



Science K Course Syllabus

Prince George's County Public Schools

INSTRUCTOR INFORMATION		COURSE INFORMATION	
NAME:		COURSE NUMBER:	
E-MAIL ADDRESS:		CLASS TIME:	
PLANNING TIME:		MEETING DAYS:	
SCHOOL:		ROOM:	
SCHOOL PHONE NUMBER:		STUDENT TEXTBOOK/DIGITAL RESOURCES:	<i>Grade K Science Discovery Education Techbook® (2020). Discovery Education, Incorporated.</i>

Prerequisites: None

Course Description: The Grade K Science Discovery Education Techbook is an interactive digital resource that brings the wonders of science to life for kindergarten students. This course engages students in inquiry-based learning, hands-on activities, virtual experiments, and multimedia resources to explore key scientific concepts and foster a deep understanding of the natural world. Through a combination of interactive lessons, videos, simulations, and real-world applications, students will develop scientific thinking skills, engage in scientific investigations, learn about future STEM careers, and develop a curiosity for scientific exploration.

Students will conduct hands-on investigations using the aligned Discovery Education Techbook materials kits supplied to all PGCPS K-5 elementary schools and K-8 academies that support three-dimensional classroom instruction.

Each lesson will integrate robust literacy strategies through writing activities from Discovery Education Techbook to also include connections between mathematics and reading skills. After each course, students will move towards becoming scientifically literate as they gain the skills to be problem-solvers, communicators, global citizens, critical thinkers, goal-directed learners, creators, and innovators by connecting science to their world.

Course Overview by Quarter:

Classroom instructional pacing on the topics listed in the chart below will differ due to individual school schedules, events, testing, holidays, and calendar modifications. In support of the shifts and demands of the Next Generation (NGSS), Science and Engineering Practices (SEPs) and Crosscutting Concepts (CCCs) are integrated throughout each unit. During instruction, students will view videos, images, simulations and conduct hands-on investigations to deepen their knowledge of the science content. The PGCPs Grade K curriculum includes lesson plans and activities for teacher use.

Quarter	Grade K
1	Unit 1: Plant and Animal Needs ● Explore the basic needs of all living things, including animals and plants. ● Analyze the needs of all kinds of animals, from pets to familiar animals found in local environments to more exotic animals that live far away. ● Observe how animals' habitats meet their needs and how animals live in places that can meet each of their needs. ● Uncover the basic needs of plants as they investigate the cause of a droopy plant. ● Discover what plants need to survive, how the environments in which they live meet their needs, and what happens when basic needs are not met ● Design a habitat that meets the needs of specific living things
2	Unit 2: Living Things and The Environment ● Explore how living things, including humans, change the environment when they use resources to meet their needs. Analyze the causes and effects of living things changing their environment to meet their needs ● Explore how plants, animals, and humans use resources to find that they use natural resources as well and understand that some natural resources are renewable while others are not ● Build an understanding by reading about real-life problems and solutions and how they are handled ● Investigate various resources and how to minimize the impacts caused by human resource use
3	Unit 3: Weather and Shelter ● Explore weather patterns and learn about weather changes ● Investigate how the sun warms the Earth and how shade helps protect objects in the sun ● Measure temperatures with a thermometer and compare ● Observe the effect of sunlight on Earth and collect weather data over time. ● Design a solution that protects a camper from both the hot sun and stormy weather.
4	Unit 4: Motion and Change ● Explore pushes and pulls in order to understand how forces cause and change the motion of objects. ● Discover how forces cause objects to move faster and slower, to stop, and to fall down. ● Build an understanding by reading about how living and nonliving things move, how gravity affects how things move, and how other forces can change the motion of objects. ● Observe how forces like gravity and friction can change motion ● Design a solution to move a heavy box up from a low place to a higher place.

PGCPS Elementary Science Grading Factors for Grades K-1

Overview: The goal of grading and reporting is to provide the students with feedback that reflects their progress toward mastery of the indicators and objectives found in the Science Curriculum Framework Progress Guide. Teachers will determine the range of points for each assignment and place the assignment in SchoolMax; SchoolMax will then convert the points to a percentage, and then the percentage will be converted to a grade of a PR, IP, or ND.

- PR = Proficient – child can demonstrate indicators independently
- IP = In Process – child can reliably demonstrate indicator
- ND = Needs Development - child does not demonstrate indicator

Factors	Brief Description	Grade Percentage Per Quarter
Classwork	This includes, but is not limited to, activities that involve: ● Student participation ● Classroom assignments (written or oral) ● Use technical and scientific vocabulary to explain phenomena in oral and written responses ● Projects (Individual and/or group)	50%
Independent	This includes, but is not limited to, assignments that involve: ● Developing and using models ● Obtaining, evaluating, and communicating information ● Constructing scientific explanations (for science) and designing solutions (for engineering)	10%
Assessment	This includes, but is not limited to, activities that involve: ● Online/written/oral evaluation that reflects the student's performance on a summary of a lesson, chapter or unit ● This category encompasses both the traditional (exams and quizzes) and alternative methods of assessing student learning with the goal of mastery (presentations, projects, portfolios, completion of graphic organizers/foldables, anecdotal notes from teacher observations, teacher/student conferences, student online/written/oral responses).	40%

Next Generation Science Standards Parents' Guide for Student Success

<https://www.nextgenscience.org/> and <https://www.nextgenscience.org/parentguides>