

PAVING THE WAY WITH TREADS

GRADES K-3

This document lists the Florida 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 Florida Department of Education.

46

MATH

36

ELA

22

CS

3

SCIENCE

107

TOTAL STANDARDS

MATHEMATICS

46 STANDARDS

Based on the Florida state standards

GRADE	CODE	STANDARD
K-3	MA.K12.MTR.1.1	Actively participate in effortful learning both individually and collectively.
K	MA.K.NSO.1.1	Given a group of up to 20 objects, count the number of objects in that group and represent the number of objects with a written numeral. State the number of objects in a rearrangement of that group without recounting.
K	MA.K.NSO.2.1	Recite the number names to 100 by ones and by tens. Starting at a given number, count forward within 100 and backward within 20.
K	MA.K.NSO.3.1	Explore addition of two whole numbers from 0 to 10, and related subtraction facts.
K	MA.K.AR.1.3	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem.
K	MA.K.M.1.1	Identify the attributes of a single object that can be measured such as length, volume or weight.
K	MA.K.M.1.2	Directly compare two objects that have an attribute which can be measured in common. Express the comparison using language to describe the difference.
K	MA.K.M.1.3	Express the length of an object, up to 20 units long, as a whole number of lengths by laying non-standard objects end to end with no gaps or overlaps.
K	MA.K.GR.1.1	Identify two- and three-dimensional figures regardless of their size or orientation. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.
K	MA.K.GR.1.2	Compare two-dimensional figures based on their similarities, differences and positions. Sort two-dimensional figures based on their similarities and differences. Figures are limited to circles, triangles, rectangles and squares.

GRADE	CODE	STANDARD
K	MA.K.GR.1.4	Find real-world objects that can be modeled by a given two- or three-dimensional figure. Figures are limited to circles, triangles, rectangles, squares, spheres, cubes, cones and cylinders.
K	MA.K.DP.1.1	Collect and sort objects into categories and compare the categories by counting the objects in each category. Report the results verbally, with a written numeral or with drawings.
1	MA.1.2.MTR.2.1	Demonstrate understanding by representing problems in multiple ways.
1	MA.1.NSO.1.3	Compose and decompose two-digit numbers in multiple ways using tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.
1	MA.1.NSO.1.4	Plot, order and compare whole numbers up to 100.
1	MA.1.AR.1.1	Apply properties of addition to find a sum of three or more whole numbers.
1	MA.1.AR.1.2	Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem.
1	MA.1.M.1.2	Compare and order the length of up to three objects using direct and indirect comparison.
1	MA.1.GR.1.1	Identify, compare and sort two- and three-dimensional figures based on their defining attributes. Figures are limited to circles, semi-circles, triangles, rectangles, squares, trapezoids, hexagons, spheres, cubes, rectangular prisms, cones and cylinders.
1	MA.1.GR.1.2	Sketch two-dimensional figures when given defining attributes. Figures are limited to triangles, rectangles, squares and hexagons.
1	MA.1.GR.1.3	Compose and decompose two- and three-dimensional figures. Figures are limited to semi-circles, triangles, rectangles, squares, trapezoids, hexagons, cubes, rectangular prisms, cones and cylinders.
1	MA.1.DP.1.1	Collect data into categories and represent the results using tally marks or pictographs.
1	MA.1.DP.1.2	Interpret data represented with tally marks or pictographs by calculating the total number of data points and comparing the totals of different categories.
2	MA.2.NSO.1.1	Read and write numbers from 0 to 1,000 using standard form, expanded form and word form.
2	MA.2.NSO.1.2	Compose and decompose three-digit numbers in multiple ways using hundreds, tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.
2	MA.2.NSO.2.3	Add two whole numbers with sums up to 100 with procedural reliability. Subtract a whole number from a whole number, each no larger than 100, with procedural reliability.
2	MA.2.FR.1.1	Partition circles and rectangles into two, three or four equal-sized parts. Name the parts using appropriate language, and describe the whole as two halves, three thirds or four fourths.
2	MA.2.FR.1.2	Partition rectangles into two, three or four equal-sized parts in two different ways showing that equal-sized parts of the same whole may have different shapes.
2	MA.2.AR.1.1	Solve one- and two-step addition and subtraction real-world problems.

GRADE	CODE	STANDARD
2	MA.2.M.1.1	Estimate and measure the length of an object to the nearest inch, foot, yard, centimeter or meter by selecting and using an appropriate tool.
2	MA.2.M.2.2	Solve one- and two-step addition and subtraction real-world problems involving either dollar bills within \$100 or coins within 100¢ using \$ and ¢ symbols appropriately.
2	MA.2.GR.1.1	Identify and draw two-dimensional figures based on their defining attributes. Figures are limited to triangles, rectangles, squares, pentagons, hexagons and octagons.
2	MA.2.DP.1.1	Collect, categorize and represent data using tally marks, tables, pictographs or bar graphs. Use appropriate titles, labels and units.
2	MA.2.DP.1.2	Interpret data represented with tally marks, tables, pictographs or bar graphs including solving addition and subtraction problems.
3	MA.3.NSO.2.2	Explore multiplication of two whole numbers with products from 0 to 144, and related division facts.
3	MA.3.FR.1.1	Represent and interpret unit fractions in the form $\frac{1}{n}$ as the quantity formed by one part when a whole is partitioned into n equal parts.
3	MA.3.FR.1.2	Represent and interpret fractions, including fractions greater than one, in the form of $\frac{m}{n}$ as the result of adding the unit fraction $\frac{1}{n}$ to itself m times.
3	MA.3.FR.2.1	Plot, order and compare fractional numbers with the same numerator or the same denominator.
3	MA.3.AR.1.1	Apply the distributive property to multiply a one-digit number and two-digit number. Apply properties of multiplication to find a product of one-digit whole numbers.
3	MA.3.AR.1.2	Solve one- and two-step real-world problems involving any of four operations with whole numbers.
3	MA.3.AR.2.3	Determine the unknown whole number in a multiplication or division equation, relating three whole numbers, with the unknown in any position.
3	MA.3.M.1.1	Select and use appropriate tools to measure the length of an object, the volume of liquid within a beaker and temperature.
3	MA.3.GR.1.2	Identify and draw quadrilaterals based on their defining attributes. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.
3	MA.3.GR.2.1	Explore area as an attribute of a two-dimensional figure by covering the figure with unit squares without gaps or overlaps. Find areas of rectangles by counting unit squares.
3	MA.3.DP.1.1	Collect and represent numerical and categorical data with whole-number values using tables, scaled pictographs, scaled bar graphs or line plots. Use appropriate titles, labels and units.
3	MA.3.DP.1.2	Interpret data with whole-number values represented with tables, scaled pictographs, circle graphs, scaled bar graphs or line plots by solving one- and two-step problems.

ENGLISH LANGUAGE ARTS

36 STANDARDS

Based on the Florida state standards

GRADE	CODE	STANDARD
K	ELA.K.F.1.1(b)	Distinguish letters from words within sentences.
K	ELA.K.F.1.2(b)	Identify and produce alliterative and rhyming words.
K	ELA.K.F.1.3(b)	Demonstrate knowledge of the short and long sounds for the five major vowels.
K	ELA.K.F.1.4	Recognize and read with automaticity grade-level high frequency words.
K	ELA.K.R.3.2	Retell a text orally to enhance comprehension
K	ELA.K.C.3.1	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.
K	ELA.K.C.5.1	Use a multimedia element to enhance oral or written tasks.
K	ELA.K.V.1.3	Identify and sort common words into basic categories, relating vocabulary to background knowledge.
1	ELA.1.F.1.2(a)	Segment spoken words into initial, medial, and final phonemes, including words with digraphs, blends, and trigraphs.
1	ELA.1.F.1.3	Use knowledge of grade-appropriate phonics and word-analysis skills to decode words accurately.
1	ELA.1.F.1.3(c)	Decode and encode regularly spelled one-syllable words.
1	ELA.1.F.1.3(f)	Decode words that use final -e and vowel teams to make long-vowel sounds.
1	ELA.1.F.1.4	Read grade-level texts with accuracy, automaticity, and appropriate prosody or expression.
1	ELA.1.F.1.4(a)	Recognize and read with automaticity the grade-level sight words.
1	ELA.1.R.3.2	Retell a text in oral or written form to enhance comprehension.
1	ELA.1.C.2.1	Present information orally using complete sentences and appropriate volume.
1	ELA.1.C.3.1	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.
2	ELA.2.F.1.3(a)	Decode words with variable vowel teams (e.g., oo, ea, ou) and vowel diphthongs (e.g., oi, oy, ow).
2	ELA.2.F.1.3(b)	Decode regularly spelled two-syllable words with long and short vowels.
2	ELA.2.R.3.2	Retell a text to enhance comprehension.
2	ELA.2.C.1.2	Write personal or fictional narratives using a logical sequence of events, transitions, and an ending.
2	ELA.2.C.1.3	Write opinions about a topic or text with reasons supported by details from a source, use transitions, and provide a conclusion.
2	ELA.2.C.1.5	Improve writing as needed by planning, revising, and editing with guidance and support from adults and feedback from peers.

GRADE	CODE	STANDARD
2	ELA.2.C.2.1	Present information orally using complete sentences, appropriate volume, and clear pronunciation.
2	ELA.2.C.3.1	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.
2	ELA.2.C.5.1	Use one or more multimedia element(s) to enhance oral or written tasks.
2	ELA.2.V.1.3	Identify and use context clues, word relationships, reference materials, and/or background knowledge to determine the meaning of unknown words.
2	ELA.K12.EE.4.1	Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.
3	ELA.3.F.1.3	Use knowledge of grade-level phonics and word-analysis skills to decode words.
3	ELA.3.R.1.2	Explain a theme and how it develops, using details, in a literary text.
3	ELA.3.R.2.2	Identify the central idea and explain how relevant details support that idea in a text.
3	ELA.3.R.3.2	Summarize a text to enhance comprehension.
3	ELA.3.C.1.2	Write personal or fictional narratives using a logical sequence of events, appropriate descriptions, dialogue, a variety of transitional words or phrases, and an ending.
3	ELA.3.C.1.5	Improve writing as needed by planning, revising, and editing with guidance and support from adults and feedback from peers.
3	ELA.3.V.1.3	Use context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases, appropriate to grade level.
3	ELA.K12.EE.1.1	Cite evidence to explain and justify reasoning.

COMPUTER SCIENCE

22 STANDARDS

Based on the Florida state standards

GRADE	CODE	STANDARD
K	SC.K.HS.2.2	Explore how to create a healthy balance between physical activity and time spent on a digital device.
K	SC.K.PE.1	Recognize that tasks are completed in a sequential order.
K	SC.K.PE.1.1	Discuss how a computer program is a set of instructions made by people to show a computer how to complete a task.
K	SC.K.PE.3.2	Solve problems involving logical order thinking or sequencing with or without technology.
K	SC.K.TI.1.1	Explore the use of technology in daily life.
1	SC.1.CC.1.1	Communicate and collaborate with teachers and other students with and without the use of technology.
1	SC.1.CO.1.1	Recognize and operate different types of computer components.
1	SC.1.CO.1.9	Recognize and operate different types of computer applications.

GRADE	CODE	STANDARD
1	SC.1.CO.1.1	Demonstrate proper care for electronic devices.
1	SC.1.PE.1.1	Explain that a computer program can only follow a set of instructions made by people to complete a task.
2	SC.2.CO.1.5	Create and present a digital product.
2	SC.2.PE.1.1	Construct code segments using tools that do not require a textual programming language.
3	SC.3.CC.1.2	Use feedback from peers to make revisions using technology.
3	SC.3.CO.1.5	Use digital tools for sharing information.
3	SC.3.PE.1.1	Explore using graphics, blocks or visual cues to design a program.
3	SC.3.PE.1.2	Create a program that includes user choices based on defined conditions.
3	SC.3.PE.2.1	Collect data using a digital tool.
3	SC.3.PE.2.2	Compile data collected and draw conclusions based on trends.
3	SC.3.PE.3.2	Demonstrate how programs written differently can have the same outcome.
3	SC.3.PE.3.3	Use graphical programming or visual cues to represent a set of instructions (algorithm) that includes repetition.
3	SC.K12.CTR.3.1	Complete tasks with digital fluency.
3	SC.K12.CTR.5.1	Create an algorithm to achieve a given goal.

SCIENCE

3 STANDARDS

Based on the Florida state standards

GRADE	CODE	STANDARD
1	SC.1.N.1.1	Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.
2	SC.2.N.1.2	Compare the observations made by different groups using the same tools.
3	SC.3.N.1.1	Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SOURCES & NOTES

- The official mathematics, English language arts, computer science and science standards for Florida, as published by the Florida Department of Education.
- 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.
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- A lesson-level crosswalk is available on request at info@truerobotics.org.