

# Math Empowers

## PARCC Performance Assessment For Kindergarten?

This is a good thing...really.

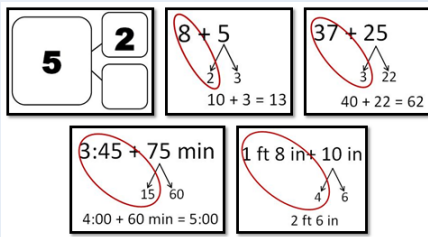
There are 16 ELA and 16 Math performance tasks (Kindergarten – Gr.2) which can be accessed at <https://prc.parcconline.org/>. Teachers must register and log in to view the items. Click on the **Instructional Tools** tab, then **Formative Instructional Tools**, to view the table that displays the tasks. The tasks are designed to engage students in learning while you observe how students demonstrate proficiencies with respect to the standards embedded in the tasks. Your observations can be easily recorded using the formative tools (e.g., checklists) provided. This information can then be used to inform instructional decisions.

## Composing & Decomposing Numbers

*"If basic facts are to be foundational, they must be based on an understanding of the composition and decomposition of numbers"*

-Kathy Richardson

Considering values in terms of parts and wholes is a critical part of developing number sense and fluency. Consider the following examples showing how the ability to fluently decompose and compose numbers allows for *flexible* computation... not only with basic facts, but soon with multi-digit computation, fractions and measurement concepts.



Many students leave kindergarten flexibly composing and decomposing most numbers to 10, yet many do not. Children often develop automaticity with 3, 4, 5 and then 10 before knowing all the ways of making 6, 7 and 8. A [hiding assessment](#) can identify exactly what numbers a child can quickly and confidently recognize in terms of wholes and parts. When a student needs to count or use fingers to determine a missing part, that is their number.

There are a variety of activities kindergarteners can work with such as [Rekenreks](#), [number bracelets](#), [dot cards](#), and [shake and spill](#) (*On & Off*) games to differentiate composing and decomposing practice. Attached are some "Shake and Spill" activities, which are easily differentiated by giving each child "their" number of counters. Some could be working with 6 counters, others 9, and perhaps a few have 15 counters to shake and spill onto their picture and quickly identify *how many are on* and *how many are off* the picture.

\*Click here for a [hiding assessment](#) video!

## "Recreational Mathematics-Only For Fun?"

In the January 2015 Journal of Humanistic Mathematics, Lovisa Sumpter writes about the importance that recreational math be used to awaken mathematics-related "joy," "satisfaction," "excitement" and "curiosity" in students. She notes that educational policies of several countries (including China, India, Finland, Sweden, England, Singapore and Japan) explicitly call for this emotional side of the subject. In contrast, the Common Core in the United States regards mathematics only as a tool. **For more about the benefits of students having fun with math, read the full article...**

<http://scholarship.claremont.edu/cgi/viewcontent.cgi?article=1232&context=ihm>

**Some suggested fun....SUBITIZE TREE** this app lets you



choose a speed, level, and card type. Players must "save the animals" by quickly identifying an amount visually before the doors close. Set all the animals free and win the game!



This ABCYA game [Math Lines](#) allows students to practice composing any number from 5 to 12.