

Lesson Title: Bricks, Beams, and Slabs

Grade 2

Content Standards:

2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; record the strategy with a written numerical method (drawings and, when appropriate, equations) and explain the reasoning used. Understand that in adding and subtracting 3-digit numbers, hundreds are added or subtracted from hundreds, tens are added or subtracted from tens, ones are added or subtracted from ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Materials:

Base ten blocks (1's, 10's, and 100's), recording sheet for Building A (The Lucas Tower?) and Building B (The Mansfield Mansion?), 5 step lesson form.

Shared Experience and procedure details: Position students to work in pairs. Each pair of students will either receive an A bag of base ten blocks (2 100's, 7 10's, 3 1's) or a B bag of base ten blocks (5 100's, 4 10's, 8 1's). Ask each pair of students to use all the material in their bag and construct a building with them. Name the 100's as "slabs" the 10's as "beams," and the 1's as "bricks." After they have made the building they should record the materials they used on the recording sheet. Next assign an A pair to work with a B pair, and ask them to combine their 2 buildings and create a new one (Kingwood Castle?) with the following conditions: they cannot use more than 9 slabs, 9 beams, or 9 bricks, but they have to use the same amount of materials. After the building is complete, they should examine it and determine the total amount of materials it took to construct. That total should then be recorded on the recording sheet. Ask the students to use words and pictures to show the first 2 buildings and how they were combined to create a new building.

Possible picture: The students may show some or all of the three buildings in varying degrees of detail. The students may show how they traded bricks for beams or beams for slabs. The students may instead show the building as numbers and the exchanges in number notation.

Feature Talk:

Trade, exchange, bricks, beams, slabs, ones, tens, hundreds, buildings, combine, add, 9, Lucas Tower, Mansfield Mansion, Kingwood Castle

Feature talk sentences: The beams, bricks, and slabs in the Lucas Tower were combined with the beams, bricks, and slabs of the Mansfield Mansion to make the Kingwood Castle.

Symbolic Representation: Symbols needed for these words: beams, slabs, bricks, Lucas Tower, Mansfield Mansion, Kingwood Castle, combined, make

$$273 + 548 = 821$$

Written by: Lucas Grade 2 Planning Team – Otero, Cook, Reinthal – 95/17

What we used to build:

Lucas Tower

Mansfield Mansion

Kingwood Castle

--	--	--