



Carolina's Building Blocks of Science 3D Reference Database Review

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Carolina's Building Blocks of Science™ 3D

Grade Level: K-Gr 5

Cost: Prices start at \$382.95 per kit.

Overview: Premier scientific supplier Carolina has tailored Building Blocks of Science™ 3D to engage a wide range of learners. These inquiry lessons are ideal for elementary school teachers and librarians seeking a carefully organized suite of materials that offer hands-on, phenomenon-based science instruction.

Content: For each grade level, from kindergarten to fifth grade, Carolina has bundled three units of study mapped to the NextGen science standards. Even the youngest students are framed as active investigators and given tasks to explore phenomena around them, capture and communicate their findings, and strive to make meaning from that new knowledge. Each unit of study involves five lessons, with up to three independent investigations per lesson, but everything is modular enough to be used independently. All materials are available à la carte or bundled into themed unit kits.



Each unit follows the 5 E's constructivist model: engagement, exploration, explanation, elaboration, and evaluation. The curriculum mapping, lesson planning, and print and digital resources are a treasure trove for any elementary teacher looking to help students understand the scientific method. The science resources leverage household and instructional supplies and emphasize the importance of gathering information from observation and through instrumentation.

Carolina also makes available spiral-bound unit books, along with their easily accessible digital equivalents, which provide teachers with valuable activities broken into lesson-sized chunks. Each unit plan involves authentic activities that incorporate a range of standards. In addition to strong elements of literacy and language learning support, the use of data concepts across units is particularly robust. All sorts of learner needs are

anticipated; there are even safety contracts for parents and students. These teacher guides come with the kits; additional guides are available for \$249.95 only if a previous kit has been purchased.

Carolina has organized each unit with online multimedia support, from video introductions to overarching concepts to extensions for enrichment, and each unit is replete with material kits containing physical objects as well as reproducible handouts guiding students through age-appropriate exploration. The online multimedia support includes pithy, up-to-date, subtitled videos and preloaded presentations. The material is pedagogically sound and connected to standards. Reflection is built into each unit of study, and there are scenario-based digital assessments integrated with other evaluation approaches and plans for remediation based on concepts not yet mastered. The resources allow for whole-class participation as the kits include parallel materials for below-grade-level readers and Spanish-language versions of print as well as video materials.



Building Blocks of Science homepage on CarolinaScienceOnline.com



The unit books are supported by a range of digital resources. Teachers can assign online activities for students in 1:1 environments, use them in demonstration mode in single-computer classrooms, or opt for files designed for interactive whiteboards. Integrated virtual classroom capabilities allow educators to load class rosters and proscribe their custom pathways for each student through an instructional interface. The same dashboard-type mechanism allows for assignments based on teacher choices, tracks individual student progress, and permits teachers to group students in class sections as needed.

But some of the value in the kits lies in a range of print resources accessible entirely independently of the online instructional interface, in modular components that are adaptable for teachers without specialist science training. This gives these curriculum units flexibility to be deployed on the go without much pre-planning.

Much of the hands-on equipment—K’NEX, Unifix Cubes, thermometers—will be familiar. The third-grade weather kit, for example, contains an inflatable globe, wind sock, and rain gauge. While all materials are available as independent purchases, for newer teachers and in some settings, the integration of uniform storage containers could make the purchase in whole class sets advisable. Most sets come with enough materials for either one or three classes. Refresher packages are available for consumables, and some kits are entirely reusable.



*Digital resources from
Building Blocks of Science*



Ease of Use/Visual Appeal: The colocation of the digital and physical resources will give teachers the necessary confidence and support to dive into hand-on science activities. When users are accessing online support for a 3D unit, applicable video files display as thumbnail previews in a visual menu. The online reproducible components to support each unit of study in Carolina's series are available in tandem with the hard copy resources and can be used in the classroom in a wide variety of related lessons.

Verdict: The current enthusiasm for STEM lessons makes Carolina's Building Blocks 3D a pragmatic purchase for new teachers or those just starting to teach science to elementary grades. The 3D kits offer seamless hands-on exploration of grade level content, and the range of reproducible, informational texts embedded throughout makes the unit guides a valuable tool for librarians. The units can serve as something to have on hand for unanticipated teacher absences and can be used to reinforce content area concepts through information literacy lessons in the library or makerspace.

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