https://eric.ed.gov/?q=computational+thinking+programming+activities+math&ff1=subMathematics+Instruction

ERIC

Notes FAQ Contact Us

Collection | Thesaurus

computational thinking programming Search Advanced Search Tips

☐ Peer reviewed only ☐ Full text available on ERIC

Mathematics Instruction ×

Showing 1 to 15 of 242 results Save | Export

PUBLICATION DATE

In 2023	6
Since 2022	23
Since 2019 (last 5 years)	53
Since 2014 (last 10 years)	100
Since 2004 (last 20 years)	174

DESCRIPTOR

Mathematics Instruction	242
Teaching Methods	128
Problem Solving	87
Thinking Skills	86
Mathematical Concepts	59
Mathematics Skills	51
Foreign Countries	48
Elementary School Mathematics	46
Computation	43
Elementary School Students	36
Educational Technology	35

More ▼

SOURCE

Mathematics Teaching in the...	17
Teaching Children Mathematics	13
ProQuest LLC	9
Heinemann	4
International Association for...	4
Eye on Education	3
International Group for the...	3
International Journal of STEM...	3
Mathematics Teacher	3
Asia-Pacific Education...	2
Crystal Springs Books	2

More ▼

AUTHOR

Yadav, Aman	4
Rich, Kathryn M.	3
Sarama, Julie	3

Exploring the Characteristics of an Optimal Design of Non-Programming Plugged Learning for Developing Primary School Students' Computational Thinking in Mathematics

Wang, Jue; Zhang, Yi; Hung, Cheng-Yu; Wang, Qiyun; Zheng, Ying – Educational Technology Research and Development, 2022

Peer reviewed
Direct link

Existing computational thinking (CT) research focuses on programming in K-12 education; however, there are challenges in introducing it into the formal disciplines. Therefore, we propose the introduction of non-programming plugged learning in mathematics to develop students' CT. The research and teaching teams collaborated to develop an…

Descriptors: Thinking Skills, Computation, Mathematics Instruction, Elementary School Students

Variables in Early Algebra: Exploring Didactic Potentials in Programming Activities

Kilhamn, C.; Bråting, K.; Helenius, O.; Mason, J. – ZDM: Mathematics Education, 2022

Peer reviewed
Direct link

In this paper we consider implications of the current world-wide inclusion of computational thinking in relation to children's development of algebraic thinking. Little is known about how newly developed visual programming environments such as Scratch could enhance early algebra learning. The study is based on examples of programming activities…

Descriptors: Computation, Thinking Skills, Preadolescents, Programming

Leveraging Prediction and Reflection in a Computational Setting to Enrich Undergraduate Students' Combinatorial Thinking

Lockwood, Elise – Cognition and Instruction, 2022

Peer reviewed
Direct link

In this paper, I discuss undergraduate students' engagement in basic Python programming while solving combinatorial problems. Students solved tasks that were designed to involve programming, and they were encouraged to engage in activities of prediction and reflection. I provide data from two paired teaching experiments, and I outline how the task…

Descriptors: Undergraduate Students, Thinking Skills, Prediction, Teaching Methods

The Integration of Programming in Swedish School Mathematics: Investigating Elementary Mathematics Textbooks

Bråting, Kajsa; Kilhamn, Cecilia – Scandinavian Journal of Educational Research, 2022

Peer reviewed
Direct link

We characterize the recently included programming content in Swedish mathematics textbooks for elementary school. Especially, the connection between programming content and traditional mathematical content has been considered. The analytical tools used are based on the so-called 5E's, a theoretical framework of action, developed within the…

Descriptors: Foreign Countries, Programming, Computer Science Education, Mathematics Instruction

The Influence of SRA Programming on Algorithmic Thinking and Self-Efficacy Using Lego Robotics in Two Types of Instruction

Fanchamps, Nardie L. J. A.; Slangen, Lou; Hennissen, Paul; Specht, Marcus – International Journal of Technology and Design Education, 2021

Peer reviewed