DESCRIPTION

Visualizing Elementary & Middle School Mathematics Methods is designed to guide students to learn effectively by teaching mathematics content and pedagogy in a visual and exciting way. Author Joan Cohen Jones offers prospective teachers the opportunity to learn about teaching mathematics at the elementary level while incorporating real-world and cultural perspectives of mathematics teaching and learning. Applying this new approach gives all students the opportunity to set aside their previous beliefs about mathematics and to learn concepts and pedagogy from a new perspective. With fully developed lesson plans using the 2010 Common Core State Standards, this book is a must see for those interested in the power of learning, and teaching, with visuals.

The debut edition of Visualizing Elementary & Middle School Mathematics Methods is part of the Wiley Visualizing Series.

Visualizing Elementary & Middle School Mathematics Methods is available in alternate versions (eBooks and custom) for professors and students. For more information, visit the “Instructor’s Resource” tab or “Student Resource” tab below.

ABOUT THE AUTHOR

Joan Cohen Jones is the author of Visualizing Elementary and Middle School Mathematics Methods, published by Wiley.
NEW TO EDITION

- Chapter Opening Photos provides a visual representation of the chapter content with a caption connecting the photo to the chapter’s introduction.

- Each chapter opens with a brief vignette to evoke student interest in the chapter’s central mathematics concept. Chapter One opens with a discussion of the Shakers’ use of round barns instead of square barns and how this benefitted their lives. This real-life example engages students in the connection between mathematics and everyday life.

- Mathematics pedagogy often involves step-by-step procedures, through the book, Process Diagrams provide a series of figures, photos, and text that create a visual presentation of a complex process. As an example, Chapter 6 illustrates each step of the problem-solving process based on the four-step Polya process.

- In the Classroom provides a real-life look into a classroom and is accompanied by a photo or illustration that shows how classroom practice and research impacts teaching.

- Multicultural Perspectives in Mathematics presents content-rich, culturally relevant examples of mathematics and its place in the world, such as the Mayan system of counting and the Egyptian method of adding fractions.

- Fully developed Lesson Plans model for prospective teachers how to make mathematics culturally relevant and reflective of students’ lives outside the classroom, while fulfilling standards-based mathematics objectives. All lessons highlight specific state standards and provide adaptations for English language learners. For example, a fifth-grade lesson on Euler circuits, which meets the Arizona State Mathematics Standards and is introduced using the example of Lusona sand drawings.

- Educational InSite is a multi-part visual feature focusing on a key concept or topic in the chapter, exploring it in detail or in a broader context using a combination of photos and figures. For example, in Chapter One, What is Mathematics?, the development of mathematics throughout history is illustrated with timelines.
Systems, this feature illustrates different ways to celebrate 100. In Chapter Eight, Place Value, the different types of place value models are illustrated with several examples.

• Each chapter includes an abundance of hands-on Activities for elementary school children (many tested by the author herself) and many incorporate technology. These activities can be used as mini-lessons for children to practice using mathematics concepts. Each one is accompanied by full instructions and illustrations.

• Children’s Literature: Each chapter presents illustrations from children’s books that contain exciting connections to mathematics content. This feature offers detailed suggestions of how to use children’s books to motivate mathematics learning. For example, illustrations and discussion of the children’s book A Grain of Rice enhances a lesson on representing information with tables and graphs.

• Each end-of-chapter Visual Summary provides a review of the chapter’s central topics with narrative text and images. The Summary reinforces learning and helps students see the big picture.

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SERIES

Visualizing Series

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