It All Adds Up!

Grade 1

Lesson 120

Relevant Chapters in the *Digi-Block Comprehensive Teacher's Guides:*
   Book I: Unit 3-3, Exploring Addition with Larger Blocks, pages 72 - 76
   Book II: Unit 3-2, Exploring Addition with Larger Blocks, pages 64 - 70

Lesson Overview

Students pack as much as possible to model addition. They repeatedly predict and then combine their blocks with another group's blocks until all the blocks in the classroom have been added together.

Objectives

Thinking Skills:	Students predict sums of 2-digit and 3-digit numbers with and without regrouping.
Mastery Skills:	Students learn to model addition with blocks and to pack as much as possible to find the sum.

Materials

Each group of 2-4 students starts with:
* A collection of single blocks
* Holders
* 1 place value mat with digit cards
  [Note: If there are no mats or digit cards available, consider making some using heavy paper. See illustrations below.]
* 1 activity sheet per student

Have students sit with a partner or in a small group (up to 4 students). Divide up the blocks and holders in your classroom so that each group has a fairly equal amount of single blocks.

Have each group pack their blocks as much as possible and set their digit cards to show how many blocks they have:

Choose two groups to model the activity. Ask the class to look at the collection of blocks on each group's place value mat.
- Have the class predict how many blocks they will have altogether if they combine their blocks onto one mat.
- Write down some of the predictions.
- Have the two groups combine their blocks onto one mat and pack as much as possible.
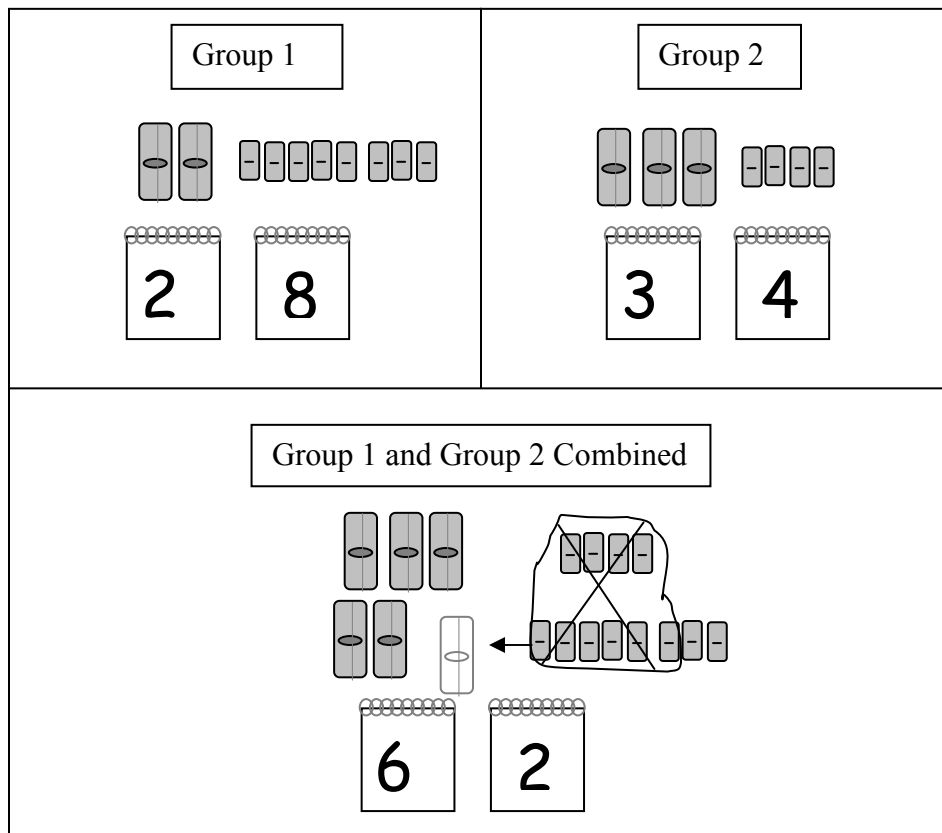
- Discuss what happened. Ask, **Did you make a block-of-100? Did you make a new block-of-10?**
- Have students compare their prediction with the actual sum of the combined blocks.

Continue predicting and combining as a class until all the blocks are packed.

Activity   (5-10 minutes)

Pass out one activity sheet to each student. Have students predict the sum of the two sets of blocks by drawing their predicted totals.

Closure   (10 minutes)

Bring the class together to model the problem with blocks. Have one or two students draw the blocks for the problem. Make sure they indicate how the blocks were packed (regrouped) to form a new block-of-10. Allow students to show <u>their own</u> way to do this regrouping. One way is to draw a loop or a ring around the ten single blocks and to draw an arrow indicating the new block-of-10.

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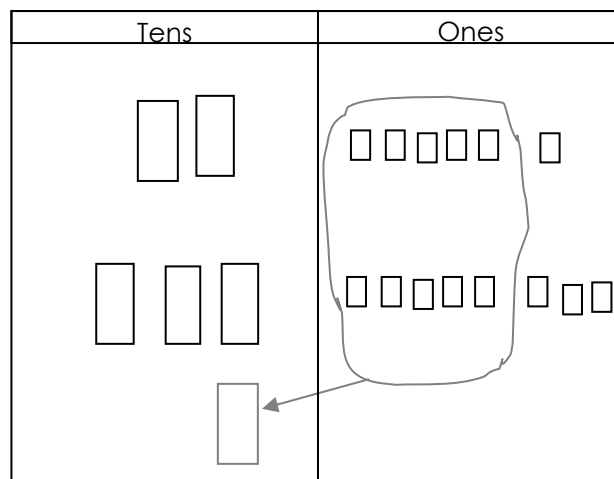
Assessment

As students are solving problems, observe and note:
Do they –
- Make a reasonable prediction? Predict exactly?

- Pack as much as possible when combining their blocks with those of another group?
- Distinguish between problems that need regrouping and those that do not?
- Represent each addend in their drawings?
- Show the regrouping process in their drawings?
- Understand the connection between the blocks and their drawing of the blocks?

Extensions

- ❑ Try a new activity sheet with 3-digit addends. Have students predict and then model the problem with the blocks. Discuss.
- ❑ Have students use blocks to model 2-digit addition word problems.

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Emily has 37 blocks.
Mike has 46 blocks.
How many blocks do they have altogether?

Draw Emily's blocks.	Draw Mike's blocks.

Draw the blocks altogether.

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