2016-2017 STATE OF FLORIDA INSTRUCTIONAL MATERIALS ADOPTION
STANDARDS ALIGNMENT
COURSE STANDARDS/BENCHMARKS (Form IM7)

BID ID:	**3249**
SUBMISSION TITLE:	**National Geographic Science Florida Edition, Grade 5**
GRADE LEVEL:	**5**
COURSE TITLE:	**Science, Grade 5**
COURSE CODE:	**5020060**
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BENCHMARK CODE	BENCHMARK	LESSONS WHERE STANDARD/BENCHMARK IS DIRECTLY ADDRESSED IN MAJOR TOOL (MOST IN-DEPTH COVERAGE LISTED FIRST) (Include the student edition and teacher edition with the page numbers of lesson, a link to lesson, or other identifier for easy lookup by reviewers.)
SC.5.E.5.1:	Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.	*Big Ideas Book:* 106–116, 132, 136–143 *Teacher's Edition:* T108–T109, T112–T115, T117.
SC.5.E.5.2:	Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.	*Big Ideas Book:* 106–107, 109, 116–125, 128–129, 132, 136 *Science Inquiry and Writing Book:* 54–57 *Teacher's Edition:* T118–T125, T192m–T192p.
SC.5.E.5.3:	Distinguish among the following objects of the Solar System -- Sun, planets, moons, asteroids, comets -- and identify Earth's position in it.	*Big Ideas Book:* 106–107, 109–110, 116–132, 136–143 *Science Inquiry and Writing Book:* 44, 46–49, 54–57 *Teacher's Edition:* T105e–T105h, T116–T118, T120–T122, T126–T131, T131a–T131h.
SC.5.E.7.1:	Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.	*Big Ideas Book:* 146–151, 156–163, 178, 184 *Science Inquiry and Writing Book:* 58–61 *Teacher's Edition:* T145e–T145h, T162–T163.
SC.5.E.7.2:	Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.	*Big Ideas Book:* 146–147, 149, 156–157, 159–162, 176–177, 185 *Teacher's Edition:* T146–T147, T157, T159, T161–T163.
SC.5.E.7.3:	Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.	*Big Ideas Book:* 148, 152–155, 159–161, 164–169, 176–178, 180–181, 184, 186, 189 *Science Inquiry and Writing Book:* 45, 62–65 *Teacher's Edition:* T177a–T177h, T177, T180.
SC.5.E.7.4:	Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather	*Big Ideas Book:* 151–153, 160–161, 176–177, 183, 188–191 *Teacher's Edition:* T160–T161.
SC.5.E.7.5:	Recognize that some of the weather-related differences, such as temperature and humidity, are found among	*Big Ideas Book:* 170–171 *Teacher's Edition:* T170–T171.

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SC.5.E.7.6:	Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.	*Big Ideas Book:* 170–177 *Teacher's Edition:* T171–T175.
SC.5.E.7.7:	Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.	*Big Ideas Book:* 182–191 *Teacher's Edition:* T169, T182–T192.
SC.5.L.14.1:	Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton,	*Big Ideas Book:* 56–77, 90–99 *Teacher's Edition:* T53g–T53j, T56–T57, T59–T77, T81, T85a–T85d, T88, T92–T99, T100m–T100p.
SC.5.L.14.2:	Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.	*Big Ideas Book:* 78–85 *Teacher's Edition:* T78–T85.
SC.5.L.15.1:	Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.	*Big Ideas Book:* 32–40 *Teacher's Edition:* T34–T35, T37, T50–T51.
SC.5.L.17.1:	Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.	*Big Ideas Book:* 6, 10–23, 28–31, 40–47 *Science Inquiry and Writing Book:* 6, 8–11, 16–19 *Teacher's Edition:* T5e–T5h, T8–T18, T20–T25, T28–T31, T39e–T39h, T100k–T100l.
SC.5.N.1.1:	Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	*Science Inquiry and Writing Book:* 12–15, 16–19, 20–23, 24–27, 28–29, 30–37, 54–57, 58–61, 62–65, 66–69, 70–71, 72–77, 92–95, 100–103, 104–107, 110–113, 114–117, 118–121, 122–125, 126–129, 130–131, 132–139 *Teacher's Edition:* T39a–T39d, T100i–T100l, T100m–T100p, T131a–T131d, T131e–T131h, T145e–T145h, T177a–T177d, T177e–T177h, T192i–T192j, T192k–T192l, T192m–T192p, T192q–T192t, T263a–T263f, T317e–T317h, T343a–T343d, T356n–T356q
SC.5.N.1.2:	Explain the difference between an experiment and other types of scientific investigation.	*Science Inquiry and Writing Book:* 38–43 *Teacher's Edition:* T105e–T105h, T145e–T145h, T177a–T177d, T177e–T177h, T303a–T303d, T317e–T317h.
SC.5.N.1.3:	Recognize and explain the need for repeated experimental trials.	*Science Inquiry and Writing Book:* 140–143 *Teacher's Edition:* T277e–T277h, T356r–T356u.
SC.5.N.1.4:	Identify a control group and explain its importance in an experiment.	*Science Inquiry and Writing Book:* 30–37, 70–71, 72–79, 110–113 *Teacher's Edition:* T85c, T100k, T263g–T263j.

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SC.5.N.1.5:	Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."	*Science Inquiry and Writing Book:* 38–43 *Teacher's Edition:* T5e–T5h, T53g–T53j, T100q–T100v, T105e–T105h, T145e–T145h, T303a–T303d.
SC.5.N.1.6:	Recognize and explain the difference between personal opinion/interpretation and verified observation.	*Science Inquiry and Writing Book:* 80–83 *Teacher's Edition:* T192q–T192t, T245i–T245l, T254–T257.
SC.5.N.2.1:	Recognize and explain that science is grounded in empirical observations that are testable; explanation must	*Science Inquiry and Writing Book:* 80–83 *Teacher's Edition:* T100k–T100l, T192q–T192t, T263g–T263j.
SC.5.N.2.2:	Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.	*Science Inquiry and Writing Book:* 80–83 *Teacher's Edition:* T192q–T192t, T197e–T197h, T277e–T277h, T356l–T356m, T356r–T356u.
SC.5.P.8.1:	Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.	*Big Ideas Book:* 198–209, 228, 234, 239 *Science Inquiry and Writing Book:* 88–91 *Teacher's Edition:* T197e–T197h, T198–T209.
SC.5.P.8.2:	Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.	*Big Ideas Book:* 216–219, 226–227, 236 *Science Inquiry and Writing Book:* 92–95 *Teacher's Edition:* T216–T219, T226–T227, T227a–T227d.
SC.5.P.8.3:	Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.	*Big Ideas Book:* 201, 212–215, 234 *Science Inquiry and Writing Book:* 84 *Teacher's Edition:* T212–T215.
SC.5.P.8.4:	Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.	*Big Ideas Book:* 200–201, 210–211, 220, 228, 230–231, 234 *Teacher's Edition:* T210–T211.
SC.5.P.9.1:	Investigate and describe that many physical and chemical changes are affected by temperature.	*Big Ideas Book:* 205, 220–225, 228, 235, 238 *Science Inquiry and Writing Book:* 92–95 *Teacher's Edition:* T220–T225, T227a–T227d.
SC.5.P.10.1:	Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.	*Big Ideas Book:* 278–282, 284–305, 308–315, 318, 320–344, 348–355 *Science Inquiry and Writing Book:* 86–87, 114–117, 118–121 *Teacher's Edition:* T277e–T277h, T303a–T303d, T284–T303, T312–T315.
SC.5.P.10.2:	Investigate and explain that energy has the ability to cause motion or create change.	*Big Ideas Book:* 278–285, 298–301, 304, 311, 330–331, 336–337 *Science Inquiry and Writing Book:* 114–117 *Teacher's Edition:* T277e–T277h, T282–T283.
SC.5.P.10.3:	Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.	*Big Ideas Book:* 322, 324–325, 338 *Science Inquiry and Writing Book:* 122–125 *Teacher's Edition:* T317e–T317h, T324–T325, T356n–T356q.

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SC.5.P.10.4:	Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.	*Big Ideas Book:* 318–319, 322–323, 330–337, 344, 346–347 *Teacher's Edition:* T330–T337.
SC.5.P.11.1:	Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).	*Big Ideas Book:* 321, 328–329, 344, 350 *Science Inquiry and Writing Book:* 126–129 *Teacher's Edition:* T328–T329, T343a–T343d.
SC.5.P.11.2:	Identify and classify materials that conduct electricity and materials that do not.	*Big Ideas Book:* 321, 326–329, 334–335, 338–339, 344, 351 *Science Inquiry and Writing Book:* 126–129 *Teacher's Edition:* T326–T327, T343a–T343d.
SC.5.P.13.1:	Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.	*Big Ideas Book:* 246–253, 256–260, 262, 264, 268–271, 274–275 *Science Inquiry and Writing Book:* 85 *Teacher's Edition:* T245e–T245h, T248–T253.
SC.5.P.13.2:	Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.	*Big Ideas Book:* 249, 256–261, 264, 270–273 *Science Inquiry and Writing Book:* 110–113 *Teacher's Edition:* T245e–T245h, T260–T261, T263g–T263j.
SC.5.P.13.3:	Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.	*Big Ideas Book:* 256–257, 260–261, 264, 272–273 *Science Inquiry and Writing Book:* 110–113 *Teacher's Edition:* T236g–T236j, T263.
SC.5.P.13.4:	Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.	*Big Ideas Book:* 257–259, 262–263, 269–270 *Science Inquiry and Writing Book:* 100–103 *Teacher's Edition:* T245i–T245l, T256, T258–T259, T262.
LAFS.5.RI.1.3:	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.	Many scientific concepts interact within the lessons. For example: Teacher's Edition: T68-T69, T82-T85, T85a-T85d, T105e-T105h, T131e-T131h, T125, T145g-T145j, T177e-T177h, T245i-T245l, T277e-T277h
LAFS.5.RI.2.4:	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.	Big Ideas Book: p. 16, 17, 19, 22, 58, 64, 71, 73, 110-112, 116, 120, 129, 152, 153, 156, 157, 168, 170, 206, 208, 210, 212, 216, 250, 252, 261, 284, 298, 322, 324, 326, 328 Teacher's Edition: T6-T9, T54-T57, T106-T109, T146-T149, T198-T201, T246-T249, T250-T263, T278-T281, T318-T321
LAFS.5.RI.4.10:	By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.	Big Ideas Book: p.5-90, 105-182, 197-348 Teacher's Edition: T10-T39, T40-T52, T52a, T58-T85, T86-T100, T100a, T110-T131, T132-T144, T144a, T150-T177, T178-T192, T192a, T202-T227, T228-T244, T264-T276, T276a, T282-T303, T304-T316, T322-T343, T344-T356

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LAFS.5.SL.1.1:	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.	Teacher's Edition: T16, T32, T39e, T41, T44, T52, T87, T100, T133, T144, T179, T192, T229, T244, T245k, T263i, T265, T276, T277g, T305, T316, T345, T356
	a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.	Teacher's Edition: T16, T32, T39e, T41, T44, T52, T87, T100, T133, T144, T179, T192, T229, T244, T245k, T263i, T265, T276, T277g, T305, T316, T345, T356
	b. Follow agreed-upon rules for discussions and carry out assigned roles.	Teacher's Edition: T16, T32, T39e, T41, T44, T52, T87, T100, T133, T144, T179, T192, T229, T244, T245k, T263i, T265, T276, T277g, T305, T316, T345, T356
	c. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.	Teacher's Edition: T16, T32, T39e, T41, T44, T52, T87, T100, T133, T144, T179, T192, T229, T244, T245k, T263i, T265, T276, T277g, T305, T316, T345, T356
	d. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.	Teacher's Edition: T16, T32, T39e, T41, T44, T52, T87, T100, T133, T144, T179, T192, T229, T244, T245k, T263i, T265, T276, T277g, T305, T316, T345, T356
LAFS.5.W.3.8:	Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.	Each lesson gives opportunity to use prior knowledge. For Example: Teacher's Edition: T39, T46, T59, T63, T78, T92, T114, T122, T130, T138, T208, T225, T227a, T254, T274, T293, T298, T330, T339
LAFS.5.W.3.9:	Draw evidence from literary or informational texts to support analysis, reflection, and research.	Big Ideas Book: p.5-90, 105-182, 197-348 Teacher's Edition: T10-T39, T40-T52, T52a, T58-T85, T86-T100, T100a, T110-T131, T132-T144, T144a, T150-T177, T178-
	a. Apply grade 5 Reading standards to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]").	This objective is not directly addressed at this grade level of National Geographic Science.
	b. Apply grade 5 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]").	Big Ideas Book: p.5-90, 105-182, 197-348 Teacher's Edition: T10-T39, T40-T52, T52a, T58-T85, T86-T100, T100a, T110-T131, T132-T144, T144a, T150-T177, T178-T192, T192a, T202-T227, T228-T244, T264-T276, T276a, T282-T303, T304-T316, T322-T343, T344-T356

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MAFS.5.G.1.1:	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	This objective is not directly addressed at this grade level of National Geographic Science.
MAFS.5.MD.2.2:	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	This objective is not directly addressed at this grade level of National Geographic Science.
ELD.K12.ELL.SC.1:	English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.	Teacher's Edition: T11, T17, T23, T31, T43, T59, T71, T79, T89, T103, T120, T138, T151, T155, T161, T167, T197g, T204, T221, T231, T253, T258, T267, T285, T291, T294, T312, T323, T331, T346
ELD.K12.ELL.SI.1:	English language learners communicate for social and instructional purposes within the school setting.	Teacher's Edition: T11, T17, T23, T31, T43, T59, T71, T79, T89, T103, T120, T138, T151, T155, T161, T167, T197g, T204, T221, T231, T253, T258, T267, T285, T291, T294, T312, T323, T331, T346
HE.5.C.1.5:	Explain how human body parts and organs work together in healthy body systems, including the endocrine and reproductive systems.	Teacher's Edition: T60-T77