

The thirteen days of halloween: Using children's literature to differentiate instruction in the mathematics classroom

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Main content

Article Preview :

One of the most difficult tasks that we face as teachers is finding ways to challenge all the students in our care appropriately. The mathematical abilities of the children in any given classroom can vary widely (Slavin 1987). Educational experts assert that learning is greatest when instruction matches the child's level of readiness or performance. For example, John Dewey recommended that teachers match instructional activities to the individual (Dewey 1963, 1964). The Russian psychologist Lev Vygotsky argued that lessons must be crafted to match individual development (Vygotsky 1978). Jean Piaget believed in matching instruction to a child's developmental readiness and demonstrated that instruction is profitable only when a child is developmentally ready (Inhelder, Sinclair, and Bovet 1974). The National Council of Teachers of Mathematics (NCTM) recommends that structures be developed to "provide appropriate, differentiated support" (NCTM 2000, p. 369). When the mathematical abilities of children in the class are varied, however, it is difficult for one teacher to provide instruction and support at the optimal level for each child in the room.

How can teachers meet the diverse mathematical needs of children in their classrooms? Using children's literature as a springboard for mathematics instruction is one enjoyable and versatile technique. The wealth of delightful children's literature available yields many stories with the potential for mathematical investigations at a variety of instructional levels. After reading a book together, the whole class can participate in an instructional activity, or small groups of students can focus on different mathematical problems suited to their levels of readiness.

Children's literature offers rich opportunities for children to discuss mathematical ideas in the context of solving real problems and therefore is an excellent vehicle for implementing NCTM's Principles and Standards for School Mathematics (2000). NCTM recommends that problem solving be an integral part of the curriculum, that mathematics instruction be connected to the real world, and that children learn to communicate their mathematical thinking to teachers and peers. Children's literature allows children to discuss their ideas while solving problems embedded in the stories, in a context that most children find engaging and motivating. As Marilyn Burns writes, "Incorporating children's books into math instruction helps students experience the wonder possible in mathematical problem solving and helps them see a connection between mathematics and the imaginative ideas in books" (Burns 1992, p. 1).

This article describes how the book *The Thirteen Days of Halloween* (Greene 2000) can be used to teach a variety of mathematical concepts in kindergarten to fourth-grade classrooms. The wealth of mathematical investigations that the story inspires make it an ideal choice for teachers trying to meet the diverse needs of their students.

About the Book

The *Thirteen Days of Halloween* by Carol Greene is a take-off on the traditional song "The Twelve Days of Christmas." In this delightfully eerie rendition, a debonair ghoul attempts to woo his green-skinned girlfriend ("ghoulfriend") with a series of unique gifts. On the first day of Halloween, he gives her a vulture in a dead tree. On the second day,...

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The benefits of differentiation in the classroom are often accompanied by the drawback of increasing workloads. Here are factors and examples to keep in mind. Examples of How to Differentiate Instruction in the Classroom. By Cathy Weselby. Facebook. The roots of differentiated instruction go all the way back to the days of the one-room schoolhouse, where one teacher had students of all ages in one classroom. As the educational system transitioned to grading schools, it was assumed that children of the same age learned similarly. However in 1912, achievement tests were introduced, and the scores revealed the gaps in student's abilities within grade levels. This article shows how children's literature can be used to provide meaningful mathematics instruction for children functioning at a variety of instructional levels in a single classroom. Descriptors: Childrens Literature, Mathematics Instruction, Relevance (Education), Student Needs, Individualized Instruction, Teaching Methods. National Council of Teachers of Mathematics. 1906 Association Drive, Reston, VA 20191-1502. Tel: 800-235-7566; Tel: 703-620-3702; Fax: 703-476-2970; e-mail: orders@nctm.org; Web site: <http://www.nctm.org/publications/>. Publication Type: Journal Articles; Reports Individualized instruction, Cognitive styles in children, Mixed ability grouping in education. Publisher. Minneapolis, MN : Free Spirit Pub. - How do you differentiate for special populations? - - Final thoughts: teaching as a creative activity. Access-restricted-item. 14 day loan required to access EPUB and PDF files. IN COLLECTIONS. Books to Borrow. Books for People with Print Disabilities. Internet Archive Books. Regular mathematics classrooms that offer sufficiently challenging and broad experiences for gifted students have the potential to enrich the learning community as a whole since other students will be interested in attempting, perhaps with help, some of the more challenging tasks. If math classes offer diversity in assignments, products, and pacing and monitor student needs, all students will be able to work at their own challenge level. Deciding to Differentiate Instruction in Middle School: One school's journey. Gifted Child Quarterly, 39, 77-87. Westberg, K. L., Archambault, F. X., Dobyys, S. M. & Salvin, T. J. (1993) The classroom practices observation study. Journal for the Education of the Gifted, 16, 120-146. Teaching Children Mathematics. Issue Date: 2004. Similar Literature. FAQscontactonacademic@126.com. ©Wirey All Rights Reserved. For ¥0.57 per day, unlimited downloads. This function is a member function, members do not limit the number of downloads. Create your membership.