



11

Block Races

Topic: Regrouping in addition and subtraction.

In this activity students will:

- * Model addition and subtraction with blocks.
- * Predict when regrouping will occur.
- * Add or subtract 1-digit and 2-digit numbers.
- * Work cooperatively with a partner.

Setup:

- *Student arrangement:* Groups of 4 (two teams of two students)
- *Each team needs:*
 - One to five blocks-of-100 (depending on the game)
 - 1 pair of dice
 - 1 place value mat
 - Several activity sheets (as needed)

Introduction:**Set up a game of Race to 100 for two teams:**

- Have students sit with a partner and pass out the blocks and the place value mats.
- Write a starting number on the activity sheet for everyone to see. (Note: The class may start with any number but, if this is the first time for the students, have them start with a single digit number (i.e., 7).)
- Have students put this number of blocks on their mats and set the digit cards.
- Roll the die. Have a student write the number indicated on the die on the activity sheet.
- Have students make this number with blocks and set it next to their mat.
- Next, ask students to think quietly what will happen when they put the blocks altogether on their mats.
- Have students combine the blocks on their mats. Record the result on the overhead or on the blackboard.
- Repeat. This time ask students to predict if they will “pack a block-of-10” or “pack a block-of-100.”
Note: Students will only need to "pack" when the problem requires regrouping. Because students are carrying out the operation of addition concretely and they must set the digit cards for their answer each time, they will naturally recognize the need to "pack" when it arises.
- Continue until students are ready to play together in groups of 4 (2 teams of 2).

Activity:

- Pass out the activity sheet.
- Have teams play “Race to 100”.
Note: Have students use the dice to form a 2-digit number by selecting one die as the tens number and the other as the ones number.

If teams finish early:

- Have them play again or change the game to Race to 200 or Race to 500.

Closure:

- Have students explain how they know when they will have to regroup.
- Ask students to share addition patterns they discovered when playing.

Assessment:

- Do students play cooperatively with their partners?
- Are students able to predict when they need to regroup?
- Are students accurately modeling and recording the problems?
- Are students reflecting and discovering addition patterns?

Extensions:

- Students can play the race game in reverse using subtraction. Choose a starting number (such as 100, 200, or 500) and have students role and subtract until they reach zero. In this version of the game, students predict when they need to unpack a block-of-100 and a block-of-10. A second activity sheet is provided: “Race from...”

11 Block Races

Names _____

RACE TO _____

	Hundreds	Tens	Ones		
You started with:	<input type="text"/>	<input type="text"/>	<input type="text"/>		
You rolled: +		<input type="text"/>	<input type="text"/>	Predict:	<i>yes!</i>
				Will you pack a block-of-10?	<input type="checkbox"/>
				Will you pack a block-of-100?	<input type="checkbox"/>

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>		
You rolled: +		<input type="text"/>	<input type="text"/>	Predict:	<i>yes!</i>
				Will you pack a block-of-10?	<input type="checkbox"/>
				Will you pack a block-of-100?	<input type="checkbox"/>

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>		
You rolled: +		<input type="text"/>	<input type="text"/>	Predict:	<i>yes!</i>
				Will you pack a block-of-10?	<input type="checkbox"/>
				Will you pack a block-of-100?	<input type="checkbox"/>

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>		
You rolled: +		<input type="text"/>	<input type="text"/>	Predict:	<i>yes!</i>
				Will you pack a block-of-10?	<input type="checkbox"/>
				Will you pack a block-of-100?	<input type="checkbox"/>

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>		
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Keep recording on the back of the paper until someone wins! →

Names _____

RACE FROM _____

	Hundreds	Tens	Ones
You started with:	<input type="text"/>	<input type="text"/>	<input type="text"/>

You rolled: -	<input type="text"/>	<input type="text"/>
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Predict: *yes!*

Will you unpack a block-of-10?

Will you unpack a block-of-100?

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>
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You rolled: -	<input type="text"/>	<input type="text"/>
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Predict: *yes!*

Will you unpack a block-of-10?

Will you unpack a block-of-100?

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>
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You rolled: -	<input type="text"/>	<input type="text"/>
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Predict: *yes!*

Will you unpack a block-of-10?

Will you unpack a block-of-100?

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>
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You rolled: -	<input type="text"/>	<input type="text"/>
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Predict: *yes!*

Will you unpack a block-of-10?

Will you unpack a block-of-100?

Now you have:	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Keep recording on the back of the paper until someone wins! →