WHEN WILL I EVER USE MATH???? – EVERY DAY!

Math found in art class:

- various units of **measurements** to create borders, et al.
- grid **enlargements**
- the rule of thirds, the golden mean, and other **math-based design principles** in composition
- work with **3 dimensions** - literally, and on 2-dimensional surfaces
- **diameter, radius, and circumference** calculations
- perspective using **vanishing points and horizon lines** (thank you Leonardo)
- calculate **volume** to prepare amounts of paint
- **ratios** (using fractions and some algebra) for **enlarging and reducing**
- an understanding of balance includes **symmetrical (flips), asymmetrical, and radial balance**
- **geometry** (see Piet Mondrian)
- string theory (ok, we make art with string)
- **pattern** and of course, every math teacher's favourite artist: MC Escher (**tessellations)**

Math found in Socials class:

- Reading **statistics** (literacy rate, population growth, life expectancy, gdp) and comparing with other statistics
- **Readings and making graphs** (j curve, line, pie, climate graphs)
- Looking a population figures and **determining differences**
- adding up test marks
- **Measuring distance**

Math found in the Cafeteria:

- **measuring** ingredients (fractions and whole number :adding, counting)
- **scaling** recipes - multiplying and dividing (original recipe yields 20, but we want 50...gotta do the math - multiply recipe by 2.5)
- **converting measurements** - eg. 3 tsp (5 ml each) = 1 Tbsp (15ml)
- **calculating** food costs - if 10 lb of chicken costs $50, how much would each 1/4 lb serving cost?
- setting menu item prices - if we want our food cost **percentage** to be 40%, what price do we have to charge on a given item to make that?
- cashiers - counting money, making change**(add and subtract decimals)**
- cooking times - weighing meats, determining cooking time at a given temperature depending on desired doneness of meat - eg. how much longer will a 10 lb roast take to reach 140 degrees vs a 5 lb roast when cooked at at 300F **temperature** lag and log - understanding heating and cooling times for food items (food safety)

FOODS & NUTRITION – HOW WE USE MATH

- **Measuring in Metric- adding and subtracting**
- During a Demonstration, we go over the Ingredient list with the class & determine what Measures we are going to use to measure an ingredient as some of the time, the amount to be measured does not match up with the equipment we have on hand. For example – 90 mL flour = 50 mL dry measure, 25 mL & 15 mL spoon.
- **Increasing & Decreasing Recipes** – ratio, percent, simple dividing & multiplication
- **Converting Imperial to Metric** when they are researching recipes.

- Reading Labels – when the amount they eat does not match up with the serving size on the label they must use **percentage and ratios** to determine amount.
- Budget Assignments – calculating the cost of a recipe or meal. This includes adding **taxes, multiplying** amounts and **adding** totals.

Math found in Textiles:

- **Measurement; conversions**- inches to cm; feet to metres
- **Scale** in patterns
- **Patterns** in design: **cost** of design: **percent** tax, material x cost per m

Math in PE Performance and Leadership

- We calculate **percentages** of our max lift ie. a max lift of 100 lbs would mean that if we were lifting 60 % of max we would plate up the bar with 60 lbs.
- We **convert metric weight to** lbs(Imperial).
- We are **adding** different plate denominations all the time

Math in Woodwork

- Measurement
- **Conversions** between inches, feet, cm and metres
- **Area, perimeter, volume**
- **Scale** in drawings and plans

Math found in Computer class:

- Designing- **scale; percent; algorithms; ratio; patterns**
- **Graphing, spreadsheets**
- **Rate** of typing speed

Math found in English Classes

- **Percent and scales** for grades

Math found in Planning Classes

- Financial planning- **percent, rates, probability, interest**
- Budgeting- **percent, integers** (positive and negative numbers), **rates**
- **Statistics** in research studies

Math found in Science Classes:

- …… math is everywhere…….
- Experiments and studies in Physics, Chemistry, Biology and Earth Science use: **measurement, formulas(equations), conversions, rates, ratios, percent, algebra, surface area and volume, graphing, exponents, squares and square roots, scientific notation, logarithms, statistics…** and many more!
- MATH AND SCIENCE ARE INTERCONNECTED…..the study of math started with science… and science uses math to prove hypotheses and gather or present data.