

Teaching Strategies - Base Ten Blocks

Establishing the Thousands place: (whole class activity)

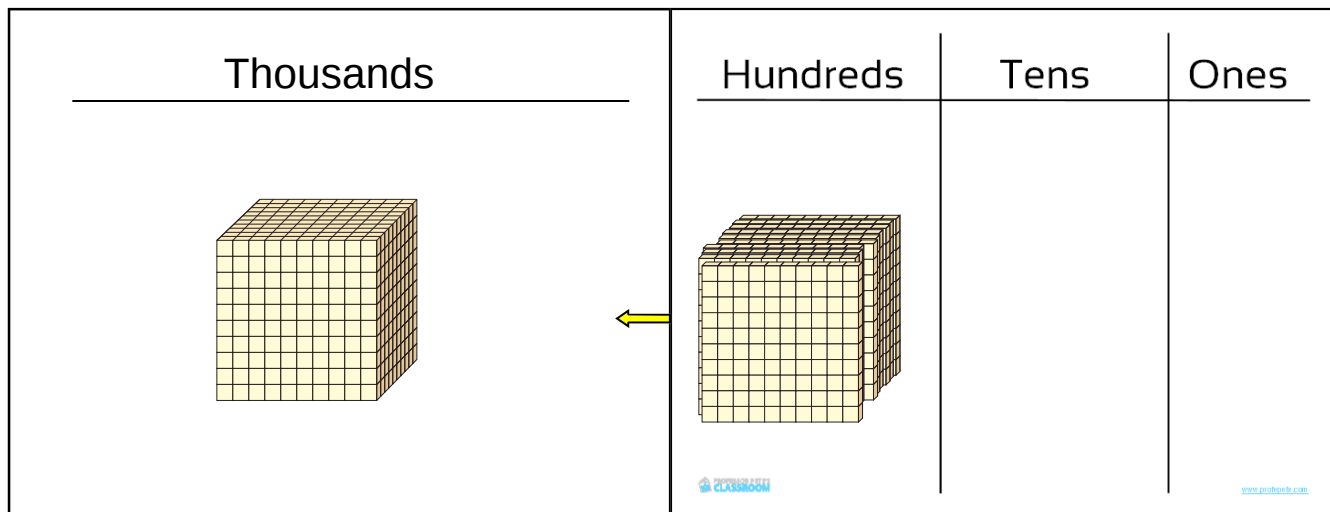
Students need to understand place value to the hundreds place very well AND have used bundling sticks (see Teaching Strategies: Introducing the Thousand) before introducing the thousand block. Whereas adults can easily “see” the thousand ones that make up the thousand block, many students cannot and rather may see it as one block simply called “a thousand”.

Resources needed:

Place value chart
Base ten blocks

- Revise the thousand concept with bundling sticks.
- Now introduce the base ten blocks. Using the Place Value Chart*, revise the understanding that 10 ones to make a ten, and 10 tens make a hundred, swapping 10 blocks for the next size block as you go.
- Ask, “What happens when we get ten hundreds?” Place ten hundreds in the hundreds place. Stack them so that it looks like a thousand block. Move them to the thousands place. Show students a thousand block and compare it to the ten hundreds pile. Establish with students that they are the same in size.

That block is the thousand and it goes in the thousands place.



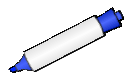
Writing and saying the number:

A number written in the thousands place tells how many thousand blocks there are. (Write on the laminated thousands, hundreds, tens and ones place value chart with whiteboard markers).

Have students count and say the thousands first, then the hundreds, then the tens and lastly the ones, writing symbols as they say the name. Practice saying the number.

Discuss what happens when there are no ones, no tens, or no hundreds. Explain that we write a zero to “hold the place”.

Repeat, creating and writing more numbers.



Extension Activity 1 (whole class activity)

Extend to ten-thousands place:

Once you have 9 thousands, ask, "What will happen when we get 10 thousands?"

Students may say that they need to swap for a new block, a "ten-thousands block". Stack the 10 thousands on top of each other to make a tower. Explain there is no block for this but if there was, this would its size.

This is really impressive for students and very empowering as they begin to picture the values represented by digits as the places extend beyond thousands.

Resources needed:

Place value chart

Base ten blocks - including 10 thousand blocks

Extension Activity 2 (small group activity)

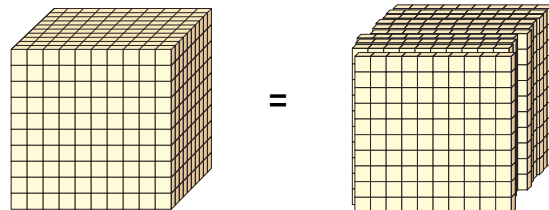
Creating a thousand with various sized blocks:

Resources needed for each group:

1 thousand block

Other base ten blocks

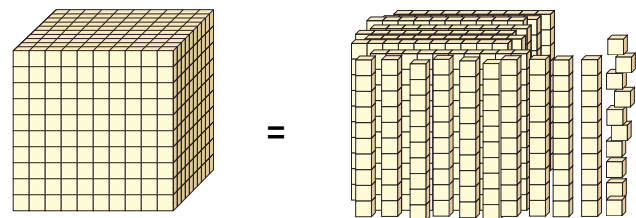
- Ask each group to create a thousand block using any of the other base ten blocks.
- Students may like to start with 10 hundreds. Check and compare the size of the stack with the thousand block.
- Have students write this: $1000 = 10 \text{ hundreds}$
- Now ask for other arrangements such as swapping 1 hundred for 10 tens
- Write $1000 = 9 \text{ hundreds} + 10 \text{ tens}$



- Continue swapping and writing the number sentences

e.g. $1000 = 9 \text{ hundreds} + 9 \text{ tens} + 10 \text{ ones}$

- Make sure students are always comparing the stack of blocks they are creating with the 1 thousand block.



(push them together and stack them)

Thousands

Hundreds

Tens

Ones