TRUE ROBOTICS

PAVING THE WAY WITH TREADS

GRADES K–3

This document lists the New York learning standards addressed by Paving the Way with Treads, True Robotics' grades K–3 robotics curriculum. Standards are grouped by subject and grade level, with codes and wording as published by the New York State Education Department.

44	34	19	5	102
MATH	ELA	CS	SCIENCE	TOTAL STANDARDS

MATHEMATICS

44 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
K–3	MP.1	Make sense of problems and persevere in solving them.
K	NY-K.CC.1	Count to 100 by ones and by tens.
K	NY-K.CC.4	Understand the relationship between numbers and quantities up to 20; connect counting to cardinality.
K	NY-K.OA.1	Represent addition and subtraction using objects, fingers, pennies, drawings, sounds, acting out situations, verbal explanations, expressions, equations, or other strategies.
K	NY-K.OA.2a	Add and subtract within 10.
K	NY-K.OA.2b	Solve addition and subtraction word problems within 10.
K	NY-K.MD.1	Describe measurable attributes of an object(s), such as length or weight, using appropriate vocabulary.
K	NY-K.MD.2	Directly compare two objects with a common measurable attribute and describe the difference.
K	NY-K.MD.3	Classify objects into given categories; count the objects in each category and sort the categories by count.
K	NY-K.G.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
K	NY-K.G.2	Name shapes regardless of their orientation or overall size.
1	MP.2	Reason abstractly and quantitatively.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820

GRADE	CODE	STANDARD
1	NY-1.OA.1	Use addition and subtraction within 20 to solve one step word problems involving situations of adding to, taking from, putting together, taking apart, and/or comparing, with unknowns in all positions.
1	NY-1.OA.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.
1	NY-1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones.
1	NY-1.NBT.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
1	NY-1.MD.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1	NY-1.MD.2	Measure the length of an object using same-size "length units" placed end to end with no gaps or overlaps. Express the length of an object as a whole number of "length units."
1	NY-1.MD.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
1	NY-1.G.1	Distinguish between defining attributes versus non-defining attributes for a wide variety of shapes. Build and/or draw shapes to possess defining attributes.
1	NY-1.G.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
2	NY-2.OA.1a	Use addition and subtraction within 100 to solve one-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
2	NY-2.OA.1b	Use addition and subtraction within 100 to develop an understanding of solving two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
2	NY-2.NBT.1	Understand that the digits of a three-digit number represent amounts of hundreds, tens, and ones.
2	NY-2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2	NY-2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2	NY-2.MD.1	Measure the length of an object to the nearest whole by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2	NY-2.MD.3	Estimate lengths using units of inches, feet, centimeters, and meters.
2	NY-2.MD.8b	Solve real world and mathematical problems within one dollar involving quarters, dimes, nickels, and pennies, using the ¢ (cent) symbol appropriately.
2	NY-2.MD.9	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Present the measurement data in a line plot, where the horizontal scale is marked off in whole-number units.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820

GRADE	CODE	STANDARD
2	NY-2.MD.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a picture graph or a bar graph.
2	NY-2.G.1	Classify two-dimensional figures as polygons or non-polygons.
2	NY-2.G.3	Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the words halves, thirds, half of, a third of, etc. Describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
3	NY-3.OA.1	Interpret products of whole numbers.
3	NY-3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.
3	NY-3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
3	NY-3.OA.5	Apply properties of operations as strategies to multiply and divide.
3	NY-3.NF.1	Understand a unit fraction, 1/b, is the quantity formed by 1 part when a whole is partitioned into b equal parts. Understand a fraction a/b as the quantity formed by a parts of size 1/b.
3	NY-3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line.
3	NY-3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in a scaled picture graph or a scaled bar graph.
3	NY-3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.
3	NY-3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement.
3	NY-3.MD.6	Measure areas by counting unit squares.
3	NY-3.G.1	Recognize and classify polygons based on the number of sides and vertices (triangles, quadrilaterals, pentagons, and hexagons). Identify shapes that do not belong to one of the given subcategories.

ENGLISH LANGUAGE ARTS

34 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
K–2	L2	Demonstrate command of the conventions of academic English capitalization, punctuation, and spelling when writing.
K	KRF1c	Understand that words are separated by spaces in print.
K	KRF2a	Recognize and produce spoken rhyming words.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820

GRADE	CODE	STANDARD
K	KRF3b	Decode short vowel sounds with common spellings.
K	KRF3d	Read common high-frequency words by sight.
K	KSL2	Participate in a conversation about features of diverse texts and formats.
K	KSL3	Develop and answer questions to clarify what the speaker says.
K	KSL5	Create and/or utilize existing visual displays to support descriptions.
K	KL5c	Use words to identify and describe the world, making connections between words and their use (e.g., places at home that are colorful).
1	1RF2c	Manipulate individual sounds (phonemes) in single-syllable spoken words.
1	1RF3	Know and apply phonics and word analysis skills in decoding words.
1	1RF3b	Decode long vowel sounds in regularly spelled one-syllable words (e.g., final -e conventions and common vowel teams).
1	1RF3c	Decode regularly spelled one-syllable words.
1	1RF3g	Read most common high-frequency words by sight
1	1RF4	Read beginning reader texts, appropriate to individual student ability, with sufficient accuracy and fluency to support comprehension.
1	1SL2	Develop and answer questions about key details in diverse texts and formats.
1	1SL4	Describe familiar people, places, things, and events with relevant details expressing ideas clearly.
2	2RF3a	Distinguish long and short vowels when reading regularly spelled one-syllable words (including common vowel teams).
2	2W1	Write an opinion about a topic or personal experience, using clear reasons and relevant evidence.
2	2W3	Write narratives which recount real or imagined experiences or a short sequence of events, including details to describe actions, thoughts, and feelings; use temporal words to signal event order, and provide a sense of closure.
2	2SL1c	Ask for clarification and further explanation as needed about topics and texts under discussion.
2	2SL2	Recount or describe key ideas or details of diverse texts and formats.
2	2SL4	Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
2	2SL5	Include digital media and/or visual displays in presentations to clarify or support ideas, thoughts, and feelings.
2	2L4a	Use sentence-level context as a clue to the meaning of a word or phrase.
2	2L5a	Identify real-life connections between words and their use.
2	L1	Demonstrate command of the conventions of academic English grammar and usage when writing or speaking.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820

GRADE	CODE	STANDARD
3	3R1	Develop and answer questions to locate relevant and specific details in a text to support an answer or inference.
3	3R2	Determine a theme or central idea and explain how it is supported by key details; summarize portions of a text.
3	3RF3	Know and apply grade-level phonics and word analysis skills in decoding words.
3	3W3	Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.
3	3SL2	Determine the central ideas and supporting details or information presented in diverse texts and formats (e.g., including visual, quantitative, and oral).
3	3L4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies, including, but not limited to the following: a. Use sentence-level context as a clue to the meaning of a word or phrase. b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat). c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion). d. Use glossaries or beginning dictionaries to determine or clarify the precise meaning of key words and phrases.
3	3L5	Demonstrate understanding of word relationships and nuances in word meanings.

COMPUTER SCIENCE AND DIGITAL FLUENCY

19 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
K–1	K-1.IC.2	Identify and explain classroom and home rules related to computing technologies and digital information.
K–1	K-1.IC.3	Identify computing technologies in the classroom, home and community.
K–1	K-1.IC.7	Identify multiple jobs that use computing technologies.
K–1	K-1.CT.6	Follow an algorithm to complete a task.
K–1	K-1.CT.10	Collaboratively create a plan that outlines the steps needed to complete a task.
K–1	K-1.NSD.1	Identify ways people provide input and get output from computing devices.
K–1	K-1.DL.2	Communicate and work with others using digital tools.
K–1	K-1.DL.4	Use a least one digital tool to create a digital artifact.
2–3	2-3.CT.6	Create two or more algorithms for the same task.
2	2-3.IC.5	Identify and discuss how computers are programmed to make decisions without direct human input for daily life.
2	2-3.NSD.2	Explain the function of software in computing systems, using descriptive/precise language.
2	2-3.NSD.5	Describe and navigate to various locations where digital information can be stored.
3	2-3.CT.2	Identify and describe data collection tools from everyday life.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820

GRADE	CODE	STANDARD
3	2-3.CT.3	Present the same data in multiple visual formats in order to tell a story about the data.
3	2-3.CT.4	Identify multiple ways that the same problem could be decomposed into smaller steps
3	2-3.CT.8	Identify steps within a task that should only be carried out under certain precise conditions.
3	2-3.CT.9	Identify and debug errors within an algorithm or program that includes sequencing or repetition.
3	2-3.NSD.1	Describe and demonstrate several ways a computer program can receive data and instructions (input) and can present results (output).
3	2-3.DL.2	Communicate and work with others using digital tools to share knowledge and convey ideas.

SCIENCE (ENGINEERING DESIGN)

5 STANDARDS

Based on the New York state standards

GRADE	CODE	STANDARD
K–2	K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
K–2	K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
K–2	K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.
3	3-5-ETS1-2	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
3	3-5-ETS1-3	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

SOURCES & NOTES

- The official mathematics, English language arts, computer science and science standards for New York, as published by the New York State Education Department.
- Codes and standard wording are reproduced from the official standards documents. Clarification statements, examples and assessment boundaries are omitted.
- Grade shows the grade level at which True Robotics lessons address each standard. A range (for example K–2) marks a standard written for a grade band.
- Standards text remains the property of its publisher and is reproduced here for alignment reference only.
- A lesson-level crosswalk is available on request at info@truerobotics.org.

© 2026 True Robotics, Inc. All rights reserved.

True Robotics, Inc. · 49 Canterbury Street, Suite 700, Worcester, MA 01610 · truerobotics.org · info@truerobotics.org · (774) 276-9820