

No Maths Know Maths Different Perspectives of Whiz To Geek

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ABSTRACT

We always come across problems in life - at home, work, school, relationships, finances, and all around us. It entails that we need to be a problem solver. Before we solve these problems, we should understand the consequences and come up with its best solution. It is prerequisite for us to order the problems from least to greatest and focus on the greatest first rather than focusing on the things that are not so important. These are something that Math can do for this directly, nothing. But indirectly, it does. Hence the current study deals with an interpretation of the attitude of geek and whiz in mathematics. Moreover this interpretation put into evidence that how a whiz can help a nerd in mathematics and thus solving problems which are realised through their real life. As a proof of concept the whiz present some different perspectives to teach basic topics of mathematics to the Philomath or geek in mathematics.

KEY CONCEPTS: *Nerd in Mathematics, Philomath, Geek, Mathematicaphile, Mathphile, Whiz*

INTRODUCTION

There is no word to describe someone who likes math specifically, people use the words nerd and geek to describe people who are generally smarter, with common knowledge to learn something new. For all we know that we could love Sports and Math equally, and for some reason, Geeks and Nerds cannot like sports. Solving math as a hobby is one of the best things we could do. People have to use the ways and means of solving maths problems on the problems in their own life. When we are studying mathematics, we become so engrossed in solving the problems that not being able to find the solution nearly kills us. Most of the time, it's just the fact that there are so many ways to solve a single problem which makes try all of them. If we see mathematics from the viewpoint of examination, we are bound to hate it. A boy may be extremely good at mathematics in 7th grade. He may started be to love it. But as the years passed, he will lose his interest and became afraid of his Mathematics exam. This will be happened due to:

1. Bad teaching - uninteresting and strict.
2. Pressure of scoring as high as possible.
3. Find it an obstacle to gain better grades.
4. Without any good reason also a great number of students tend to dislike math.
5. Students hate it because it requires different level of thinking.

Skill differentiation among students also lead to the hatred towards maths. Hence it is the duty of the lover of maths to let them know that taking the challenge to love math will bring them a higher level of learning.

Once we get fast doing of the basics in maths such as addition, subtraction, multiplication and division the rest of math will come easier. Because we are made of it.

MATHS IS EVERYWHERE

People like mathematics because it is applicable almost anywhere and everywhere. There is no subject that is truly alienated from mathematics. Without any ambiguity objective results are possible when we get an answer for a problem.

Mathematics is life. Maybe we may wonder why this statement has said. But if we try to think of the things we have always done every day, we could understand that directly we are not using formulas and we are not using variables like x and y , but we always face situations like we need to make decisions, analyse and weigh things regarding its relevance which are the things related to Mathematics. We unable to hate maths completely. If we don't love math, it's tantamount that we don't love life itself.

Maths is everywhere. Maths always help us in every field at every point. It is a language of Physics. In Chemistry the coordination numbers and physical chemistry is all about math calculations. The Biology research needs the statistics. It has offered a lot of benefits. Without Maths nothing can be possible. We can enlist the different perspectives of advantages of maths.

It is our "lifelong learning" skills such as asking others for help, looking stuff up, learning to deeply focus on tasks, being organized, etc.

It develops our work ethic such as not making excuses, not blaming others, not being lazy, being on time, not giving up so easily, etc.

We get better at learning complicated things and we are less afraid of complex ideas and classes.

It develops self-esteem through the feel of pride & confidence in our ability to understand complicated things.

Career specialisation engulfed the math skills in the fields like science, health, technology, and engineering requires it seriously.

Student become intelligent & motivated generally after their successful completion of maths subject at school level.

All the entrance grading to college are based maths skill only.

It helps us to play, calculate and so many things which we want.

Being a creative subject Math can be compared to game as it motivates us to think something new.

It gives us a problem and we like to solve the problem by using multiple ways to get the answer of the problem.

It will bring the commonality solution for a problem as 20 persons solve a problem of math correctly by getting 1 answer, simultaneously it is possible that those 20 persons can solve the problem in their own way and own uncommon method lead to the correct answer which is considered as common.

No memorization needed for maths because we can create our own method and use it to solve the problems of math. But the method must be right.

Math is like creating something in a new way and never be an old. It should be updated day by day.

Hence if we understand the main facts of math, we cannot but love it.

ATTITUDE OF NERD IN MATHEMATICS AND PHILOMATH

Nerd is a distasteful person who lacks social skills or is boringly studious. A nerd is a person seen as overly cerebral, irrational, shy or lacking social skills. Here is our opinion that most people are bad at math so they want to make themselves feel better by trying to manipulate people not to learn mathematics so they called someone who like mathematics nerd. Nerd in mathematics will not be get attacked by society because most of the people in society are bad at math so they hate it.

A **Philomath** is just opposite of nerd in mathematics, it means someone who loves learning mathematics. They are the geek who has excessive enthusiasm to learn mathematics. It is the duty of the maths teacher to transform a nerd in mathematics into the Philomath whom should have everlasting love to learn mathematics.

Humbly I can say that more are nerd in mathematics because of how it's taught in school. Making the maths class really fun or making it just miserable it's all in the hand of a maths teacher. Really speaking some teachers are weird to drone and expect their own students to have an interest in math. They will not talk like robots and interspersed the lecture with little jokes where the one who really perked the students' interest in math. They understand everything about the students' interest in learning math right away and the passion will be ignited. Their teaching methodology should be based on the building mathematical aptitude in student along with problem solving from the point of view of a student. Then the student's learning experience transform him and he will be become a devoted lover of mathematics.

Some students are lucky to find the passion on their own. They can enjoy maths in anyway or they find a way to enjoy it. They can learn to see it as enjoyable when they can apply it to any subject that interests them. Sometimes they are very ready to ask someone with more maths background. They may or may not understand all the principles involved in mathematics, but can clearly see that mathematics can produce beauty that all can appreciate. They feel that maths will be as simple as breathing to them.

ATTITUDE OF WHIZ IN MATHEMATICS

Maths Lover is a person who simply fanatic on Maths. People who study math are called mathematicians. If we want to be called whiz in maths we have to be frenzy in Maths. Mathematicophile, or mathphile are also the words used to describe someone who particularly loves math. Whiz in math are a special kind of people, they have shrewd knowledge to find a solution for any problem they meet in their life. If we ask them some

complicated problems, they will not sleep until they get the answer. If we tell them that there is another way to solve any problem, they will be happy to see a way as if they will get a chocolate or an ice cream after finding the solution. We may see some people become fanatic in maths so much that they even forget family, friends, and society. This is because:

1. Math gives us pleasure when we solve a problem of a new type.
2. If we learn something there is no need of learning it again.
3. To understand a problem's solution simply go through it - no need of reading it for a long time.
4. Math improves the logical ability of a person
5. Without preparation we can get marks in exams by doing the given problem on the spot.
6. Maths is only such subject where you spend a very less time to revise.
7. Math teaches us a lot of patience.
8. For lazy people it gives solution within a very few steps.
9. Math makes us smart and increases our strategic and planning skills.

Though several things play a key role in making people interested in mathematics, there is something that makes it addictive is its aesthetic nature. We need not hesitate to call mathematicians as an artist because math is also like a form of art. We literally get mental orgasms doing math. Therefore maths is about communicating the language of God to people in a simpler way, and it spontaneously let them understand it better. Once we get maths in our minds, we'll hunt for more Mathematics because we get to know how much it defines us and the whole Universe.

DIFFERENT PERSPECTIVES TO TEACH BASIC TOPICS OF MATHEMATICS TO THE PHILO MATH OR GEEK IN MATHEMATICS

As a mathematician or as we said before whiz in mathematics we may enlist a few better ways to kindle the interest of maths to those who has just started to love and learn mathematics.

- We can familiarize them with the **numbers and counting** through writing on papers or white boards.
- We may teach them **addition, subtraction, multiplication and division** with the use of objects.
- We can make **math a fun** task to them by introducing math games like dice, ladder etc.
- Baking and cooking will help us to teach **doubling, halving, timing and fractions**.
- Treasure hunt using a map with gridlines, introduces them to the **Y axis and the X axis**, and helps with counting.
- We can teach them the **basic measurements** through let them to compare their dresses with others or tell them to find out the screen size fit for their window.
- Unused old clock and watch will help us to teach them **time**.
- Maida dough in kitchen will help us to teach them the **shapes**.
- Leaving them to shop made easy to teach them the **price and value of real money**.

- Generally games are based on mathematical reasoning and puzzles. They need all the important skills which the schools skip to solve such as **pattern recognition, estimation, guessing, planning, strategizing**, etc. Hence we may familiarize them some math games. Example Sudoku.
- Real math is understanding a situation. The situation is expecting the decision to be made. The situation is fiddling around the ways and means to get the solution. The rest is just mechanical calculation. Hence we practice them to find **solutions for the real time situations**.
- To teach **quantity and position of numbers** i.e., cardinal and ordinal numbers we can take the eggs from our fridge.
- We can also use vegetables to teach **matching and sorting** which are considered as important math skill.
- To the **visual representations of objects** to be counted and **distances between number lines to be measured** can be taught through the arrangement of household articles.
- We can teach them **weight and size** through tell them to ask the weight and sizes of others.
- The **length** of the objects and between objects can be taught through showing them the rope tied to dry clothes and the road between to cities.

DIFFERENT NUMERICAL PERSPETIVES TO TEACH BASIC TOPICS OF MATHEMATICS

- Teach with Mathematical model
- Read formulas in rhythmic
- Compare the parameters involved in the problem with interesting character
- Use mind map to memorize the formulae
- Usage of the particular topic in real life

APPLICATION OF MATHEMATICS

A differential equation is an equation involving derivatives of an unknown function and possibly the function itself as well as the independent variables. We used to use differential equations in everyday life which is the mathematical modelling to pursue Engineering. If we have to convert any physical system into a mathematical model, we must have its differential equation with us.

Likewise the household electrical equipment are an outcome of a differential equation. The engineers are designing our vehicle system using some sets of differential equation. The Malthusian Law of population growth shows how the population (p) changes with respect to time.

Some other uses of differential equations include:

- For modelling cancer growth or the spread of disease in **medicine** field shown through differential equation.
- The movement of electricity in **engineering** is described in differential equation.
- **Chemistry** use differential equation for modelling chemical reactions and also to computer radioactive.
- The optimum investment strategy in economics is finding through the differential equation.
- **Physics** has used differential equation for the motion of waves, pendulums or chaotic systems, Newton's Second Law of Motion and the Law of Cooling.

Some other examples for the application of differential equation are:

Suppose that there are 1000 birds on an island, breeding with a constant continuous growth rate of 10% per year. But now birds migrate to the island at a constant rate of 100 new arrivals per year. To three significant figures, how many birds are on the island after seven years?

Solution: Let x be the number of birds on the island after t years. With $k=0.1$ and $m=100$, we have $dxdt=0.1x+100$.

The general solution to this differential equation is

$$x(t)=Ce^{0.1t}-1000.1=Ce^{0.1t}-1000.$$

Substituting $t=0$, $x=1000$ gives $C=2000$, so we have

$$x(t)=2000e^{0.1t}-1000.$$

We obtain $x(7)=2000e^{0.7}-1000\approx 3030$ birds, to three significant figures.

CONCLUSION

Math has fused in our daily life. We have to incorporate everything with math in our day today life. If anyone still suffering from that childhood fear of math then the above said different perspectives will help them to get over it. In order to teach math to the Philomath as a geek we need to pay attention to what our nerd in mathematics is paying attention to. If we are a teacher in mathematics one of the best ways of teaching math is to encourage kids to think about problems in their own way and not force the method that is prescribed in the textbook. This is hard work as this requires thinking through with them on the next step and avoiding the temptation to solve it for them by a “better” method. Teaching math may not be easy, if we do not like math ourselves. Math is a subject that challenges our patience equally as it does our IQ. So, take it as a challenging game or a puzzle and try infusing different interesting aspects to make it fun. Though the teacher was good in math during their schooldays, the thought of teaching the same will petrify them sometime. But, when they started using these methods with their child, we must say that it has changed our perspective as well today. Indeed, for some people its easy right since the beginning but with practice and good teaching, anyone can love Mathematics. But this thing has to be done in the very beginning. The base is important.

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