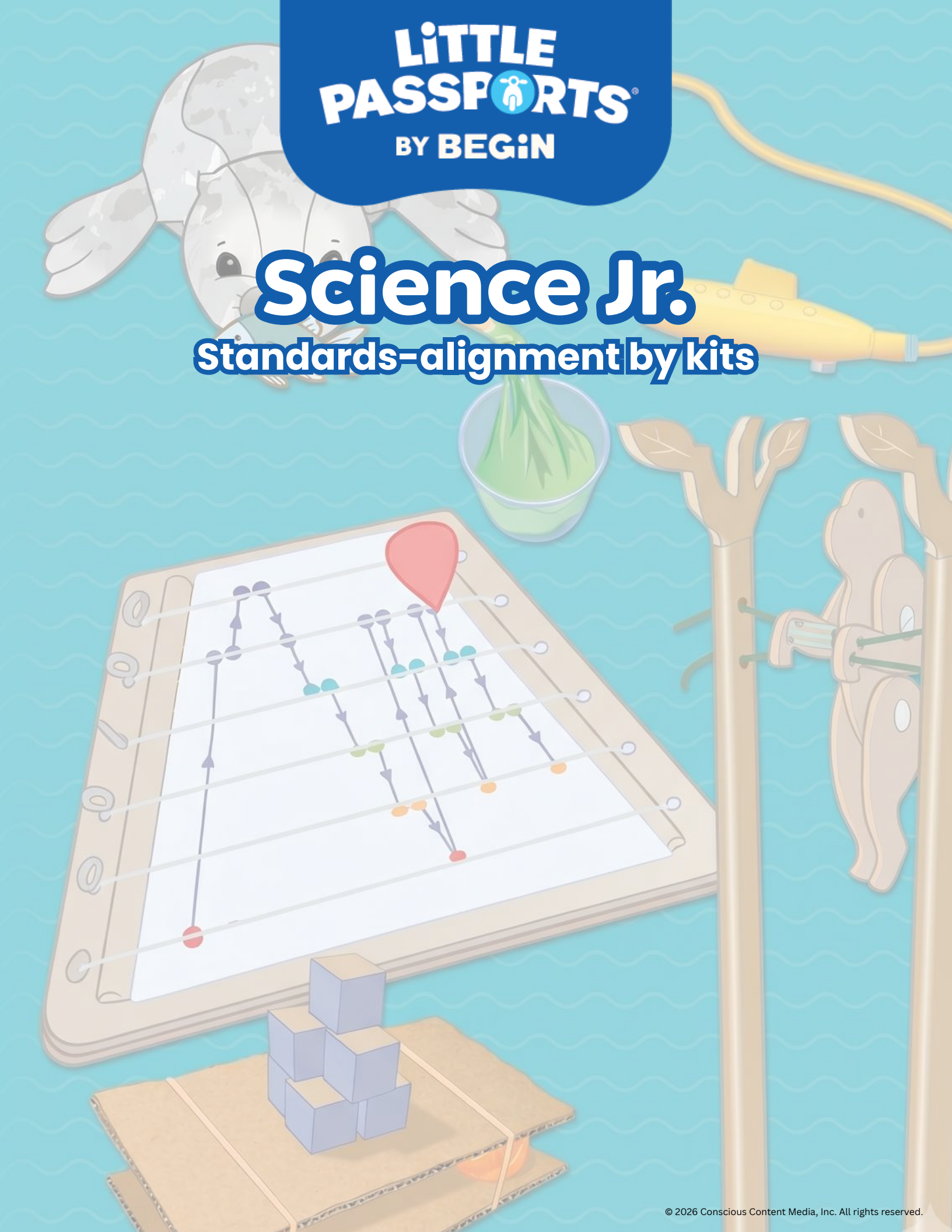
LITTLE PASSPORTS BY BEGiN

Science Jr.

Standards-alignment by kits



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Introduction

Standards-Aligned Learning Across Every Kit

Little Passports Science Jr. aligns with key K–5 academic standards, including the Next Generation Science Standards (NGSS) and Common Core State Standards for Math and English Language Arts. Through 24 hands-on science adventures, children explore foundational STEM concepts while developing scientific thinking, problem-solving, literacy, and mathematical reasoning skills.

Each kit provides an engaging, cross-disciplinary learning experience that combines science exploration, engineering challenges, observation, experimentation, and creative projects. Learners investigate topics such as weather, animals, space, geology, chemistry, engineering, and the natural world through activities that encourage asking questions, making predictions, collecting evidence, identifying patterns, and communicating discoveries.

The program's hands-on investigations create authentic opportunities to apply mathematics and literacy skills. Children engage in measurement, counting, data collection, sequencing, procedural reading, vocabulary development, and written reflection as they complete experiments and explore each month's theme. These experiences help reinforce critical thinking, perseverance, and real-world application of knowledge while fostering curiosity and confidence in STEM learning.
Our standards coverage is thorough and transparent. For each kit, we provide a detailed PDF that includes:

- An Executive Summary outlining key learning outcomes and interdisciplinary connections
- A grade-by-grade standards alignment chart (K–5) across NGSS, CCSS Math, and CCSS ELA
- A comprehensive listing of all applicable standards—some addressed directly through hands-on investigations and others that can be extended through discussion, observation, or deeper exploration with adult guidance

In addition, we provide a program-wide standards overview that summarizes how all 24 kits collectively address a broad range of K–5 standards, demonstrating both the depth of learning within individual kits and the comprehensive coverage achieved across the full series.

Little Passports Science Jr. offers an experience that is not only engaging and discovery-driven, but also standards-aligned, developmentally appropriate, and academically robust - supporting meaningful STEM learning at home or alongside classroom instruction.

LITTLE PASSPORTS BY BEGIN

Little Passports: Science Jr.

Comprehensive Standards Alignment for 24 month subscription

This chart provides a consolidated overview of the educational standards addressed across the Little Passports: Science Jr. kits (Modules 1–24). These kits utilize hands-on science exploration, engineering challenges, and creative projects to bridge NGSS scientific inquiry with CCSS mathematical reasoning and literacy.

Category	K	1	2	3	4	5
🟢 **NGSS Science**	• K-LS1-1 • K-ESS2-2 • K-ESS3-1 • K-ESS3-3 • K-PS2-1 • K-2-ETS1-1 • K-2-ETS1-2 • K-2-ETS1-3	• 1-LS1-1 • 1-LS1-2 • 1-LS3-1 • 1-ESS1-1 • 1-PS4-1 • 1-PS4-2 • 1-PS4-3 • 1-PS4-4 • K-2-ETS1-2 • K-2-ETS1-3	• 2-LS2-2 • 2-LS4-1 • 2-ESS1-1 • 2-PS1-1 • 2-PS1-2 • K-2-ETS1-3	• 3-LS3-1 • 3-LS4-1 • 3-LS4-2 • 3-LS4-3 • 3-PS2-1 • 3-PS2-2 • 3-PS2-3 • 3-5-ETS1-1 • 3-5-ETS1-3	• 4-LS1-1 • 4-LS1-2 • 4-ESS1-1 • 4-ESS2-2 • 4-ESS3-2 • 4-PS3-1 • 4-PS3-3 • 4-PS3-4 • 4-PS4-1 • 4-PS4-2 • 4-PS4-3	• 5-LS2-1 • 5-ESS2-1 • 5-ESS3-1 • 5-PS1-1 • 5-PS1-3 • 5-PS1-4 • 5-PS2-1 • 3-5-ETS1-1 • 3-5-ETS1-2
🔵 **CCSS Math**	• K.CC.A.1 • K.CC.B.4 • K.CC.C.6 • K.MD.A.2 • K.MD.B.3 • K.G.A.1 • K.G.A.2 • K.G.B.4	• 1.OA.A.1 • 1.OA.C.5 • 1.NBT.B.2 • 1.MD.C.4 • 1.G.A.1	• 2.OA.A.1 • 2.OA.B.2 • 2.OA.C.3 • 2.MD.A.1 • 2.MD.D.10 • 2.G.A.1	• 3.OA.D.9 • 3.NF.A.1 • 3.MD.A.2 • 3.MD.B.3 • 3.MD.C.5 • MP7	• 4.OA.C.5 • 4.NBT.A.2 • 4.NBT.B.4 • 4.NF.B.3 • 4.G.A.1 • MP4	• 5.MD.A.1 • 5.G.A.1 • 5.NF.A.1 • MP1 • MP2 • MP4 • MP6
🟠 **CCSS ELA**	• RI.K.1 • RI.K.4 • RI.K.7	• RI.1.3 • RI.1.7	• RI.2.4	• RI.3.3 • RI.3.7	• RI.4.3 • RI.4.4	• RI.5.4 • RI.5.7 • RI.5.10

Little Passports: Science Jr. - Weddell Seals

Executive Summary The *Little Passports Science Jr.: Weddell Seals* kit provides a highly engaging, cross-disciplinary learning experience that seamlessly integrates science, mathematics, and literacy. By exploring the extreme habitat of Antarctic seals, students apply Next Generation Science Standards (NGSS) through hands-on engineering tasks and thermal insulation experiments. Concurrently, essential literacy and math skills are reinforced as learners analyze informational texts, decode domain-specific vocabulary, and categorize population data using Venn diagrams and counting charts. This comprehensive approach ensures that foundational academic standards are met while fostering a genuine curiosity for global ecosystems.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (identifying blubber, oxygen, and fish needs). **K-ESS3-1:** Use a model to represent the relationship between the needs of different animals and the places they live (using ice for breathing holes).	**K.CC.B.4:** Understand the relationship between numbers and quantities (counting pups and adults). **K.MD.B.3:** Classify objects into given categories; count the numbers of objects (sorting animals into the Venn diagram).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about seal habits). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help

			understand the science concepts being read aloud).
1	**1-LS1-1:** Use materials to design a solution mimicking how animals use external parts to survive (building the DIY Blubber Glove to protect hands in ice water).	**1.OA.C.5:** Relate counting to addition and subtraction (systematically counting seal populations).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using magazine illustrations to understand deep diving).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (comparing a husky dog to the seal, and mapping Arctic vs. Antarctic species).	**2.MD.D.10:** Draw a bar graph to represent a data set with up to four categories (compiling data in the Population Count chart for four locations).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define words like "predator" and "mammal").
3	**3-LS4-3:** Construct an argument with evidence that in a particular habitat some organisms can survive well, and some cannot survive at all (explaining how blubber allows survival in the Antarctic).	**3.MD.B.3:** Draw a scaled picture/bar graph to represent a data set with several categories (organizing seal populations into a structured data table).	**RI.3.7:** Use information gained from illustrations and text to demonstrate understanding (analyzing diagrams showing how seals avoid orcas under the ice).

4	**4-PS3-4:** Apply scientific ideas to design, test, and refine a device that converts energy (building the Walking Weddell Seal to convert potential to kinetic energy). **4-LS1-1:** Construct an argument that animals have internal/external structures supporting survival (learning how seal lungs collapse to dive deep).	**4.NBT.B.4:** Fluently add and subtract multi-digit whole numbers using the standard algorithm (summing the total seal population across charts).	**RI.4.4:** Determine the meaning of domain-specific words or phrases in a text (reading the trading cards to understand "polar desert").
5	**5-ESS3-1:** Obtain and combine information about ways communities use science to protect Earth's resources (learning about McMurdo Station researchers monitoring seal populations).	**MP4:** Model with mathematics (using the Venn diagram to mathematically model intersecting animal habitats).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing information across the magazine, glossary, and trading cards).

Little Passports: Science Jr. - Volcanoes

Executive Summary The *Little Passports Science Jr.: Volcanoes* kit delivers an immersive, cross-disciplinary exploration of earth science and engineering. Through hands-on experiments—such as simulating a chemical volcanic eruption and constructing earthquake-resistant structures on a DIY shaker table—students directly apply Next Generation Science Standards (NGSS). The integration of coordinate mapping, multi-digit temperature calculations, and domain-specific vocabulary activities seamlessly reinforces Common Core Math and ELA standards, providing learners with a robust, multi-sensory STEM experience.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how the shape of an object helps it function to solve a problem (modeling earthquake stability with blocks).	**K.G.A.1:** Describe the relative positions of objects using positional terms (following directions to build the volcano using spatial language).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about magma). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**K-2-ETS1-3:** Analyze data from tests of two objects designed to solve the same problem to compare strengths and weaknesses (testing different block structures on the shaker table).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes; build shapes to possess attributes (molding clay into a specific volcano shape).	**RI.1.3:** Describe the connection between two events or pieces of information in a text (sequencing the chronological steps of island formation).
2	**2-ESS1-1:** Use information from several sources to provide evidence that Earth events can occur quickly or slowly (comparing quick eruptions to the slow formation of islands).	**2.G.A.1:** Recognize and draw shapes having specified attributes. Identify cubes (using three-dimensional blocks to engineer building structures).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define terms like "fault" and "viscosity").
3	**3-5-ETS1-3:** Plan and carry out fair tests in which variables are controlled to identify aspects of a model that can be improved (testing block foundations on the shaker table).	**3.MD.A.2:** Measure and estimate liquid volumes (measuring specific amounts of water to trigger the chemical volcano eruption).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following the multi-step procedure to construct and erupt the volcano).

4	**4-ESS3-2:** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans (designing earthquake-resistant block structures). **4-ESS2-2:** Analyze and interpret data from maps to describe patterns of Earth's features (mapping the Ring of Fire).	**4.NBT.A.2:** Read and write multi-digit whole numbers using base-ten numerals (navigating the maze to collect and write the center of the earth's temperature).	**RI.4.3:** Explain events, procedures, or concepts in a scientific text based on specific information (explaining how magma cools into obsidian or basalt).
5	**5-PS1-4:** Conduct an investigation to determine whether the mixing of two or more substances results in new substances (mixing baking soda and citric acid to create gas).	**5.G.A.1:** Use a pair of perpendicular number lines to define a coordinate system (using the alphanumeric grid to map seismic activity levels).	**RI.5.4:** Determine the meaning of domain-specific words and phrases in a text (deciphering and unscrambling names of igneous rocks).

Little Passports: Science Jr. - Sound & Music

Executive Summary The *Little Passports Science Jr.: Sound & Music* kit delivers an immersive, cross-disciplinary learning experience that demystifies the physics of acoustics and the biology of hearing. By engaging in hands-on engineering projects—such as constructing a tunable zither and creating a water xylophone—students actively apply Next Generation Science Standards (NGSS) to observe how vibrations generate sound waves. Concurrently, essential mathematics and literacy skills are reinforced as learners decode fractional note values, sequence volume data, and synthesize informational texts regarding animal biology and acoustic vocabulary. This integrated approach ensures that students meet rigorous academic benchmarks while fostering a creative appreciation for global music and STEM.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**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 (using a cardboard box to amplify the zither's sound).	**K.MD.A.2:** Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute (comparing and charting the volume of objects from quiet to loud).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about musical instruments). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**1-PS4-1:** Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate (plucking zither strings and tapping water glasses to observe vibrations and pitch).	**1.OA.C.5:** Relate counting to addition and subtraction (using the Math and Musical Notes key to count and add the beats of different notes).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (tracing the "Anatomy of Your Ear" diagram to describe how sound travels to the brain).
2	**2-PS1-2:** Analyze data obtained from testing different materials to determine which materials have properties best suited for an intended purpose (testing the zither on and off a cardboard box to analyze amplification).	**2.MD.D.10:** Draw a picture graph and a bar graph to represent a data set with up to four categories (categorizing sounds like a whisper or an airplane on a continuous volume chart).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (utilizing the glossary to define "acoustics," "frequency," and "resonate").
3	**3-5-ETS1-1:** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints (engineering the zither using specific hardware and strings).	**3.NF.A.1:** Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts (understanding whole, half, and quarter notes as fractions of a measure).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following the multi-step technical instructions to assemble and tune the zither).

4	**4-PS4-1:** Develop a model of waves to describe patterns in terms of amplitude and wavelength (analyzing diagrams showing how fast vibrations create high frequency pitches). **4-LS1-2:** Use a model to describe that animals receive different types of information through their senses and process it in their brain (studying how the brain's lobes process music).	**4.NF.B.3:** Understand a fraction a/b with a > 1 as a sum of fractions 1/b (combining quarter notes and eighth notes to calculate total musical beats).	**RI.4.4:** Determine the meaning of general academic and domain-specific words or phrases in a text (reading the Trading Cards to contextually define "amplification").
5	**5-PS1-1:** Develop a model to describe that matter is made of particles too small to be seen (learning how sound waves travel through invisible air particles to vibrate the eardrum).	**5.NF.A.1:** Add and subtract fractions with unlike denominators (adding different fractional note values to compose custom sheet music).	**RI.5.7:** Draw on information from multiple print or digital sources to solve a problem (synthesizing clues from fact riddles to match animals to their hearing capabilities).

Little Passports: Science Jr. - Chimpanzees

Executive Summary The *Little Passports Science Jr.: Chimpanzees* kit provides a captivating, cross-disciplinary exploration into primatology and ecology. By engaging with hands-on mechanical builds and immersive field-note activities, learners actively apply Next Generation Science Standards (NGSS) to understand animal behaviors and anatomical adaptations. Furthermore, the kit seamlessly integrates foundational mathematics and literacy through logic puzzles, vocabulary crosswords, and data categorization, offering a well-rounded and engaging STEM experience for elementary students.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning chimps are omnivores needing plants and insects).	**K.CC.B.4:** Understand the relationship between numbers and quantities (counting chimps and babies in the field notes).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about termite fishing). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**1-LS1-2:** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive (observing baby chimps clinging to their moms).	**1.MD.C.4:** Organize, represent, and interpret data with up to three categories (categorizing chimps by age, action, and color).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (matching detailed chimpanzee illustrations to their solid shadows).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (identifying habitats like rainforests and woodlands via trading cards).	**2.MD.A.1:** Measure the length of an object using appropriate tools (estimating and leaving two inches of space when stringing the mechanical toy).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "brachiation" and "troop").
3	**3-LS4-2:** Use evidence to construct an explanation for how characteristics provide survival advantages (exploring how hairless palms allow for easier grooming).	**MP7:** Look for and make use of structure (using the structural grid rules of the crossword puzzle to fit overlapping words).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the Swinging Chimpanzee).
4	**4-LS1-1:** Construct an argument that animals have external structures that support survival (learning chimps use four fingers and a thumb to grasp branches).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (following elimination rules in the Termite Treats logic puzzle to reveal a hidden word).	**RI.4.4:** Determine the meaning of domain-specific words or phrases in a text (utilizing domain-specific vocabulary to solve the Rainforest Crossword).

5	**5-LS2-1:** Develop a model to describe the movement of matter among plants and animals (understanding the chimpanzee's place in the food web as an omnivore).	**MP1:** Make sense of problems and persevere in solving them (systematically solving multi-step visual and logic puzzles like matching specific shadows).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing information across the magazine about Dr. Jane Goodall).

Little Passports: Science Jr. - Deep Sea Exploration

Executive Summary The *Little Passports Science Jr.: Deep Sea Exploration* kit provides a captivating, cross-disciplinary dive into oceanography and physics. By engineering functional models like a periscope and a diving submarine, students directly apply Next Generation Science Standards (NGSS) to explore concepts of light reflection, buoyancy, and density. Concurrently, foundational mathematics and literacy skills are reinforced as learners decode Morse code patterns, follow multi-step technical procedures, and expand their domain-specific vocabulary regarding marine life and submersibles. This comprehensive approach ensures that students meet rigorous academic benchmarks while fostering a deep curiosity for STEM and ocean exploration.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how the shape of an object helps it function to solve a problem (building the periscope to see over obstacles).	**K.MD.A.2:** Directly compare two objects with a measurable attribute in common (comparing features of two submarines in the "Spot the Difference" activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about bioluminescence and submarines). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help

			understand the science concepts being read aloud).
1	**1-PS4-4:** Use materials to design and build a device that uses light or sound to communicate over a distance (learning how Morse code is sent through light or sound).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes; build shapes (folding geometric shapes to construct the periscope).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using diagrams to understand how air compression sinks the Cartesian diver).
2	**2-PS1-2:** Analyze data from testing different materials to determine which materials have properties best suited for a purpose (testing ketchup packets for buoyancy).	**2.G.A.1:** Recognize and draw shapes having specified attributes (identifying the curved, pressure-dispersing bodies of deep sea submersibles).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "density," "buoyancy," and "pressure").
3	**3-5-ETS1-1:** Define a simple design problem reflecting a need or a want that includes constraints on materials (engineering the diving submarine using specific components).	**3.OA.D.9:** Identify arithmetic patterns and explain them (decoding the symbolic dots and dashes in the Morse Code activity).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the periscope and submarine).

4	**4-PS4-2:** Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen (building and observing light paths in the periscope).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (applying Morse code rules to translate a personal name into dots and dashes).	**RI.4.4:** Determine the meaning of general academic and domain-specific words in a text (using context clues to define terms like "compressed" and "dense").
5	**5-PS1-1:** Develop a model to describe that matter is made of particles too small to be seen (understanding how squeezing a bottle compresses invisible air particles).	**MP6:** Attend to precision (precisely manipulating the syringe to control air and water intake in the submarine's ballast balloon).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing deep-sea science concepts across the magazine and trading cards).

Little Passports: Science Jr. - Wetlands

Executive Summary

The *Little Passports Science Jr.: Wetlands* kit offers a dynamic, cross-disciplinary journey into the unique ecosystems of the Florida Everglades. By engineering a balloon-powered airboat and mixing non-Newtonian slime, students actively apply Next Generation Science Standards (NGSS) to explore physics and material properties. Essential math and literacy skills are seamlessly integrated as learners measure chemical ingredients, decipher ecological riddles, and compare the distinct anatomical features of wetland predators. This comprehensive approach guarantees that students meet rigorous K-5 academic benchmarks while fostering a deep appreciation for environmental science and conservation.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning wetland survival needs). **K-ESS3-3:** Communicate solutions that will reduce the impact of humans on the environment (learning how wetlands filter water).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects (classifying animals by environment in the habitat maze).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about airboats).

1	**1-LS3-1:** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents (observing traits of alligators vs. crocodiles).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (identifying defining physical attributes that distinguish an alligator from a crocodile).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using illustrations to describe how plants filter pollutants).
2	**2-PS1-1:** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties (creating and observing non-Newtonian slime).	**2.MD.D.10:** Draw a picture graph and a bar graph to represent a data set with up to four categories (organizing vocabulary words by color/position).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "ecosystem" and "estuary").
3	**3-LS4-3:** Construct an argument with evidence that in a particular habitat some organisms can survive well, and some cannot survive at all (learning how animals thrive in brackish water).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying structural patterns to find words in the frog search).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the airboat). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

4	**4-LS1-1:** Construct an argument that plants and animals have internal and external structures that function to support survival (learning how mangrove roots anchor trees).	**4.G.A.1:** Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines (tracing the complex paths in the habitat maze).	**RI.4.4:** Determine the meaning of general academic and domain-specific words in a text (synthesizing clues to solve ecological riddles).
5	**5-LS2-1:** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment (learning about the wetland food web).	**5.MD.A.1:** Convert among different-sized standard measurement units (measuring fractional quantities of ingredients to mix slime).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing ecological information across the magazine and cards).

Little Passports: Science Jr. - Rockets & Space

Executive Summary The *Little Passports Science Jr.: Rockets & Space* kit provides an immersive, cross-disciplinary exploration into aerospace engineering and astronomy. By constructing a functional air-powered rocket and a light-projecting Star Dome, students actively apply Next Generation Science Standards (NGSS) to investigate pneumatic force, energy transfer, and constellation patterns. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode planetary symbols, label astronaut gear diagrams, sequence historical space travel events, and categorize the defining attributes of spacecraft versus aircraft. This hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for space exploration and physical sciences.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-PS2-1:** Compare the effects of different strengths or directions of pushes and pulls on the motion of an object (stomping the air chamber to launch the rocket).	**K.MD.A.2:** Directly compare two objects with a measurable attribute in common (comparing features of rockets and airplanes).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about the solar system). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science

			concepts being read aloud).
1	**1-ESS1-1:** Use observations of the sun, moon, and stars to describe patterns that can be predicted (projecting and observing constellations with the Star Dome).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (identifying defining features of spacecraft in the "This or That" facts).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using diagrams to label the protective functions of astronaut gear).
2	**2-PS1-2:** Analyze data from testing materials to determine which are best suited for an intended purpose (learning why specific materials are used in space suits).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing geometric shapes within the Planetary Symbols).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "orbit" and "trajectory").
3	**3-PS2-1:** Provide evidence of the effects of unbalanced forces on the motion of an object (exploring how compressed air propels the rocket upward against gravity).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying patterns to decode hidden letters in the "Living in Space" activity).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions and sequencing the "To the Moon" story).
4	**4-PS3-1:** Construct an explanation relating the speed of an object to the energy of that object (observing how a harder	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (tracing trajectories and the lines connecting stars in constellations).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to define aerospace engineering terms).

	stomp results in a higher rocket flight).		
5	**5-PS2-1:** Support an argument that the gravitational force exerted by Earth on objects is directed down (learning how rockets overcome downward gravitational pull).	**MP6:** Attend to precision (precisely assembling the pneumatic rocket components to ensure an airtight seal for maximum propulsion).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing physics concepts across the kit's materials).

Little Passports: Science Jr. - Elastic Force

Executive Summary The *Little Passports Science Jr.: Elastic Force* kit provides an immersive, cross-disciplinary exploration into physical science and Southeast Asian culture. By engineering a rubber-band powered Tuk Tuk and synthesizing a bouncy rubber ball, students actively apply Next Generation Science Standards (NGSS) to investigate potential and kinetic energy, elasticity, and polymer chains. Essential Common Core math and literacy skills are reinforced as learners measure chemical ingredients, navigate geometric mazes, solve counting puzzles, and decode domain-specific vocabulary. This hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for engineering and global discovery.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-PS2-1:** Compare the effects of different strengths or directions of pushes and pulls on motion (observing how stretching rubber bands affects Tuk Tuk motion).	**K.CC.B.4:** Understand the relationship between numbers and quantities (counting balloons in the math activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about kinetic energy).
1	**1-LS1-1:** Use materials to design a solution mimicking how plants use their external parts (learning how natural rubber is sourced by tapping rubber trees).	**1.OA.A.1:** Use addition and subtraction to solve word problems (categorizing and comparing different colored water balloons).	**RI.1.7:** Use illustrations and details in a text to describe key ideas (tracing the tree-tapping process in the maze illustration). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the

			science concepts being read aloud).
2	**2-PS1-1:** Conduct an investigation to describe and classify materials by observable properties (creating and observing the elastic properties of a rubber ball).	**2.G.A.1:** Recognize and draw shapes having specified attributes (identifying structural shapes of the Tuk Tuk and the spherical rubber ball).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "elasticity" and "polymer").
3	**3-PS2-1:** Provide evidence of the effects of unbalanced forces on the motion of an object (using an unbalanced elastic force to propel the Tuk Tuk).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying structural patterns to find hidden words in the "Let's Get Stretchy" puzzle).	**RI.3.3:** Describe the relationship between steps in technical procedures (following multi-step instructions to assemble the Tuk Tuk and rubber ball).
4	**4-PS3-4:** Apply scientific ideas to design and refine a device that converts energy (converting potential energy in a rubber band to kinetic energy in the vehicle).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (navigating and tracing the pathways in the Thai Rubber Tree Maze).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to understand the behavior of polymers).

5	**5-PS1-3:** Make observations to identify materials based on their properties (exploring the chemical and physical properties of linked polymer molecules).	**5.MD.A.1:** Convert among different-sized standard measurement units (measuring the ingredients needed to chemically synthesize the rubber ball).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing physical science concepts across the kit's materials).

Little Passports: Science Jr. - Optical Illusions

Executive Summary The *Little Passports Science Jr.: Optical Illusions* kit provides a captivating, cross-disciplinary exploration into optics, neuroscience, and the psychology of visual perception. By engineering functional early animation devices—such as the Zoetrope and Praxinoscope—students actively apply Next Generation Science Standards (NGSS) to investigate how the human brain and eyes process light and motion. Concurrently, essential Common Core math and literacy skills are reinforced as learners construct 3D geometric shapes, decode visual patterns, trace the history of animation, and master domain-specific vocabulary. This hands-on approach ensures rigorous K–5 academic benchmarks are met while unlocking the fascinating science behind how we see the world.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how an object's shape helps it function (building the Zoetrope model to illustrate how its shape creates animations).	**K.G.B.4:** Analyze and compare 2D and 3D shapes (comparing flat 2D drawings to the illusion of 3D shapes).	**RI.K.1:** Ask and answer questions about key details in a text (reading the comic to learn about the history of animation). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science

			concepts being read aloud).
1	**1-PS4-2:** Construct an evidence-based account that objects can be seen only when illuminated (exploring how light allows photoreceptors to perceive illusions).	**1.G.A.1:** Distinguish between defining and non-defining attributes (distinguishing the visual attributes that trick the eye into perceiving depth).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual optical illusions to describe peripheral drift).
2	**K-2-ETS1-3:** Analyze data from tests of two objects designed to solve the same problem (comparing the visual effects of the Zoetrope versus the Praxinoscope).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing the specific lines and angles required to draw 3D letters).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "neuroscience" and "optics").
3	**3-PS2-2:** Make observations of an object's motion to provide evidence that a pattern can predict future motion (observing how spinning the Zoetrope creates a continuous animation pattern).	**3.G.A.1:** Understand that shapes in different categories may share attributes (exploring how 2D shapes can share the visual attributes of 3D objects through shading).	**RI.3.3:** Describe the relationship between historical events (tracing the historical timeline of animation from cave paintings to Victorian inventions).
4	**4-LS1-2:** Use a model to describe that animals receive information through senses, process it in the brain, and respond (learning how photoreceptors send	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (actively drawing intersecting lines needed to construct 3D shape illusions).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to understand terms like "peripheral drift").

	signals to neurons, creating illusions).		
5	**3-5-ETS1-1:** Define a simple design problem reflecting a need or want (exploring the early engineering design problem of making still images appear to move).	**MP7:** Look for and make use of structure (identifying hidden structures and patterns to decode the 3D letters and images).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing neuroscience and psychology concepts).

Little Passports: Science Jr. - Robots

Executive Summary

The *Little Passports Science Jr.: Robots* kit offers an immersive, cross-disciplinary exploration into engineering, robotics, and computer science. By engineering a functional solar-powered robot and decoding visual programming patterns, students actively apply Next Generation Science Standards (NGSS) to investigate energy conversion and machine design. Concurrently, essential Common Core math and literacy skills are reinforced as learners decipher geometric sequences, analyze map data, match specialized robotic functions, and master domain-specific technology vocabulary. This comprehensive approach ensures that rigorous K–5 academic benchmarks are met while inspiring a deep curiosity for future STEM careers.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how an object's shape helps it function (building the solar robot and changing its arms to change its function).	**K.CC.C.6:** Identify whether the number of objects in one group is greater than, less than, or equal to another (comparing features in the Droid Differences activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about the Mars rover and vacuum robots). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**1-LS1-1:** Use materials to design a solution mimicking how animals use their external parts to survive (learning how engineers design "Animal Robots" to mimic animal abilities).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (folding pre-scored geometric panels to build the 3D robot body).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using a visual map to match robotic facts to locations in Japan).
2	**K-2-ETS1-3:** Analyze data from tests of two objects designed to solve the same problem (analyzing the functions of different robotic arms and vehicles using trading cards).	**2.OA.A.1:** Use addition and subtraction to solve one- and two-step word problems (checking sequential patterns to isolate sequence breaks in the bug activity).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "programming" and "robotics").
3	**3-5-ETS1-1:** Define a simple design problem reflecting a need or want that includes constraints on materials (building the robot within the constraints of provided materials).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying the repeating visual patterns in the "Find the Bugs" coding activity).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the solar-powered robot).
4	**4-PS3-4:** Apply scientific ideas to design, test, and refine a device that converts energy from one form to another (building the robot to convert solar energy into mechanical energy).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (applying logic rules to match animal robots to their functions and counterparts).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using the "Meet the Scientist" section to understand what a "simple machine" is).

5	**3-5-ETS1-2:** Generate and compare multiple possible solutions to a problem based on criteria and constraints (comparing specialized robots to determine the best fit for specific jobs).	**MP1:** Make sense of problems and persevere in solving them (systematically solving multi-step visual and logic puzzles like mapping robot locations).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing energy conversion and computer science concepts).

Little Passports: Science Jr. - Coral Reefs

Executive Summary The *Little Passports Science Jr.: Coral Reefs* kit delivers a highly engaging, cross-disciplinary exploration into marine biology and oceanography. By growing crystal coral structures and engineering an upcycled jellyfish, students actively apply Next Generation Science Standards (NGSS) to investigate ecosystem interdependence, biodiversity, and material phase changes. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode complex visual patterns, categorize animal populations, decode domain-specific vocabulary, and read informational texts about the Great Barrier Reef. This hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for environmental conservation and the natural world.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning that coral polyps need algae for chemical energy). **K-ESS3-3:** Communicate solutions that will reduce the impact of humans on the environment (upcycling a plastic bag into a jellyfish craft).	**K.CC.B.4:** Understand the relationship between numbers and quantities (counting specific quantities of fish and coral). **K.MD.B.3:** Classify objects into given categories; count the numbers of objects (classifying animals by species in the ecosystem count).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to learn about the Great Barrier Reef). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**1-LS1-1:** Use materials to design a solution mimicking how animals use their external parts to survive (assembling templates to mimic how coral builds external skeletons).	**1.OA.C.5:** Relate counting to addition and subtraction (utilizing the Ecosystem Count to tally populations).	**RI.1.7:** Use illustrations and details in a text to describe key ideas (matching visual coral appearances to their descriptive names).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (observing the diverse species that live in coral reefs). **2-PS1-1:** Conduct an investigation to describe and classify materials by observable properties (observing the liquid solution evaporate into solid crystals).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing the structural shapes of different corals, like dome-shaped brain coral).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "invertebrate" and "biodiversity").
3	**3-LS4-3:** Construct an argument with evidence that in a particular habitat some organisms can survive well (exploring the symbiotic relationship between coral and algae).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying repeating sequences of marine animals in the Great Barrier Reef Rows).	**RI.3.3:** Describe the relationship between steps in technical procedures (following multi-step instructions to grow the mini coral).

4	**4-LS1-1:** Construct an argument that animals have external structures that support survival (learning that jellyfish lack backbones and use tentacles to move).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (analyzing visual patterns to locate specific animal sequences).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to define fringing reefs, barrier reefs, and atolls).
5	**5-LS2-1:** Develop a model to describe the movement of matter among plants and animals (exploring the energy transfer in the coral reef food web). **5-PS1-4:** Conduct an investigation to determine whether mixing substances results in new substances (observing crystallization during the coral experiment).	**MP1:** Make sense of problems and persevere in solving them (systematically solving the complex visual pattern-matching puzzle).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing marine biology concepts across the magazine and cards).

Little Passports: Science Jr. - Gravity and Motion

Executive Summary The *Little Passports Science Jr.: Gravity & Motion* kit provides an immersive, cross-disciplinary exploration into classical mechanics and physics. By engineering a wooden Tumble Tower and a paper Kinetic Caterpillar, students actively apply Next Generation Science Standards (NGSS) to investigate gravity, friction, and Newton's Laws of Motion. Concurrently, essential Common Core math and literacy skills are reinforced as learners count object pairs, untangle complex line mazes, decode domain-specific vocabulary, and read informational texts about energy transfer and momentum. This hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for engineering and physical science.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-PS2-1:** Compare the effects of different strengths or directions of pushes and pulls on motion (observing gravity pull the tumble toys downward).	**K.CC.B.4:** Understand the relationship between numbers and quantities (counting pairs of rocks in the tumbling activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic about falling apples and momentum). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**1-ESS1-1:** Use observations of the sun, moon, and stars to describe patterns that can be predicted (learning how Earth's gravity causes the moon's predictable orbit).	**1.OA.C.5:** Relate counting to addition and subtraction (counting groups or pairs of rocks to find the total amount).	**RI.1.7:** Use illustrations and details in a text to describe key ideas (using diagrams to describe how gymnasts rely on Newton's laws).
2	**K-2-ETS1-3:** Analyze data from tests of two objects to compare strengths and weaknesses (testing "less incline" vs. "more incline" on the Tumble Tower).	**2.OA.C.3:** Determine whether a group of objects has an odd or even number by pairing objects (pairing smooth rocks in the rock tumbler activity).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "Acceleration," "Mass," and "Friction").
3	**3-PS2-1:** Provide evidence of the effects of unbalanced forces on motion (observing unbalanced gravity pull the toys downward). **3-PS2-2:** Make observations of motion to predict future motion (predicting the repetitive tumbling pattern of the wooden character).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying structural patterns to locate hidden vocabulary in the word search).	**RI.3.3:** Describe the relationship between steps in technical procedures (following multi-step instructions to assemble the Tumble Tower and Kinetic Caterpillar).

4	**4-PS3-1:** Construct an explanation relating the speed of an object to its energy (experimenting with the Tumble Tower incline to observe changes in speed). **4-PS3-3:** Predict outcomes about changes in energy when objects collide (learning how energy transfers when dominoes collide).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (visually tracing the intersecting, tangled lines in the Gymnastics Scramble).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to define "transfer of energy" and "opposite reaction").
5	**5-PS2-1:** Support an argument that gravitational force exerted by Earth is directed down (learning how gravity pulls apples and water downward toward Earth's center).	**MP1:** Make sense of problems and persevere in solving them (systematically untangling the complex visual paths in the Gymnastics Scramble).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing the physics concepts of Newton's Three Laws of Motion).

Little Passports: Science Jr. - Sports

Executive Summary The *Little Passports Science Jr.: Sports* kit provides an immersive, cross-disciplinary exploration into the physics of motion, biomechanics, and spatial reasoning. By engineering a functional Foosball Field and analyzing the kinematics of gameplay, students actively apply Next Generation Science Standards (NGSS) to investigate force, trajectories, and energy transfer. Concurrently, essential Common Core math and literacy skills are reinforced as learners track score card data, distinguish geometric attributes in shape-based coloring activities, navigate complex mazes, and decode domain-specific sports science vocabulary. This hands-on approach ensures rigorous K–5 academic benchmarks are met while illuminating the hidden science and math behind popular sports.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-PS2-1:** Compare the effects of different strengths or directions of pushes and pulls on motion (pushing and spinning foosball rods to strike the ball).	**K.G.A.2:** Correctly name shapes regardless of orientation (identifying squares, circles, and triangles in the "Hidden Shapes" activity).	**RI.K.1:** Ask and answer questions about key details in a text (reading the comic to learn how athletes use physics). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**K-2-ETS1-2:** Develop a physical model to illustrate how an object helps it function (building the physical Foosball Field model).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (distinguishing shape attributes to apply the correct coloring rules).	**RI.1.7:** Use illustrations and details in a text to describe key ideas (using visual diagrams to understand biomechanics like flexion).
2	**K-2-ETS1-3:** Analyze data from tests of two objects to compare strengths and weaknesses (testing different Foosball tricks to determine the best method for scoring).	**2.OA.B.2:** Fluently add and subtract within 20 using mental strategies (keeping track of goals and adding points on the Foosball score card).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "friction" and "kinesiology").
3	**3-PS2-1:** Provide evidence of the effects of unbalanced forces on motion (observing how foosball paddles change the ball's speed and direction).	**3.OA.D.9:** Identify arithmetic patterns and explain them (exploring how ancient board games like Senet utilize arithmetic logic).	**RI.3.3:** Describe the relationship between steps in technical procedures (following multi-step instructions to assemble the Foosball Field).
4	**4-PS3-1:** Construct an explanation relating speed to energy (exploring the distance/time relationship to calculate velocity).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (visually tracing intersecting paths to navigate the "Speed Skater's Maze").	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues to define "velocity" and "trajectories").

5	**3-5-ETS1-1:** Define a simple design problem including criteria and constraints (engineering the foosball table within material constraints).	**MP1:** Make sense of problems and persevere in solving them (systematically navigating dead-ends in the complex maze).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing physics and biomechanics concepts).

Little Passports: Science Jr. - Eco Homes

Executive Summary The *Little Passports Science Jr.: Eco Homes* kit offers an immersive, cross-disciplinary exploration into sustainable architecture and environmental engineering. By constructing a 3D model of a green home and drafting original whiteprint floor plans, students actively apply Next Generation Science Standards (NGSS) to investigate energy conversion, resource conservation, and material science. Concurrently, essential Common Core math and literacy skills are reinforced as learners navigate geometric mazes, connect numbered architectural plots, sequence historical building timelines, and master domain-specific vocabulary. This hands-on approach ensures rigorous K–5 academic benchmarks are met while inspiring a deep appreciation for ecologically responsible design.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-ESS3-3:** Communicate solutions that will reduce the impact of humans on the environment (exploring how eco homes use solar panels and recycled materials to reduce impact).	**K.G.A.1:** Describe the relative positions of objects using terms like above, below, beside (following positional instructions to build the house model).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about sustainable features). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help

			understand the science concepts being read aloud).
1	**K-2-ETS1-1:** Ask questions and gather information about a situation people want to change to define a simple problem (observing how architects design homes to solve energy waste).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (using specific geometric symbols to represent furniture in the Whiteprint Drawing).	**RI.1.7:** Use illustrations and details in a text to describe its key ideas (using visual diagrams to describe the roles of different types of architects).
2	**2-PS1-2:** Analyze data from testing different materials to determine which are best suited for a purpose (learning why bamboo and smart concrete are used in eco homes).	**2.G.A.1:** Recognize and draw shapes having specified attributes (drawing connecting lines to form the curved shapes of Zaha Hadid's buildings).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "thermodynamics" and "sustainability").
3	**3-5-ETS1-1:** Define a simple design problem including criteria for success and constraints (designing a functional floor plan within the constraints of the provided grid).	**3.MD.C.5:** Recognize area as an attribute of plane figures and understand concepts of measurement (planning the spatial layout and footprint of rooms on the grid).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following sequential, multi-step instructions to assemble the 3D wooden model).

4	**4-PS3-4:** Apply scientific ideas to design, test, and refine a device that converts energy (learning how solar panels convert light energy into electricity).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (drawing straight line segments between points in the Architecture Dot2Dot activity).	**RI.4.4:** Determine the meaning of general academic and domain-specific words in a text (using context clues to understand "zero net energy").
5	**5-ESS3-1:** Obtain and combine information about ways communities use science to protect the Earth's resources (exploring how urban planning and sustainable architecture protect resources).	**MP1:** Make sense of problems and persevere in solving them (systematically navigating the complex spatial pathways of the Blueprint Maze).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing historical timelines and ecological practices across the magazine).

Little Passports: Science Jr. - The Galápagos

Executive Summary The *Little Passports Science Jr.: The Galápagos* kit invites students on an ecological expedition to study one of the world's most unique biodiversity hotspots. By stepping into the shoes of a conservation scientist to observe habitats and record field notes, students actively apply Next Generation Science Standards (NGSS) to investigate animal adaptations, endemic species, and island geology. Concurrently, essential Common Core math and literacy skills are reinforced as learners classify and count animal populations, interpret observational data, read informational texts about marine biology, and master domain-specific vocabulary. This immersive approach ensures rigorous K–5 academic benchmarks are met while instilling a deep appreciation for zoology and environmental conservation.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (observing how unique Galápagos animals adapt to find food and thrive).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects (identifying, classifying, and counting different species in the visual observation activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about island wildlife). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**1-LS1-1:** Use materials to design a solution by mimicking how plants/animals use their external parts (studying external adaptations like the marine iguana's tail).	**1.MD.C.4:** Organize, represent, and interpret data with up to three categories (organizing the tally of counted species and recording the total numbers).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using the visual "Field Notes" to describe the physical characteristics of animals).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (comparing endemic Galápagos species to animals elsewhere).	**2.OA.B.2:** Fluently add and subtract within 20 using mental strategies (calculating the total populations of spotted animals during field observations).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "archipelago," "endemic," and "conservation").
3	**3-LS4-2:** Use evidence to construct an explanation for how variations provide survival advantages (learning how specific traits help tortoises and iguanas survive).	**3.MD.B.3:** Draw a scaled picture graph and a scaled bar graph to represent a data set (quantifying biodiversity in the observation activity to compare population sizes).	**RI.3.3:** Describe the relationship between scientific ideas or concepts in a text (connecting geographical isolation to evolutionary biology and adaptations).
4	**4-LS1-1:** Construct an argument that plants and animals have internal/external structures that support survival (recording field notes on how specialized structures function).	**MP4:** Model with mathematics (using numerical representation to document and model the ecological biodiversity found within the habitat illustrations).	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues to understand the function of "zoology" and "marine biology").

5	**5-LS2-1:** Develop a model to describe the movement of matter among plants, animals, and the environment (understanding the ecosystem and island food webs).	**MP2:** Reason abstractly and quantitatively (connecting the abstract concept of conservation to the concrete numbers tallied during the counting activity).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing zoology, geology, and conservation concepts across the magazin

Little Passports: Science Jr. - Forensic Investigation

Executive Summary The *Little Passports Science Jr.: Forensic Investigation* kit transforms students into detectives, providing an interactive, cross-disciplinary dive into biology, cryptology, and deductive reasoning. By lifting fingerprints, analyzing crime scene evidence, and cracking secret ciphers, students actively apply Next Generation Science Standards (NGSS) to investigate biological traits, observation techniques, and pattern-based information transfer. Concurrently, essential Common Core math and literacy skills are reinforced as learners classify visual data in spot-the-difference challenges, navigate spatial mazes, generate cryptographic rules, and master domain-specific vocabulary. This comprehensive, hands-on approach ensures rigorous K–5 academic benchmarks are met while building critical thinking and problem-solving skills.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-1:** Ask questions, make observations, and gather information to define a simple problem (making careful observations of the crime scene to gather information).	**K.MD.B.3:** Classify objects into given categories (visually analyzing and sorting different fingerprint patterns into loops, whorls, and arches).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about suspects). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**1-LS3-1:** Make observations to construct an evidence-based account of inherited traits (learning about DNA and biological traits that make fingerprints unique).	**1.MD.C.4:** Organize, represent, and interpret data with up to three categories (documenting the types of physical evidence found during the investigation).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual clues in the "spot the difference" activity to pinpoint evidence).
2	**2-PS1-1:** Plan and conduct an investigation to describe/classify materials by observable properties (conducting an investigation to lift fingerprints from surfaces).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing the structural attributes necessary to navigate the fingerprint maze).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "cryptology," "DNA," and "forensics").
3	**3-LS3-1:** Analyze and interpret data to provide evidence of inherited traits and variations (analyzing variations in human fingerprint biology as unique identifiers).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying sequence and substitution patterns to successfully decode secret messages).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (understanding the sequential steps a forensic investigator takes).
4	**4-PS4-3:** Generate and compare multiple solutions that use patterns to transfer information (exploring cryptology and utilizing symbols to unscramble facts).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (applying specific rules to construct and crack ciphers in the code-making activities).	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues to understand roles like "forensic scientist").

5	**5-PS1-3:** Make observations to identify materials based on properties (acting as an investigator to analyze physical evidence properties to solve the mystery).	**MP1:** Make sense of problems and persevere in solving them (systematically piecing together clues and deciphering codes to deduce the solution).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing biology and cryptology concepts across the magazine).

Little Passports: Science Jr. - The Amazon

Executive Summary The *Little Passports Science Jr.: The Amazon* kit immerses students in a cross-disciplinary exploration of rainforest ecology, botany, and geography. By engineering a "Rolling River" maze and observing capillary action through a "Blooming Amazon Lily," students actively apply Next Generation Science Standards (NGSS) to investigate ecosystem dynamics, biodiversity, and plant life cycles. Concurrently, essential Common Core math and literacy skills are reinforced as learners classify visual data in spot-the-difference challenges, identify patterns in word searches, navigate spatial reasoning tasks, and master domain-specific vocabulary. This comprehensive, hands-on approach ensures rigorous K–5 academic benchmarks are met while cultivating a deep appreciation for one of the Earth's most vital ecosystems.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning how plants like the Amazon Lily need water to bloom).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects (visually classifying and counting differences in the insect observation activity).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about the rainforest). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**K-2-ETS1-2:** Develop a physical model to illustrate how an object's shape helps it function (building the river maze to illustrate how water navigates the Amazon basin).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (distinguishing the visual attributes of feathers to match them to the correct bird).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual details to describe different species of the rainforest canopy).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (comparing the Amazon's high biodiversity to other known habitats).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing the specific geometric shapes needed to construct the maze walls and lily petals).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define domain-specific terms like "nocturnal" and "canopy").
3	**3-LS4-3:** Construct an argument that in a particular habitat some organisms can survive well (learning how specialized Amazonian life thrives in a hot, wet environment).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying specific letter sequences to locate vocabulary words in the word search).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to engineer the maze and paper lily).
4	**4-LS1-1:** Construct an argument that plants and animals have internal/external structures that support survival (exploring how the structures of bird feathers function).	**4.G.A.1:** Draw points, lines, angles, and perpendicular/parallel lines (utilizing spatial reasoning to navigate the physical pathways and barriers of the maze).	**RI.4.4:** Determine the meaning of domain-specific words in a text (reading the Guest Editor sections to contextually define concepts regarding nocturnal wildlife).

5	**5-LS2-1:** Develop a model to describe the movement of matter among plants, animals, and the environment (understanding how the river system supports immense biodiversity).	**MP1:** Make sense of problems and persevere in solving them (systematically observing and analyzing the detailed illustration to deduce subtle differences).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing ecology, botany, and geography concepts across the magazine).

Little Passports: Science Jr. - Electricity

Executive Summary The *Little Passports Science Jr.: Electricity* kit provides an immersive, cross-disciplinary exploration into electromagnetism, atomic structure, and energy conversion. By engineering a functional crank-powered flashlight and conducting static electricity experiments, students actively apply Next Generation Science Standards (NGSS) to investigate how mechanical energy is converted into light and how unseen particles interact. Concurrently, essential Common Core math and literacy skills are reinforced as learners track experimental data, count subatomic particles, follow multi-step technical instructions, and master domain-specific physics vocabulary. This comprehensive, hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a deep curiosity for physical science and engineering.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how the shape of an object helps it function (building the crank-powered flashlight model to solve the problem of needing light).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects (testing and classifying household items based on whether a charged balloon sticks to them).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about power outages and generators). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using

			the comic panels and visual diagrams to help understand the science concepts being read aloud).
1	**1-PS4-2:** Make observations to construct an evidence-based account that objects can be seen only when illuminated (observing how the flashlight generates a beam to see in the dark).	**1.OA.C.5:** Relate counting to addition and subtraction (counting protons and electrons to understand electrical charge balance in atoms).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual diagrams to describe how positive and negative charges interact).
2	**2-PS1-2:** Analyze data from testing different materials to determine which are best suited for an intended purpose (identifying conductors and insulators in the word search activity).	**2.MD.D.10:** Draw a bar graph to represent a data set with up to four categories (recording yes/no observational data when testing objects with a charged balloon).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define "electron," "friction," and "generator").
3	**3-PS2-3:** Ask questions to determine cause and effect relationships of electric/magnetic interactions between objects not in contact (rubbing a balloon to observe non-contact static attraction).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying specific letter and structural patterns to locate vocabulary in the word search).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the gears and motor of the flashlight).

4	**4-PS3-4:** Apply scientific ideas to design, test, and refine a device that converts energy (building the flashlight to convert mechanical energy into electrical/light energy).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (matching the positive and negative terminals of batteries according to connectivity rules).	**RI.4.4:** Determine the meaning of domain-specific words in a text (reading trading cards to contextually define concepts like "magnetic field" and "copper coils").
5	**5-PS1-1:** Develop a model to describe that matter is made of particles too small to be seen (exploring how invisible protons and electrons make up matter and currents).	**MP1:** Make sense of problems and persevere in solving them (systematically identifying, counting, and matching subatomic particle models in the atom worksheet).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing electromagnetism concepts and historical facts across the magazine).

Little Passports: Science Jr. - The Himalayas

Executive Summary The *Little Passports Science Jr.: The Himalayas* kit delivers a highly engaging, cross-disciplinary exploration into Earth science, high-altitude biology, and mountaineering. By engineering a mechanical "Crafty Climber" toy and analyzing rock formations, students actively apply Next Generation Science Standards (NGSS) to investigate tectonic plate movement, ecosystem interdependence, and friction. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode anagrams, solve spatial seek-and-find puzzles, read informational texts about atmospheric oxygen, and master domain-specific vocabulary. This comprehensive approach ensures that foundational K–5 academic benchmarks are met while fostering a genuine curiosity for geography and the natural world.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning how the human body reacts to low oxygen and needs supplemental air).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects (visually classifying and seeking specific climbing gear from a mixed group).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about high altitude). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**K-2-ETS1-2:** Develop a physical model to illustrate how an object's shape helps it function (assembling the Crafty Climbers model to illustrate how friction and tension aid climbing).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (distinguishing visual attributes of climbing tools, such as crampon spikes, to locate them).	**RI.1.7:** Use illustrations and details in a text to describe key ideas (using bodily diagrams to describe how lungs work harder at high elevations).
2	**2-ESS1-1:** Use information to provide evidence that Earth events can occur quickly or slowly (learning how tectonic plates slowly collided over millions of years to form the Himalayas).	**2.G.A.1:** Recognize and draw shapes having specified attributes (identifying the geometric outlines of hidden fossils embedded in the mountain illustration).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define domain-specific terms like "kinesiology" and "altitude").
3	**3-LS4-1:** Analyze and interpret data from fossils to provide evidence of organisms and environments (searching for marine fossils to prove these peaks were once underwater).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying spelling patterns to unscramble the names of Himalayan animals like the Snow Leopard).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to thread, tie, and assemble the climbing toy).
4	**4-ESS1-1:** Identify evidence from patterns in rock formations and fossils (learning about igneous, sedimentary, and metamorphic rocks to understand tectonic history).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (navigating spatial layouts to properly map string pathways through the climber model).	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues from descriptions to understand the function of gear like "crampons").

5	**5-ESS2-1:** Develop a model to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact (exploring how the thin atmosphere interacts with the human biosphere).	**MP1:** Make sense of problems and persevere in solving them (systematically searching the detailed illustration to deduce the locations of gear from specific clues).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing Earth science and biology concepts across the magazine and cards).

Little Passports: Science Jr. - Flight

Executive Summary The *Little Passports Science Jr.: Flight* kit provides an immersive, cross-disciplinary exploration into aerodynamics, engineering, and meteorology. By engineering physical glider and stunt plane models, students actively apply Next Generation Science Standards (NGSS) to investigate forces, thrust, and air resistance. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode aviation alphabets, navigate simplified maps, and master domain-specific aerospace vocabulary. This comprehensive, hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for aviation and physical sciences.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-PS2-1:** Compare the effects of different strengths or directions of pushes and pulls on the motion of an object (learning that toy planes rely on arm force to launch).	**K.G.A.1:** Describe the relative positions of objects using terms such as above, below, beside (following positional instructions to assemble planes).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to ask and answer questions about flight). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science

			concepts being read aloud).
1	**K-2-ETS1-2:** Develop a physical model to illustrate how the shape of an object helps it function (assembling plane models to see how shape affects flight).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (distinguishing structural aircraft attributes like unmoving wings).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using diagrams to identify components like the cockpit and fuselage).
2	**K-2-ETS1-3:** Analyze data from tests of two objects designed to solve the same problem to compare performance (building and testing a glider vs. a stunt plane).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing specific curved shapes of propeller blades that increase thrust).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define terms like "aeronautics" and "aileron").
3	**3-PS2-1:** Provide evidence of the effects of unbalanced forces on the motion of an object (exploring how arm force creates thrust to launch a plane).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying spelling and letter patterns to decipher Alpha-Bravo-Charlie code words).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the planes and wind vane).
4	**4-PS3-1:** Construct an explanation relating the speed of an object to its energy (observing how launch force transfers kinetic energy to the planes).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (reading a simplified map and utilizing spatial reasoning to understand flight paths).	**RI.4.4:** Determine the meaning of domain-specific words in a text (using context clues to fill in the blanks with correct aviation terms).

5	**5-PS2-1:** Support an argument that the gravitational force exerted by Earth is directed down (understanding that wings use air pressure to counter downward gravity).	**MP1:** Make sense of problems and persevere in solving them (systematically deciphering code words to solve the fill-in-the-blank passage).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing aerodynamics and engineering concepts across the materials).

Little Passports: Science Jr. - Dinosaurs

Executive Summary The *Little Passports Science Jr.: Dinosaurs* kit delivers an immersive, cross-disciplinary exploration into paleontology and Earth's ancient history. By engineering a 3D dinosaur skeleton and conducting a chemical "Fizzing Fossil" experiment, students actively apply Next Generation Science Standards (NGSS) to investigate fossil evidence and material reactions. Concurrently, essential Common Core math and literacy skills are reinforced as learners complete numerical connect-the-dots, navigate spatial mazes, unscramble anagrams, and decode domain-specific vocabulary. This hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a passion for prehistoric science and discovery.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how an object helps it function (assembling the physical Construct-a-Saurus 3D wooden model).	**K.CC.A.1:** Count to 100 by ones and by tens (sequentially connecting numbered dots in the Dinosaur Defenses activity).	**RI.K.1:** Ask and answer questions about key details in a text (reading the comic to ask and answer questions about digging for fossils). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).
1	**1-LS3-1:** Make observations to construct an account that young animals are like their parents (learning how paleontologists study	**1.NBT.B.2:** Understand that two digits of a two-digit number represent amounts of tens and ones (identifying and sequencing two-digit numbers).	**RI.1.7:** Use illustrations and details in a text to describe its key ideas (using visual diagrams to describe the four different types of fossils).

	dinosaur egg fossils and nests).		
2	**2-ESS1-1:** Use information to provide evidence that Earth events can occur quickly or slowly (learning how organic matter slowly forms fossils over millions of years).	**2.G.A.1:** Recognize and draw shapes having specified attributes (navigating the complex geometric boundaries and pathways of the Fossil Maze).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define terms like "paleontology" and "trace fossil").
3	**3-LS4-1:** Analyze and interpret data from fossils to provide evidence of organisms and their environments (analyzing how Triceratops were likely solitary dinosaurs).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying letter patterns and structures to solve the Anagramasaurus Rex puzzle).	**RI.3.3:** Describe the relationship between steps in technical procedures (following multi-step instructions to assemble the Construct-a-Saurus).
4	**4-ESS1-1:** Identify evidence from patterns in rock formations and fossils (studying how footprints, eggs, and bones serve as preserved fossil evidence).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (drawing straight line segments to complete the Dinosaur Defenses illustrations).	**RI.4.4:** Determine the meaning of domain-specific words in a text (learning specific dinosaur names like *Adratiklit boulahfa* and their translations).
5	**5-PS1-4:** Conduct an investigation to determine whether the mixing of substances results in new substances (creating a chemical gas-releasing	**MP1:** Make sense of problems and persevere in solving them (systematically navigating the dead-ends and continuous paths of the Fossil Maze).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing paleontological data across the magazine and trading cards).

	reaction in the Fizzing Fossil activity).		

Little Passports: Science Jr. - Pollination

Executive Summary The *Little Passports Science Jr.: Pollination* kit delivers a highly engaging, cross-disciplinary exploration into botany and ecology. By pressing plants and engineering a physical "Buzzing Bee" model, students actively apply Next Generation Science Standards (NGSS) to investigate ecosystem interdependence, animal adaptations, and plant reproduction. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode symbol-based puzzles, complete informational sentences, and read about unusual global pollinators. This comprehensive approach ensures that foundational K–5 academic benchmarks are met while fostering a genuine curiosity for the natural world and environmental conservation.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning that bees and flowers rely on each other to survive). **K-ESS2-2:** Construct an argument for how plants and animals can change the environment to meet their needs (discovering how insect hotels provide homes for solitary bees).	**K.MD.B.3:** Classify objects into given categories; count the numbers of objects in each category (classifying animals into "usual" and "unusual" pollinators).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about the pollination process). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities).

1	**1-LS1-1:** Use materials to design a solution mimicking how animals use their external parts to survive (building a Buzzing Bee model that mimics physical bee movements).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (recognizing the geometric hexagon shapes that make up a honeycomb).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using illustrations of unusual pollinators to describe how they interact with plants).
2	**2-LS2-2:** Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants (building the interactive Buzzing Bee to mimic pollination).	**2.OA.B.2:** Fluently add and subtract within 20 using mental strategies (counting and grouping letters and spaces to solve the Pollinator Puzzle).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (utilizing context clues to define terms like "nectar" and "solitary").
3	**3-LS4-3:** Construct an argument with evidence that in a particular habitat some organisms can survive well (exploring how solitary bees survive well in Holland using insect hotels).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying specific symbol-to-letter repeating patterns to decode hidden messages).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the Buzzing Bee and press plants).
4	**4-LS1-1:** Construct an argument that animals have external structures that function to support survival (learning that butterflies taste with their feet and hummingbirds fly backward).	**4.OA.C.5:** Generate a number or shape pattern that follows a given rule (following a cipher rule to accurately translate a sequence of symbols into letters).	**RI.4.4:** Determine the meaning of domain-specific words or phrases in a text (completing the "Flower Facts" to demonstrate an understanding of botanical vocabulary).

5	**5-LS2-1:** Develop a model to describe the movement of matter among plants and animals (studying how pollinators transfer pollen matter between flowers).	**MP1:** Make sense of problems and persevere in solving them (systematically navigating the word search and decoding complex symbol patterns).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing biological concepts across the magazine and trading cards).

Little Passports: Science Jr. - Light & Color

Executive Summary The *Little Passports Science Jr.: Light & Color* kit delivers a highly engaging, cross-disciplinary exploration into the physics of optics and the vibrant art history of Italy. By engineering a functional colorscope and experimenting with interchangeable color filters, students actively apply Next Generation Science Standards (NGSS) to investigate how light reflects, absorbs, and blends. Concurrently, essential Common Core math and literacy skills are reinforced as learners decode color equations, complete shape-based puzzles, unscramble vocabulary, and read informational texts about stained glass and wave behavior. This comprehensive, hands-on approach ensures rigorous K–5 academic benchmarks are met while igniting a deep curiosity for both science and the arts.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-2-ETS1-2:** Develop a physical model to illustrate how the shape of an object helps it function (building the physical colorscope to observe light behavior).	**K.G.A.2:** Correctly name shapes regardless of orientations or overall size (identifying shapes to color the Italian landscape).	**RI.K.1:** Ask and answer questions about key details in a text (reading the comic to ask questions about prisms and sunlight). **RI.K.4:** With prompting and support, ask and answer questions about unknown words in a text (asking an adult to explain new domain-specific science vocabulary introduced in the story or activities). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science

			concepts being read aloud).
1	**1-PS4-3:** Conduct an investigation to determine the effect of placing objects made with different materials in the path of a light beam (using different filters in the colorscope).	**1.G.A.1:** Distinguish between defining attributes versus non-defining attributes (distinguishing attributes to accurately apply color rules in the artwork).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual diagrams to describe primary colors of light vs. pigment).
2	**2-PS1-1:** Conduct an investigation to describe and classify materials by their observable properties (learning how metallic salts produce specific colors in stained glass).	**2.G.A.1:** Recognize and draw shapes having specified attributes (recognizing geometric boundaries to complete the shape-matching puzzles).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define terms related to light and waves).
3	**3-5-ETS1-1:** Define a simple design problem including specified criteria and constraints (assembling the colorscope using constrained frame pieces and filters).	**3.OA.D.9:** Identify arithmetic patterns and explain them using properties of operations (identifying patterns to unscramble color words like "VIOLET").	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to build the colorscope).

4	**4-PS4-2:** Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen (learning how pure sunlight reflects off objects).	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (conceptually exploring how light rays travel, reflect, and refract).	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues from trading cards to define "blown glass" and "metallic salts").
5	**5-PS1-3:** Make observations to identify materials based on their properties (observing how colorscope filters absorb and reflect specific colors).	**MP1:** Make sense of problems and persevere in solving them (systematically solving the logic-based Italian Color Equations).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing wave mechanics and Italian art history concepts).

Little Passports: Science Jr. - Nocturnal Animals

Executive Summary The *Little Passports Science Jr.: Nocturnal Animals* kit offers an engaging, cross-disciplinary exploration into the biology and behaviors of creatures that thrive in the dark. By constructing shadow puppets to investigate the physics of light and plotting data on alphanumeric grids, students directly apply Next Generation Science Standards (NGSS) alongside Common Core math principles. Furthermore, literacy skills are robustly supported as learners decode domain-specific vocabulary, analyze sleep schedules, and read informational texts about evolutionary adaptations. This comprehensive approach ensures that students meet rigorous K–5 academic benchmarks while fostering a deep curiosity for the natural world.

Standards Alignment Chart (Grades K-5)

Grade	🟢 NGSS (Science)	🔵 CCSS Math	🟠 CCSS ELA
K	**K-LS1-1:** Use observations to describe patterns of what plants and animals need to survive (learning that nocturnal animals possess physical traits like large eyes to capture light in the dark).	**K.G.A.1:** Describe the relative positions of objects (following positional instructions to place shadow puppets in front of the light source).	**RI.K.1:** With prompting and support, ask and answer questions about key details in a text (reading the comic to answer questions about desert life). **RI.K.7:** With prompting and support, describe the relationship between illustrations and the text in which they appear (using the comic panels and visual diagrams to help understand the science concepts being read aloud).

1	**1-PS4-3:** Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light (building opaque shadow puppets to block light).	**1.MD.C.4:** Organize, represent, and interpret data with up to three categories (interpreting the Sleep Schedules chart to categorize animals as diurnal or nocturnal).	**RI.1.7:** Use the illustrations and details in a text to describe its key ideas (using visual color keys to decode and describe animal adaptations).
2	**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats (comparing habitats and survival strategies of desert creatures vs. tropical creatures).	**2.G.A.1:** Recognize and draw shapes having specified attributes (tracing linear paths between coordinate points to draw shapes).	**RI.2.4:** Determine the meaning of words and phrases in a text relevant to a grade 2 topic (using the glossary to define terms like "echolocation").
3	**3-LS4-2:** Use evidence to construct an explanation for how variations in characteristics provide survival advantages (explaining the advantages of movable ears or a tapetum lucidum).	**3.OA.D.9:** Identify arithmetic patterns and explain them (identifying color-matching patterns to unscramble letters in the Nocturnal Traits puzzle).	**RI.3.3:** Describe the relationship between steps in technical procedures in a text (following multi-step instructions to assemble the shadow puppet theater).
4	**4-LS1-1:** Construct an argument that animals have external structures that support survival (learning how structures like the flying squirrel's	**4.G.A.1:** Draw points, lines, line segments, rays, and angles (drawing connecting line segments between specific grid points to reveal hidden creatures).	**RI.4.4:** Determine the meaning of domain-specific words in a text (utilizing context clues to define terms like "pit organs").

	membrane support gliding).		
5	**5-LS2-1:** Develop a model to describe the movement of matter among plants and animals (exploring how nocturnal predators hunt prey in the food web).	**5.G.A.1:** Use a pair of perpendicular number lines to define a coordinate system (using the alphanumeric grid to accurately plot coordinate pairs).	**RI.5.10:** Read and comprehend informational texts independently and proficiently (synthesizing biological and optical facts across the kit's materials).