Codingal

Grade 8

Hello ! Young Learners

Get ready to fall in love with Math

Accredited by

STEM.ORG ACCREDITED™ EDUCATIONAL EXPERIENCE

Rate 4.6 out of 5

Trustpilot

Backed by

Y Combinator

About Codingal

Our Mission: To inspire kids to fall in love with Math

Codingal offers online math classes for K-12 students, where kids and teens learn math concepts through live, interactive sessions with expert instructors. Our mission is to build the world's best and most loved online math learning platform for kids and teens, blending traditional teaching with innovative techniques and tools.

All our instructors have strong backgrounds in math and engineering, and they are rigorously vetted and trained. Each student receives a personalized learning path with individual attention in 1:1 private classes. Students learn math through real-life applications, hands-on problem-solving, and interactive activities that make learning fun and exciting.

Kids find Codingal's math classes highly engaging and inspiring. They have rated teachers at 4.9 out of 5. Curriculum content is rated at 4.8 out of 5.

Codingal is on a mission to inspire kids to fall in love with math and provide the right education that empowers them to solve real-world problems, think critically, and build a strong foundation for the future as innovators, engineers, scientists, and entrepreneurs.

Key Learning

Rational & Irrational Numbers

Understand rational and irrational numbers, their properties, decimal expansions, and conversions between forms. Perform operations with rational numbers and apply them to real-world contexts.

Exponents & Scientific Notation

Calculate squares, cubes, square roots, and cube roots with geometric significance. Apply exponent rules, including product, quotient, negative, and zero exponents, to simplify expressions. Convert numbers to and from scientific notation and solve real-world problems using exponent rules.

Algebra & Linear Equations

Solve one-variable equations, from one-step to multi-step, using distribution and combining like terms. Graph and solve linear inequalities, analyze solutions, and apply systems of equations using graphing, substitution, and elimination.

Functions & Graphing

Understand slope, derive linear equations, and write them in slope-intercept form. Graph functions using tables and equations, differentiate between linear and nonlinear functions, and analyze transformations on the coordinate plane.

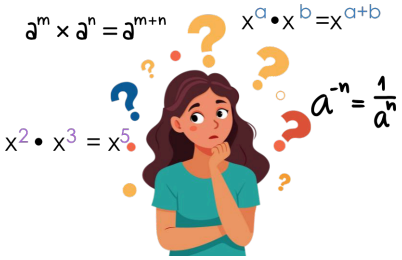
Geometry & Measurement

Apply translations, reflections, rotations, and dilations. Explore congruence and similarity, classify polygons and quadrilaterals, and prove the Pythagorean Theorem. Calculate surface area and volume of 3D shapes in real-world applications.

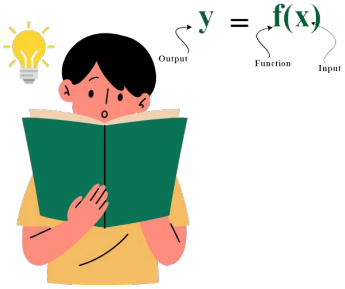
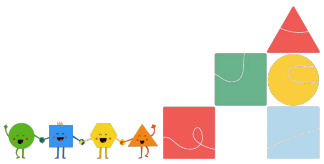
Data & Probability

Construct scatter plots, analyze data with two-way tables, and explore probability concepts including independent and dependent events. Interpret and analyze data using various graphs and measures of central tendency.

Math Curriculum (Grade 8)

Topics	Module	Lesson Titles
01. The Number System 	Rational Numbers and Irrational Numbers	Introduction to Rational Numbers
		Introduction to Irrational Numbers
		Decimal Expansions of Rational Numbers
		Understanding and Representing Proportional Relationships
		Converting Repeating Decimals to Fractions
		Operations with Rational Numbers
	Squares and Cubes	Introduction to Squares and Cubes
		Exploring and Finding Square Roots and Cube Roots
	More on Rational and Irrational Numbers	Approximating Irrational Numbers (Part 1)
		Approximating Irrational Numbers (Part 2)
		Comparing Rational and Irrational Numbers
		Applications of Rational and Irrational Numbers
02. Exponents 	Introduction to Exponents	Introduction to Exponents & Product of Powers
	Laws of Exponents	Quotient of Powers & Power of a Power
		Negative Exponents & Fractional Exponents
		Exponent of Zero & Solving Problems
	Application of Exponents	Practice and Application
	Scientific Notations	Introduction to Scientific Notation
		Operations with Scientific Notation
	Linear Equations	Solving Linear Equations (One-Step)
		Solving Linear Equations (Two-Step)
		Solving Linear Equations (Multi-Step)
	Solving Inequalities	Solving Inequalities

Math Curriculum (Grade 8)

Topics	Module	Lesson Titles
	Systems of Equations	Solving Systems of Equations (Graphing)
		Determining Number of Solutions
		Solving Systems of Equations (Substitution)
		Solving Systems of Equations (Elimination)
		Writing and Solving Systems of Equations
03. Functions 	Introduction to Functions	Slope of a Line and Rate of Change
		Direct Variation
		Slope-Intercept Form
	Linear Functions	Solving Simple Interest Problems Using Proportional Relationships
		Calculating Tax, Markups, and Markdown Using Proportional Relationships
		Solving Gratuities and Commissions Problems
		Understanding Fees and Percent Problems
	Modeling Relationships	Function Tables
		Compare Functions
	Nonlinear Functions	Nonlinear Functions
04. Geometry 	Transformations	Basic Transformations (Translations and Reflections)
		Advanced Transformations (Rotations and Dilations)
	Dilations and Similarity	Introduction to Dilations
		Exploring Scale Factor and Similarity
		Applications of Dilations
		Dilation Problems and Practice

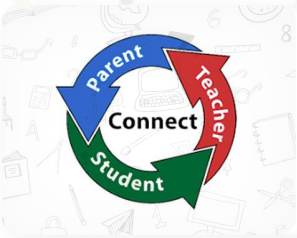
Math Curriculum (Grade 8)

Topics	Module	Lesson Titles
	Properties of Congruence and Similarity	Introduction to Congruence and Similarity
		Verifying Congruence through Transformations
		Proving Similarity using Transformations
		Using Algebra to Prove Similarity
		Congruence and Similarity Practice
	Understanding Quadrilaterals	Introduction to Polygons
		Regular and Irregular Polygons
		Classifying Quadrilaterals
		Properties of Special Quadrilaterals
		Diagonal Properties of Quadrilaterals
	Pythagorean Theorem	Understanding the Pythagorean Theorem
		Applications of the Pythagorean Theorem
		The Converse of the Pythagorean Theorem
		Distance on the Coordinate Plane
	Surface area and volume	Surface Area of Cubes
		Volume of Cubes and Cuboids
		Surface Area of Cylinders
		Volume of Cylinders
		Surface Area and Volume of Cones
		Surface Area and Volume of Spheres
		Find the Missing Dimensions
		Volume of Composite Solids

Math Curriculum (Grade 8)

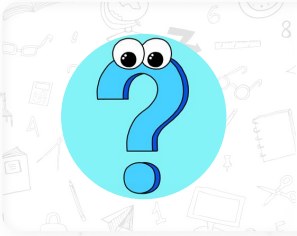
Topics	Module	Lesson Titles
05. Statistics and Probability 	Scatter Plots and Patterns	Scatter Plots
		Interpreting Slope and Intercept of Linear Models
	Two-Way Tables and Categorical Data	Introduction to Two-Way Tables
		Probability from Two-Way Tables
	Probability	Introduction to Probability
		Probability with Compound Events
		Probability of Independent and Dependent Events
		Theoretical vs Experimental Probability
	Data Representation	Interpreting Data from Graphs

Top 10 benefits of learning at Codingal



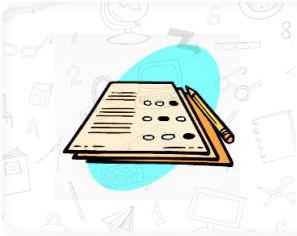
1. Regular PTM

Great opportunity for parents and teachers to open two-way communication and to share insights and information for the holistic development of a child.



2. Regular doubt session

After every module solve all your queries in this personalized session. The toughest problems addressed – concepts revised and doubts cleared!



3. Engaging Quizzes & Worksheets

After each class, students get a quiz and worksheets to reinforce learning. These engaging, gamified exercises ensure their understanding is checked and make practice exciting.

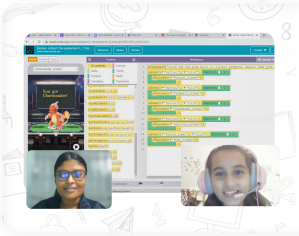
4. Global Curriculum Expertise

Codingal offers courses tailored to major international and national curricula, including US Common Core (USCC), Australian Curriculum, IB, British Curriculum, IGCSE, CBSE, ICSE, and more. Our expert teachers specialize in these curricula.

5. Course Customization

Whether before starting or anytime during your child's learning journey, you can get a personalized course tailored to align with their school curriculum, exams, Olympiad preparation, or competition needs.

Top 10 benefits of learning at Codingal

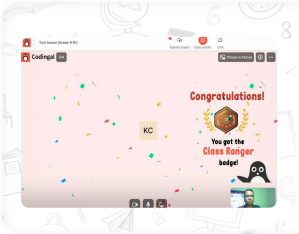


6. Live personalized classes

Understand concepts faster with personal attention from teachers. Learn coding from highly qualified teachers trained to make learning effective and impactful.

7. Lifetime Access to Class Recordings & Notes

Forgot what was taught in the last class? No worries. Watch the recorded class video anytime to refresh your memory. Get lifetime access to our exclusive learning content including interactive worksheets, videos, and other resources.



8. Gamified learning

Codingal makes learning fun with gamification. Students can take quizzes or complete projects to earn points, badges, and rewards.

9. Thrilling competitions

Regular competitions are conducted to encourage students to showcase their skills and develop their ideas.

10. Learning Certificates

Show the world what you can do with a certificate for every amazing skill you master.

Students love Codingal

Mohau Motang
South Africa

> Math was tough for me but now it has become easy and interesting because of Codingal.

Mahira Khan
Sweden

> My problem solving skills have improved drastically because of Codingal!

Alika Persaud
South Africa

> Because of Codingal Math, I have massive improvement in my grades!

Zunaira Rizwan
Pakistan

> Codingal has made me excellent in math

Trustpilot
4.6 out of 5

Google
4.8 out of 5

facebook
5 out of 5

Codingal empowers kids to become innovators of the future

Why this curriculum?

Accredited by STEM.org

Rated 4.5 out of 5 by students and parents on Trustpilot

Based on BIDE (Broad, Inspiring, Deep and Efficient) model

Focus on STEAM (Science, Technology, Engineering, Arts, Math) subjects

Enhances cognitive, logical, and computational skills

Makes learning highly effective, interactive, and fun

Foundation of Codingal's curriculum

BLOOM

Bloom's Taxonomy is a standard guideline for K-12 content development, which includes 6 stages of learning: Remember, understand, apply, analyze, evaluate and create.

BIDE

The BIDE (Broad, Inspiring, Deep and Efficient) model has been developed by Codingal in-house to ensure that our curriculum caters to the unique learning style of every child.

STEAM

STEAM is an approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking.

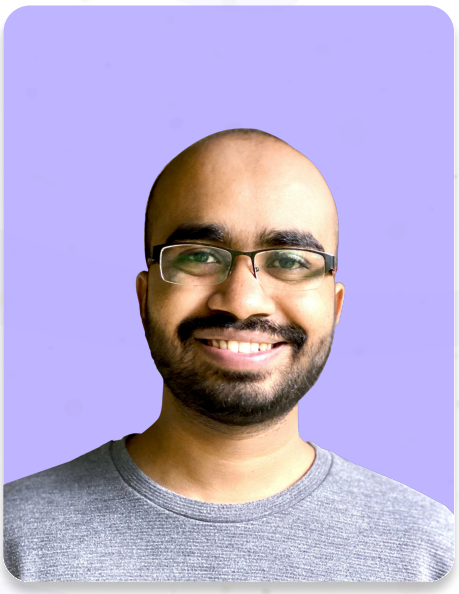
Covers K-12 Computer Science Framework compliant

Math - Foundation for the Future

"Math is the foundation of all sciences and a universal language. It's the key to unlocking solutions in business and innovation."
- Elon Musk

“Pure mathematics is, in its way, the poetry of logical ideas”
- Albert Einstein

A note from Codingal Founders



Mathematics is the language of possibility, unlocking the door to a world of innovation discovery, and endless potential. Our teachers open the doors for kids to explore the potential and beauty of Math.

Vivek Prakash

Co-founder & CEO
B.Tech & M.Tech, IIT Roorkee

LinkedIn

Mathematics is not only about numbers, equations, and algorithms; it is about understanding and exploring the patterns that shape our world.

Satyam Baranwal

Co-founder & COO
B.Tech, IIT Dhanbad

LinkedIn

Make your kid's math journey fun and inspiring

Is your child ready for the future?

Visit www.codingal.com

Try a free lesson!

Thank You

Built by alumni of

Google amazon

IIT Roorkee IIT Dhanbad

In partnership with

IIT Bombay IIT Guwahati

Hewlett Packard Enterprise BITS Pilani

Accredited by STEM.org

Backed by

Y Combinator REBRIGHT PARTNERS

Got questions? Contact us anytime.

Send us a message

support@codingal.com

Codingal
Where kids love coding