

CENT PERCENT MATHEMATICS

100% Success for 8bn+ in 100% K-12 Math

Ace 'AI & Industry 4.0 Era' Amplify Your AIQ & Wealth



Uses AERO, or, US 'Common Core Plus' Mathematics Curriculum, for the overall academic planning.

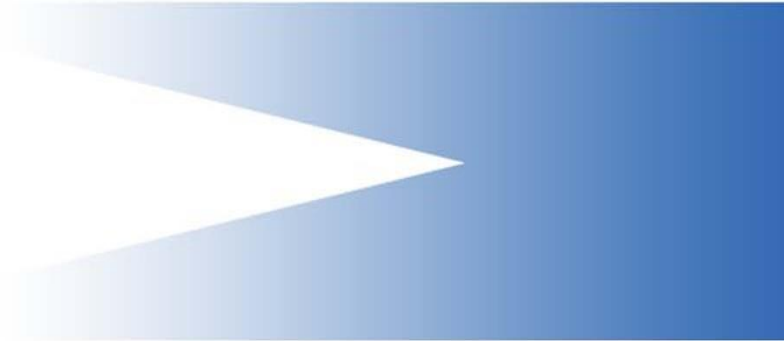
The choice of AERO is to ensure progressive integrity of MATHEMATICAL THINKING in the lessons.

However, the lesson content shall be based the unique 'A – Z' Mathematics that we have authored.

'A - Z' Mathematics is THE FIRST-EVER mathematics learning resource that is threaded by MATHEMATICAL LOGIC.

The very conception and creation of 'A - Z' Mathematics implied truly 100% Mathematics, that mathematises thinking.

The combining of the curricular detailing of mathematics by AERO, and the visualisation and verbalisation of 'A - Z' Mathematics, is the magic, awaited for 200 years.



CURRICULUM FRAMEWORK FOR MATH

About AERO

American Education Reaches Out (AERO) is a project supported by the United States Department of Education's Office of Overseas Schools, which establishes an implementation framework for international American schools which offer a standards-based U.S. curriculum.

Aligned with Common Core standards and Next Generation Science Standards, AERO is considered to be "Common Core Plus," providing an "enduring understanding, essential questions and learning progression."

Why US Common Core Mathematics?

It is one of the best curriculum for learning MATHEMATICAL THINKING. That is, to MATHEMATISE THINKING.

In these times of ever-sharpening Artificial (General) Intelligence, mathematised thinking is the only way to be successful. The typical rote, methodised, logic-less mathematics is of no value.

This curriculum will also empower foundation for success in ALL School System Curricula, globally.

The Background

One of the primary reasons, for poor mathematics education, is the lack of distinction, between mathematics content (largely methods, and practice), and mathematical thinking. This ambiguity, is also reflected, in assessment, and in evaluation.

The education system assumes, that teaching mathematics compulsorily, is enough, by itself, to develop mathematical thinking.

But, why content, and thinking, are different? That is, why the methods, and ceaseless practice, in mathematics education, does not promote mathematised mind.

For, the content does not focus on logic, process, reasoning, and the history of relevant mathematical concepts.

Briefly, mathematical thinking is not, thinking about the subject matter of mathematics, but, a way of looking, at situations, and conditions. It is critical for success in all academic ‘subjects.’

High School—Modeling

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of 3 million people, and how it might be distributed.
- Planning a table tennis tournament for 7 players at a club with 4 tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Engaging in critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Analyzing risk in situations such as extreme sports, pandemics, and terrorism.
- Relating population statistics to individual predictions.

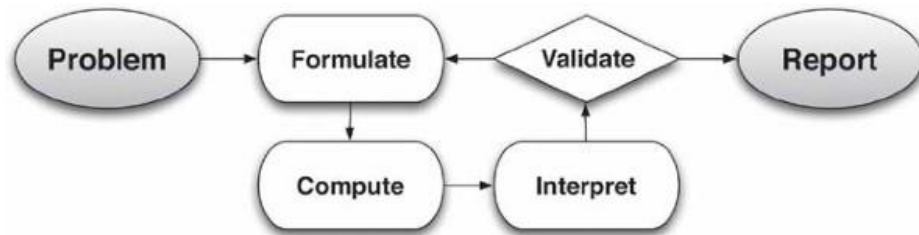
In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real- world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can sometimes model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example, as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.

The basic modeling cycle is summarized as involving

(1) identifying variables in the situation and selecting those that represent essential features,

- (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables,
- (3) analyzing and performing operations on these relationships to draw conclusions,
- (4) interpreting the results of the mathematics in terms of the original situation,
- (5) validating the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable,
- (6) reporting on the conclusions and the reasoning behind them.



Choices, assumptions, and approximations are present throughout the cycle.