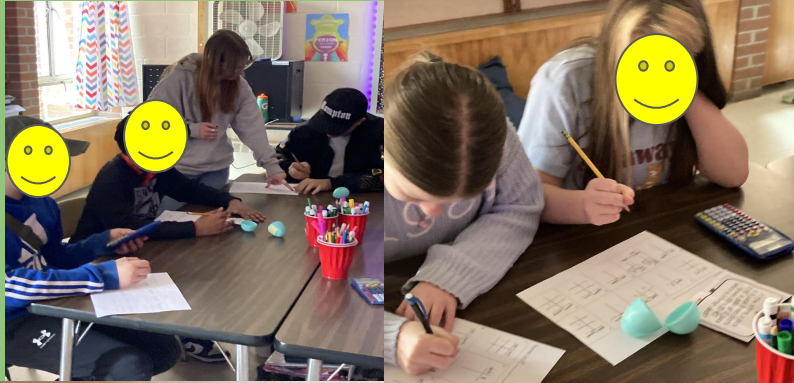
First year of full implementation:

- Students are engaged at their learning level
- Students at the different levels have expressed that the curriculum is not too slow or too fast
- Allows for more targeted instruction, enrichment, and intervention
- Positive parent feedback



Pathways in Action!

Grade 6- Review Egg Hunt



Grade 6- Math/Science Field Trip to SHU: Mission Mars

Grade 6- Math Enrichment- Virus X Statistics Project



59
 $8+2=10x$
 $7+3=10$
 $8x+3+2x+7$
 $10x+10$

1. laps/min 24 6	2. stats B	3. sugar flour 1/3 1/3	4. yellow blue	goals/games 4 2
6. cost/pounds 3.65 8.65	7. price in pack 1 1	8. miles/gallons 420 35	9. practices/hours 21 3 1 0.14	10. calories/servings 375 5 75 1

Which is a better deal?
35 miles

Directions: Continue your analysis by calculating some of the measures of central tendency.

Find the mean age of the people who recovered. Make your thinking visible.
 $52+11+5+16+15+4+5+4+5+5+5+11+60+12=327$
 $327 \div 12 = 27.25$

Find the mean age of the people who became zombies. Make your thinking visible.
 $20+29+20+3+3+24+4+1+4+1+4+2+35+32=217$
 $217 \div 10 = 21.7$

What do you notice about the means you calculated?
 I notice that the mean for the zombies are larger than the mean for the recovered.

Is the mean a useful measure of central tendency for each of these data sets? Explain.
 Its useful for the zombies due to that if you look at the dot plots you can see that there around that number. But if we look at the mean for the recovered we can see that by looking at the dot plots 27.25 is not the best. I think that we should have used something similar to the median.

Task #1: Who recovers from Virus X and who becomes zombies?

Directions: It's difficult to analyze the data when it's in a list. To begin your analysis, create two dot plots on the number lines shown below. Make one dot plot showing the ages of the people who recovered and another dot plot showing the ages of the people who became zombies.

Ages of humans who recovered

Describe the distribution of the data. What questions or conjectures do you have based on this data?
 Why do their ages vary so much? Also, a conjecture I have is that people at 20-45 are less likely to recover. One last question I have is how people not recovered over the age of 60?

Ages of humans who became zombies

Describe the distribution of the data. What questions or conjectures do you have based on this data?
 Some recoveries each is. One question I have is why are people in this age range the only ones getting infected? Another question I wonder about is if the zombie is able to do with the humans in our body? A conjecture I have is that in the age range of 20-42 are at high risk to become zomb.

$C = \text{Point}(f)$
 $= (-2.27, -0.04, 4.31)$

$D = \text{Intersect}(z\text{Axis}, y\text{Axis})$
 $= (0, 0, 0)$

$E = \text{Point}(z\text{Axis})$
 $= (0, 0, 4.33)$

$b = \text{Segment}(B, C, q1)$
 $= 4.31$

$c_1 = \text{Segment}(C, E, q1)$
 $= 2.27$

$d = \text{Segment}(D, B, q1)$
 $= 2.27$

$e = \text{Segment}(E, D, q1)$
 $= 4.33$

$D = (0, 0, 0)$

$C = (0, 0, 1)$

$g = \text{Segment}(B, D)$
 $= 1$

$h = \text{Segment}(C, D)$
 $= 1$

$f: \text{PerpendicularLine}(B, xOy\text{Plane})$
 $= X = (0.95, 0.32, 0) + k(0, 0, 1)$

$E = \text{Point}(f)$
 $= (0.95, 0.32, 1)$

$i = \text{Segment}(E, C)$
 $= 1$

$j = \text{Segment}(E, B)$
 $= 1$

$F = (6.123233995736766 \cdot 10^{-17}, -1, 1)$
 $= (0, -1, 0)$

+ Input...

$A = \text{Point}(x\text{Axis})$
 $= (1, 0, 0)$

$c: \text{Circle}(z\text{Axis}, A)$
 $= X = (0, 0, 0) + (\cos(t), \sin(t), 0)$

$B = \text{Point}(c)$
 $= (-0.19, -0.98, 0)$

$C = \text{Point}(z\text{Axis})$
 $= (0, 0, 3)$

$f = \text{Segment}(C, B)$
 $= 3.16$

$D = \text{Point}(x\text{Axis})$
 $= (0, 0, 0)$

$g = \text{Segment}(B, D)$
 $= 1$

$h = \text{Segment}(D, C)$
 $= 3$

+ Input...