🍑 蒸发大学

from the University of Tsukaba, Allisiste Member of SEAMEO Teaching Mathematics to Develop Mathematical Thinking as Higher Order Thinking How do you teach? Why?

Lesson 12: How to Introduce column addition and subtraction

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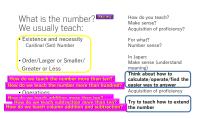


Mathematical Values: Generality and Expandability Reasonableness and Hiemsny Usefulness and Efficient Simpler and Easter Beautifulness	See and think mathematically a See question and develop A explanation such as why and when Generalize and extend Approciate others' idea and change	Lakts of mind for Citizen to line: issonabily and critically with respecting of approximation of them subconstruction of them amony allocasity uning tools such as KT moverein in magining the future through thera, teaming the future through them issues and the such as KT sets in the subconstruction of the subconstruction of the subconstruction of the subconstruction of the subconstruction of the subconstruction of the subconstruction subconstruction of the subconstruction of the subconstruction subconstruction of the subconstruction of the subconstruction of the subconstruction subconstruction of the subconstruction of th
	Mathematical Thinking and Pro	cesses metabawa
Mathematical Ideas fer: Set, Unit, Compare, Operade, Algorithm, Fundamental principie, and Varied representation such as table, diagram, espressions, graph and translations.	Mathematical Thinking: Generalization and Specialization Extension and Integration Inductive, Analogical and Deductive reasonin Adutacting, Concretizing and Embediment Diset(Dring by representing and symbolizing Relational and Functional thinking Thinking forward and backward	Consecturity, Justifiang and Proving Consectualization and Proceduralization Representation and Sharing for the
Numbers & Operations Operations	Extension of Number and	Number & Algebra
Ve are reading the JP t	extbook by using terminology to ex sequence of content for knowing t and for themselves through the pre	he way to develop children

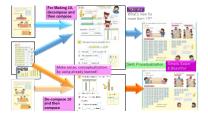
Using what you already knew on the past 11 lessons!

How do you teach column addition?



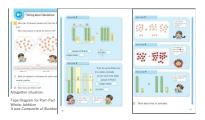








How column by using learned?

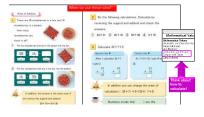


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	For What?
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Carrying/re-grouping: How do you explain by using terminology? Think about how to calculate: What does it mean here? For What?







Then, How do you plan the task sequence for column subtraction?



Then, How do you plan the task sequence for column subtraction?

Homework!!!

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References

Masami Isoda, Raimundo Olfos edited (2020). Teaching Multiplication with Lesson Study: Japanese and Ibero-American Theories for International Mathematics Education. Cham, Switzerland: Springer Oben Access (Open Access) Wagami Josha, Juki Mugap, (2020), Study with your friends: Mathematics for Elementary School (12 Wagami Josha, Juki Mugap, (2020), Study with your friends: Mathematics for Elementary Macami Josha, Juki Mugap, Marka, Kab Yap, (2015), Study with your friends: Mathematics for Elementary Macami Josha, David Tall (2019). Mathematics for Junier High School (3 vels.). Tokyo, Japan: Gakko

Massani Isada, David Tali (2013). Mathematistis for Junior 1498 School (2) etc.). Total Comparison (Days Areas, Nat. Janka, Marcina, Marcia, Marc