TRUE ROBOTICS

PAVING THE WAY WITH TREADS

GRADES K–3

This document lists the Alabama 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 Alabama State Department of Education.

42	41	16	3	102
MATH	ELA	CS	SCIENCE	TOTAL STANDARDS

MATHEMATICS

42 STANDARDS

Based on the Alabama state standards

GRADE	CODE	STANDARD
K–3	SMP.1	Make sense of problems and persevere in solving them.
K	MA19.K.1	Count forward orally from 0 to 100 by ones and by tens. Count backward orally from 10 to 0 by ones.
K	MA19.K.4	Connect counting to cardinality using a variety of concrete objects.
K	MA19.K.8	Represent addition and subtraction up to 10 with concrete objects, fingers, pennies, mental images, drawings, claps or other sounds, acting out situations, verbal explanations, expressions, or equations.
K	MA19.K.9	Solve addition and subtraction word problems, and add and subtract within 10, by using concrete objects or drawings to represent the problem.
K	MA19.K.15	Classify objects into given categories of 10 or fewer; count the number of objects in each category and sort the categories by count.
K	MA19.K.16	Identify and describe measurable attributes (length, weight, height) of a single object using vocabulary such as long/short, heavy/light, or tall/short.
K	MA19.K.17	Directly compare two objects with a measurable attribute in common to see which object has "more of" or "less of" the attribute and describe the difference.
K	MA19.K.18	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	MA19.K.19	Correctly name shapes regardless of their orientations or overall sizes.
1	SMP.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	MA19.1.1	Use addition and subtraction to solve word problems within 20 by using concrete objects, drawings, and equations with a symbol for the unknown number to represent the problem.
1	MA19.1.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 by using concrete objects, drawings, or equations with a symbol for the unknown number to represent the problem.
1	MA19.1.11	Explain that the two digits of a two-digit number represent amounts of tens and ones.
1	MA19.1.12	Compare pairs of two-digit numbers based on the values of the tens and ones digits, recording the results of comparisons with the symbols >, =, and < and orally with the words "is greater than," "is equal to," and "is less than."
1	MA19.1.16	Organize, represent, and interpret data with up to three categories.
1	MA19.1.17	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1	MA19.1.18	Determine the length of an object using non-standard units with no gaps or overlaps, expressing the length of the object with a whole number.
1	MA19.1.21	Build and draw shapes which have defining attributes.
1	MA19.1.22	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	MA19.2.1	Use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.
2	MA19.2.6	Explain that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
2	MA19.2.8	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2	MA19.2.10	Fluently add and subtract within 100, using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2	MA19.2.15	Measure lengths of several objects to the nearest whole unit.
2	MA19.2.16	Create a picture graph and bar graph to represent data with up to four categories.
2	MA19.2.17	Measure the length of an object by selecting and using standard units of measurement shown on rulers, yardsticks, meter sticks, or measuring tapes.
2	MA19.2.19	Estimate lengths using the following standard units of measurement: inches, feet, centimeters, and meters.
2	MA19.2.24	Solve problems with money.
2	MA19.2.25	Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
2	MA19.2.27	Partition circles and rectangles into two, three, or four equal shares. Describe the shares using such terms as halves, thirds, half of, or a third of, and describe the whole as two halves, three thirds, or four fourths.

© 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	MA19.3.1	Illustrate the product of two whole numbers as equal groups by identifying the number of groups and the number in each group and represent as a written expression.
3	MA19.3.3	Solve word situations using multiplication and division within 100 involving equal groups, arrays, and measurement quantities; represent the situation using models, drawings, and equations with a symbol for the unknown number.
3	MA19.3.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
3	MA19.3.5	Develop and apply properties of operations as strategies to multiply and divide.
3	MA19.3.13	Demonstrate that a unit fraction represents one part of an area model or length model of a whole that has been equally partitioned; explain that a numerator greater than one indicates the number of unit pieces represented by the fraction.
3	MA19.3.14	Interpret a fraction as a number on the number line; locate or represent fractions on a number line diagram.
3	MA19.3.16	For a given or collected set of data, create a scaled (one-to-many) picture graph and scaled bar graph to represent a data set with several categories.
3	MA19.3.17	Measure lengths using rulers marked with halves and fourths of an inch to generate data and create a line plot marked off in appropriate units to display the data.
3	MA19.3.20	Find the area of a rectangle with whole number side lengths by tiling without gaps or overlays and counting unit squares.
3	MA19.3.21	Count unit squares (square cm, square m, square in, square ft, and improvised or non-standard units) to determine area.
3	MA19.3.26	Recognize and describe polygons (up to 8 sides), triangles, and quadrilaterals (rhombuses, rectangles, and squares) based on the number of sides and the presence or absence of square corners.

ENGLISH LANGUAGE ARTS

41 STANDARDS

Based on the Alabama state standards

GRADE	CODE	STANDARD
K	K.4	With guidance and support, ask and answer questions to seek help, get information, or clarify information presented orally, through text, or other media.
K	K.8e	Point to words using one-to-one correspondence, noting that words are separated by spaces.
K	K.9c	Recognize and produce pairs of rhyming words and distinguish them from non-rhyming pairs using pictures and/or spoken words.
K	K.9f	Identify the initial, final, and medial sounds of spoken words.
K	K.10b	Identify the vowel in a closed syllable and produce the short vowel sound for the five major vowels when decoding closed syllables.
K	K.10d	Identify the vowel in an open syllable and produce the long vowel sound for the five major vowels when decoding open syllables.

© 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	K.16	Recognize and read grade-appropriate high frequency words with accuracy and automaticity.
K	K.17	With guidance and support, orally utilize new academic, content-specific, grade-level vocabulary and relate new words to prior knowledge.
K	K.33	Express ideas orally and connect these ideas through drawing and emergent writing.
K	K.36	When speaking and writing, follow the rules of standard English grammar, punctuation, capitalization, and grade-appropriate spelling.
1	1.3	Ask and answer questions to seek help, get information, or clarify information to confirm understanding in response to information presented in audible, text, or digital format.
1	1.4a	Orally describe people, places, things, and events, expressing ideas with relevant details.
1	ELA21.1.6f	Distinguish long from short vowel sounds in spoken, single-syllable words.
1	1.7	Apply knowledge of phoneme-grapheme correspondences and word analysis skills to decode and encode words accurately both in isolation and within decodable, grade-appropriate texts.
1	1.7b	Decode and encode regularly-spelled, one-syllable words with closed syllables, open syllables, and vowel-consonant-e syllables, including words with blends in initial and final position.
1	1.7h	With prompting and support, decode words with common vowel team syllables, including ai, ay, ee, ea, igh, ie, oa, ou, ow, au, aw, oe, oo, ew, oi, oy, and ue.
1	1.9	Read grade-appropriate texts with accuracy and fluency.
1	1.10	Read high-frequency words commonly found in grade-appropriate text.
1	1.32	Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.
2–3	R5	Utilize a writing process to plan, draft, revise, edit, and publish writings in various genres.
2	2.2	Present information orally using complete sentences, appropriate volume, and clear pronunciation.
2	2.2c	Ask and answer questions to seek help, clarify meaning, or get information.
2	2.4	Orally answer who, what, when, where, why, and how questions about a text or conversation, using complete sentences to provide key ideas and details.
2	ELA21.2.5	Create recordings of stories or poems.
2	ELA21.2.6	Use visual aids and technology in oral presentations to present key ideas and details about a text or conversation, and add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify thoughts, feelings, and ideas.
2	2.7a	Use collective nouns.
2	2.7b	Form and use frequently-occurring irregular plural nouns.
2	2.10a	Decode multisyllabic words with common syllable patterns, including open/closed, vowel-r, vowel-consonant-e, vowel teams, consonant-le, and schwa syllables.
2	ELA21.2.10e	Decode and encode words with variable vowel teams and vowel diphthongs.

© 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	2.18	Use dictionary definitions and information found within the text to help determine meaning of unfamiliar or multi-meaning words.
2	2.19	Identify new vocabulary and the use of word meanings in text to establish real-life connections.
2	2.40	Write a personal or fictional narrative using a logical sequence of events, including details to describe actions, thoughts, and feelings and providing a sense of closure.
2	2.42	Write an opinion piece about a topic or text with details to support the opinion, using transitional words and providing a sense of closure.
2	2.43b	Use apostrophes to form contractions and possessives.
3	3.4	Ask and answer questions using complete sentences and grade-level vocabulary.
3	3.8	Apply knowledge of phoneme-grapheme correspondences, multisyllabic word construction, and syllable division principles to decode and encode (spell) words accurately in isolation and in context.
3	3.14	Describe word relationships and nuances in word meanings, including relating them to their opposites and distinguishing shades of meaning in similar or related words, including nouns, verbs, and adjectives.
3	ELA21.3.15a	Identify meaningful parts of words (morphemes) and use them as clues to the meaning of unfamiliar words, including base words, roots, and frequently occurring affixes and inflections.
3	3.22c	Identify the central message, theme, or moral in a story, including myths, fables, and folktales, and explain the meaning conveyed in the passage.
3	3.29	Determine the main idea of a text read aloud or information presented in an audible format.
3	3.33	Write personal or fictional narratives with a logical plot (sequence of events), characters, transitions, and a sense of closure.

DIGITAL LITERACY AND COMPUTER SCIENCE

16 STANDARDS

Based on the Alabama state standards

GRADE	CODE	STANDARD
K	K.1	Create a plan that outlines the steps needed to complete a task, with guidance and support.
K	K.3	Model a simple algorithm using unplugged or plugged activities, with guidance and support.
K	DLCS25.K.13	Use basic input and output devices to interact with digital platforms, with guidance and support.
1	1.1	Create an algorithm to complete a task.
1	1.16	Use online digital tools to create a collaborative product, with guidance and support.

© 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	2.1	Create an algorithm to solve a problem collaboratively and explain alternative ways to solve the same problem.
2	2.2	Test and debug a given program.
2	2.4	Construct or modify a simple program, using basic commands.
2	2.9	Use online resources safely in individual and collaborative settings.
2	2.10	Use basic software features within familiar applications.
2	2.12	Explain how technology impacts the way people live and work.
2	2.18	Identify and use multiple digital tools to complete a project, with guidance and support.
3	3.1	Develop and document an algorithm that outlines specific steps to complete a project for other learners to follow.
3	3.5	Create a working program using sequencing and events in a visual programming environment, working in collaboration with others.
3	DLCS25.3.6	Organize data to answer a question, using a variety of computing and data visualization methods.
3	3.17	Select and use multiple digital tools to complete a project.

SCIENCE

3 STANDARDS

Based on the Alabama state standards

GRADE	CODE	STANDARD
K	K.11	Identify a problem and design possible solutions that lessen the human impact on the local environment.
2	2.11	Evaluate multiple solutions designed to slow or prevent wind or water from changing the shape of Earth's surface.
3	SC23.3.4	Apply scientific ideas about magnetic interactions to solve a problem using the engineering design process.

SOURCES & NOTES

- The official mathematics, English language arts, computer science and science standards for Alabama, as published by the Alabama State 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.
- 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