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Visual-spatial ability in STEM education. Transforming research into practice.

Cham: Springer (ISBN 978-3-319-44384-3/hbk; 978-3-319-44385-0/ebook). vi, 263 p. (2017).

Publisher's description: Each chapter in this book makes a unique contribution to the body of the literature and enhances the understanding of spatial ability and its influence on learning in the STEM disciplines. It addresses spatial abilities, ways to measure them as well as their impact and how they can affect learning subjects in scientific, technology and engineering domains. The volume deliberately covers a wide range perspectives from cognitive psychology, educational psychology, science, technology, engineering and mathematics, computer science, information technology disciplines to human development. Taking a broad view on the topic, chapters in the book discuss how to define spatial ability and its factors, the measurement of spatial ability and psychometric analyses, and educational strategies to improve spatial skills and their implications for science and technology education. The book thus provides an overview of current thinking about visual-spatial ability, spatial reasoning, and spatial skills.

Classification: A60 C40 G20

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