

## Collecting, Organizing & Analyzing Data

Collecting and organizing data has become an integral part of teachers' responsibilities. Some schools have integrated systems with software packages that analyze results. Other schools will ask instructors to gather data and calculate trends. While there are many variations of progress monitoring, research reveals some common best-practices.

### How Often Should We Collect Data?

The IRIS Center at Vanderbilt recommends the following assessment schedule for students:

- Tier 1 — In general, at least once a month; every week or every other week for students identified as struggling by the universal screening
- Tier 2 — At least once per week
- Tier 3 — Once or twice per week

### What Should We Measure?

One common type of progress monitoring is curriculum-based measurements (CBM) which utilize probes. CBMs are useful because:



- Each probe takes only a few minutes to administer and score and may be given to groups of students.
- Each probe includes sample items from every skill taught across the academic year.
- Probes are standardized to produce reliable and valid results.
- Scores reflect even the smallest changes in student improvement.
- Research shows that CBM scores are highly correlated to those on standardized tests.

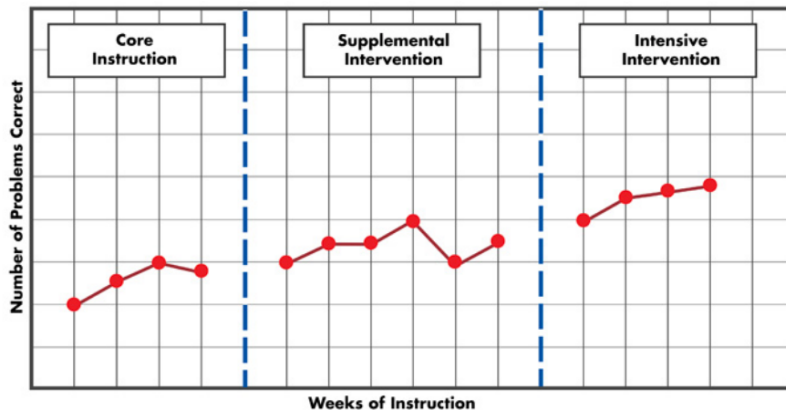
Probes are timed, and students complete as many problems or questions as possible in the allotted period. Individual administration is required when early numeracy skills like oral counting or identifying numbers are being assessed. In the case of older students, group administration typically ranges from two to ten minutes, depending on the grade level and the type of measure.

It's important to note that these tools measure progress on every skill and concept presented across the entire school year, so the first scores will likely be low since the concepts have not been taught. Students' scores will improve as they master knowledge from the curriculum throughout the year.

SELF highly recommends using graphical representations of data; we never know who at the table is a visual learner rather than an auditory processor. If your school does not have a subscription to an assessment software product, the teacher or the student can graph the data on paper or by using a graphing program or application. SELF recommends including students whenever possible. When they see their academic growth, students begin to recognize the relationship between their efforts and progress.

### What Should Our Graphs Look Like?

The following is a sample from the IRIS Center at Vanderbilt University.



The vertical axis (y) represents the range of possible scores a student can obtain on the progress-monitoring probe (e.g., the number of problems correct). The horizontal axis (x) represents the number of weeks of instruction.

For students receiving supplemental or intensive intervention, scores should continue to be plotted on their existing progress monitoring graphs. The instructor should draw a dotted vertical line to indicate when a new intervention begins (e.g., changing from supplemental or intensive intervention). This will allow school personnel to compare progress made during the different tiers of intervention.

Coming to all meetings surrounding students with a graphical representation of their academic progress will help everyone at the table: teachers, students, families, social workers, counselors and administrators obtain a fuller and more nuanced picture of the student. This, in turn, can only help us as we design appropriate supports so all students can reach their full potential.