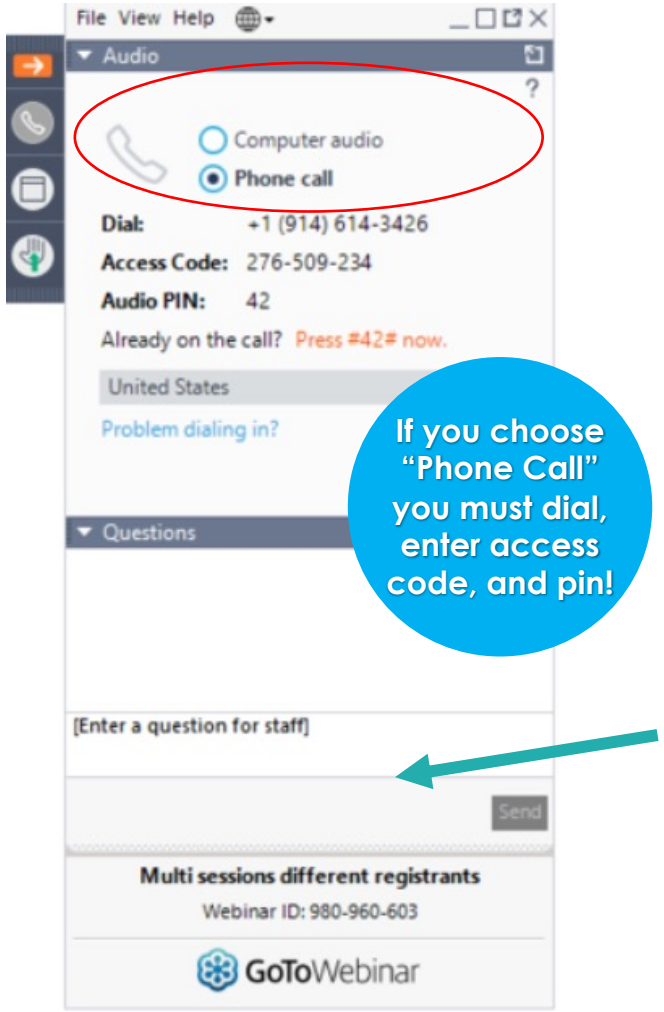
Connect Your Audio

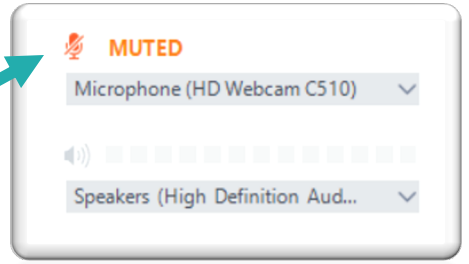


If you choose "Phone Call" you must dial, enter access code, and pin!

Choose one of the following:

- **Computer Audio –** mic and speakers
- **Phone Call –** a phone number will appear with an access code and audio pin for you to enter

Once connected you will **remain muted**!
Are you muted?



Locate question feature to send questions/comments to presenter!

Number Routines with Numberblocks

ZACHARY CHAMPAGNE

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The Counting Principles:

1. Stable Order/Standard Order
2. One to One
3. Cardinality
4. Conservation of Cardinality
5. Successor

Stable Order

When counting, the list of words used to count must be said in a repeatable order.

Standard Order

When counting, the names of the counting numbers are always said in the same order, and that order is meaningful.

One to One

When counting a set of objects, each and every object in the set is tagged with one and only one number in the counting sequence and each number with one and only one object.

Cardinality

When counting (in accordance with the standard order and one to one principles) the last number word spoken describes an important characteristic of the whole set. The last number word indicates the cardinality of the set.

Conservation of Cardinality

The cardinality of a set remains stable when:

-The order in which the objects in the set are counted is changed, or

-The objects in the set are rearranged or transformed.

Successor

There is a number that is one greater than every counting number.

Important Counting Concepts

1. Subitizing
2. Unitizing
3. Hierarchal Inclusion

Subitizing

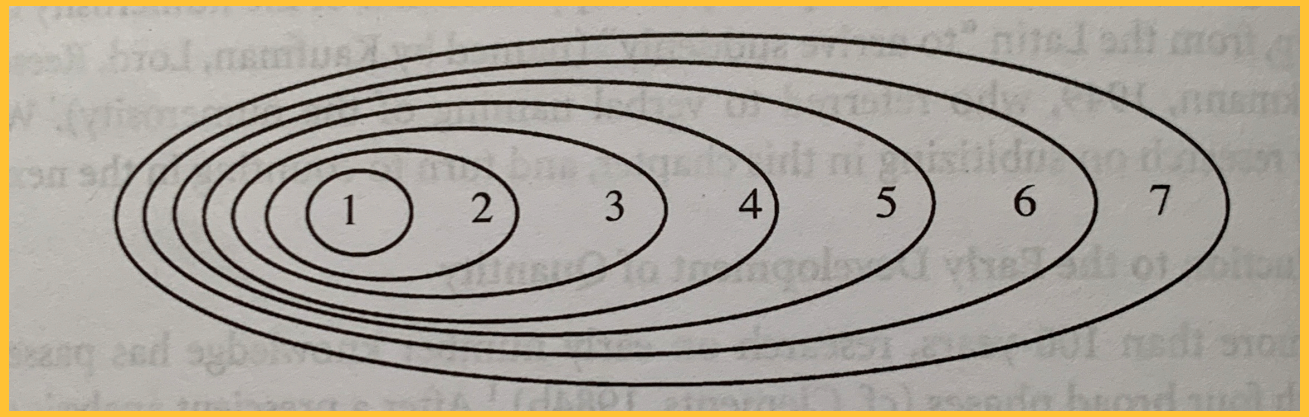
Subitizing is quickly recognizing and naming the number in a group without counting.

Unitizing

Understanding that you can count a large group of items by counting smaller, equal groups of items from within the large group.

Hierarchal Inclusion

Each cardinal number includes those that come before it. The number 7 contains a set of 6, a set of 5, a set of 4, etc.



Sarama & Clements, 2009

Why Routines?

When students know HOW the experience will go, they are better able and more likely to engage in the WHAT we hope they learn.

Some popular routines that that teachers are using

-Number talks

-Splat

-How Many?

-Which One Doesn't Belong?

-Math Flips

-Ways to Make _____

-Three Act Tasks

-Counting Collections

-Notice/Wonder

Number Blocks

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More or Less

Today's Number

Conservation of Number

7 Number Routines

What's Missing?

Guess My Number

Choral Counting

Ways To Make A Number

Why Number Routines with Numberblocks?

-Help students to see and experience the core counting principles and ancillary ideas

-Each episode allows students to engage in foundational mathematical ideas and concepts

-Short videos engage and meet students where they are

-Hands-on development of some “big ideas” in mathematics with focus on the Counting Principles

-Routine structure allows students a safe place to discuss, take risks, and collaborate with peers

-Repeatable lessons are low-prep and high-engagement

-Supports wide variety of learning styles with visual, auditory, and kinesthetic components in every lesson

THANK YOU!

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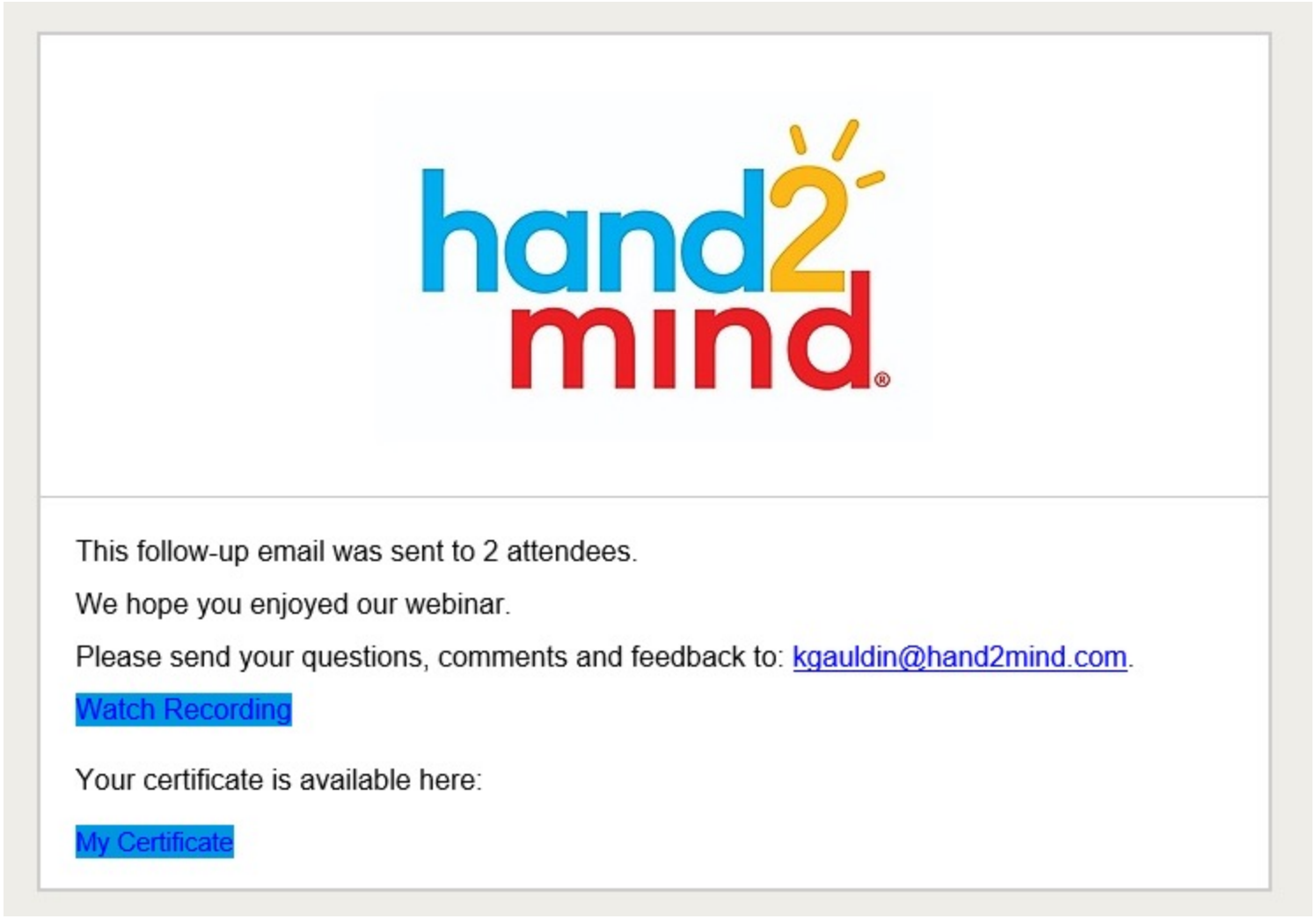

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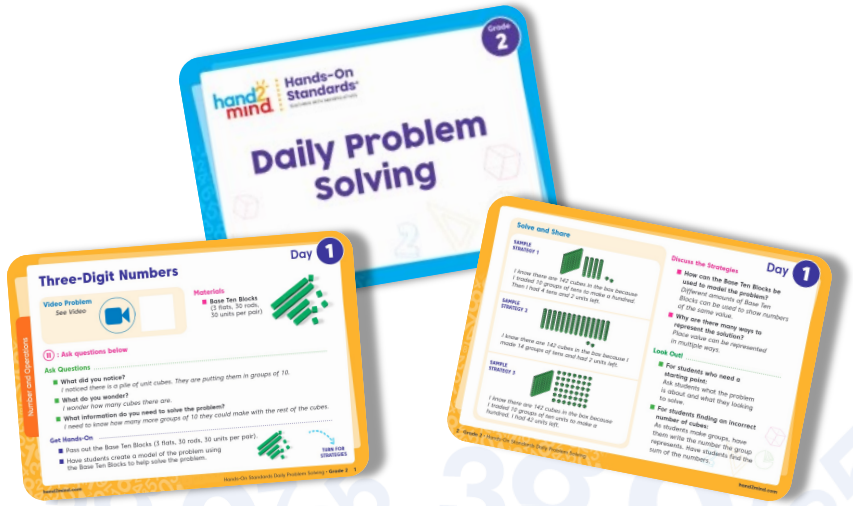
Daily Problem Solving

Grades K–2



Includes for K-2:

- **180** Teacher Problem Solving Cards with instructional support
- **36** Video Problems
- **144** Digital Format Problems
- **36** Problem Solving Student Activity Pages

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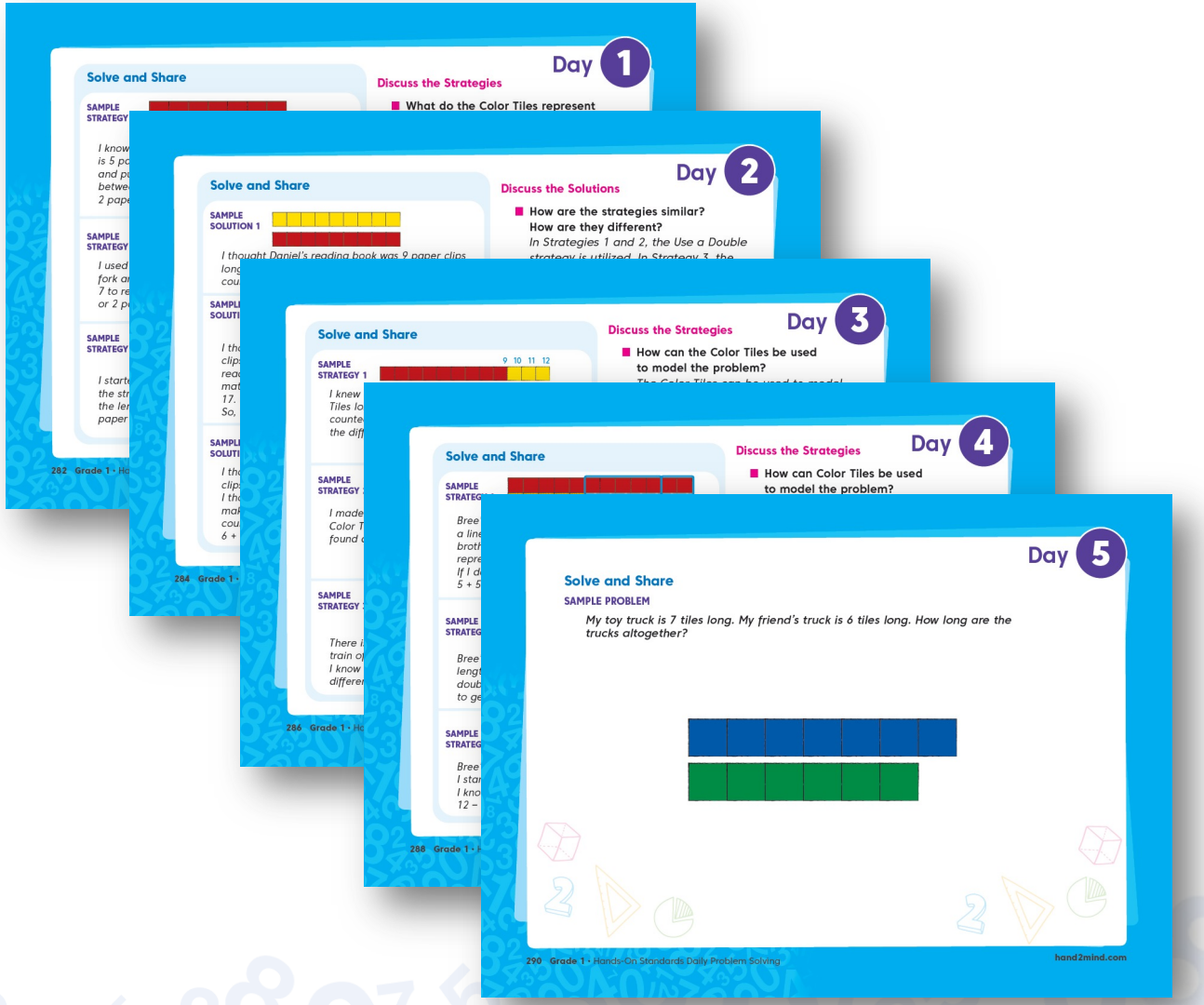
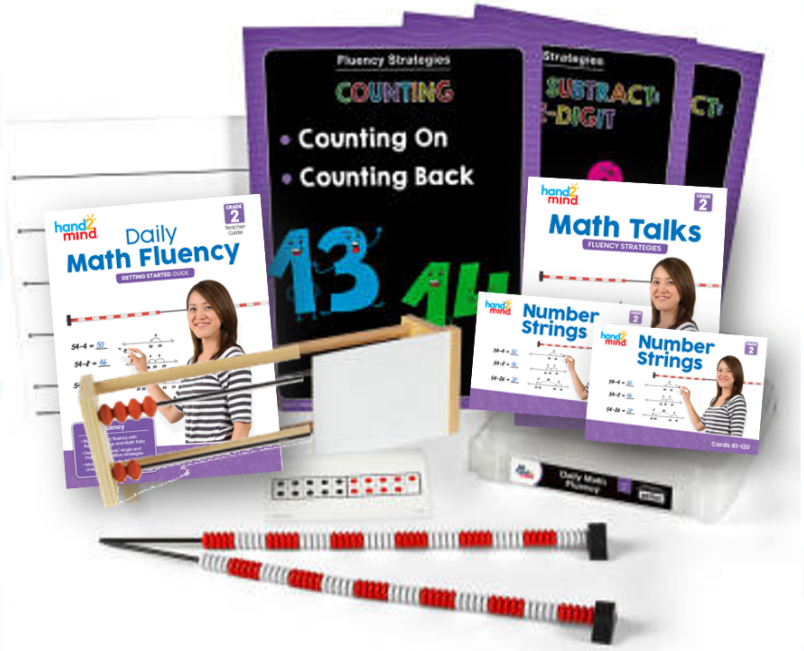
Daily Problem-Solving Cards

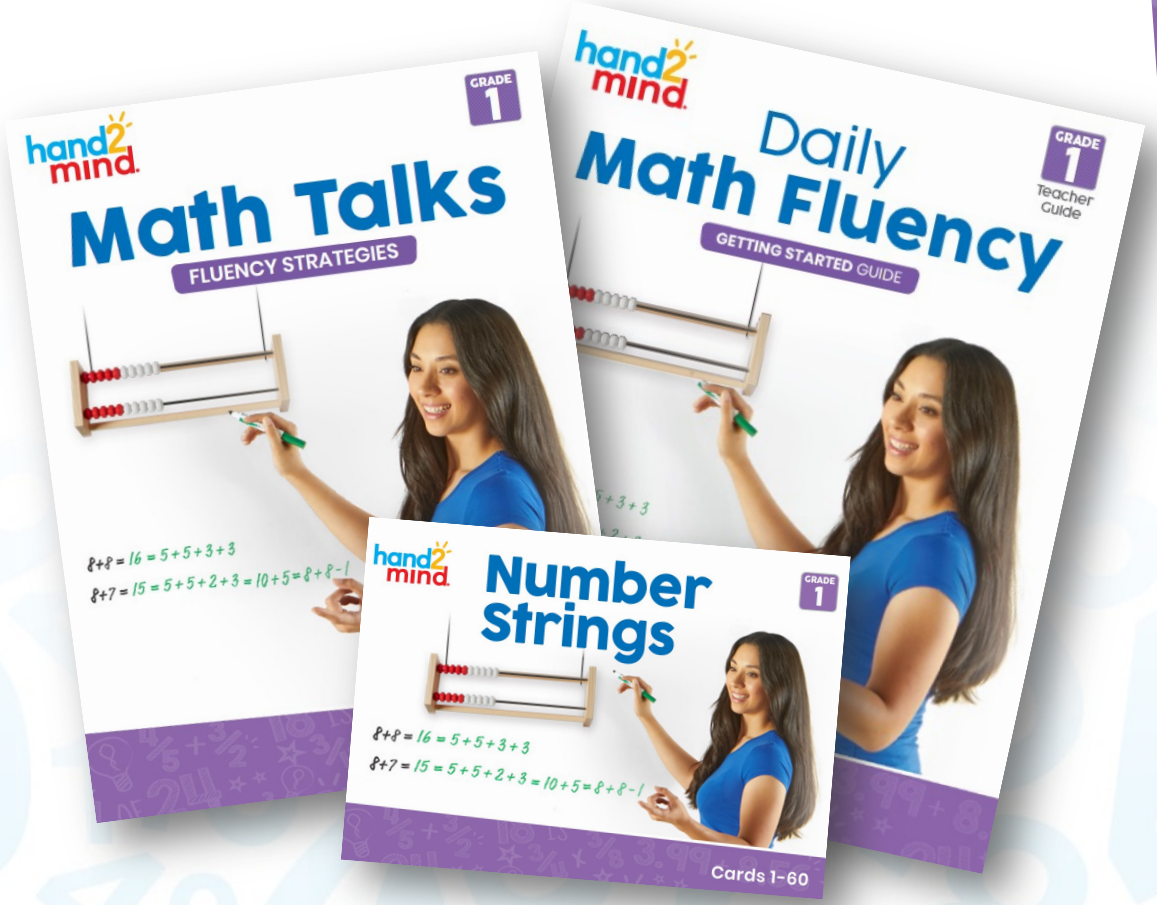


- Video Problem
- Multi-Solution Problem
- Numberless Problem
- Single-Solution Problem
- Create a Problem

Daily Math Fluency Routine

Grades K–5





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TEACHING MATH WITH MANIPULATIVES

10-15 Minutes a Day!

TCA FOR THE CLASSROOM 2020 — TEACHERS' CHOICE AWARD — LEARNING MAGAZINE

60 Math Talks

120 Number Strings