Q. What is Scientifically Based Research?

A. *The federal perspective on scientifically based research*

The No Child Left Behind (NCLB) Act of 2001 encourages and, in some cases such as Reading First, requires the use of instruction based on scientific research. The emphasis on scientifically based research supports the consistent use of instructional **methods that have been proven effective.**

To meet the NCLB definition of "scientifically based," research must:

- employ systematic, empirical methods that **draw on observation or experiment**;
- **involve rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions**;
- rely on measurements or observational methods that provide valid data across evaluators and observers, and across multiple measurements and observations; and
- **be accepted by a peer-reviewed journal or approved by a panel of independent experts** through a comparatively rigorous, objective, and scientific review.

Recognizing Effective Research

Teachers can use a simple set of questions to distinguish between research that confirms the effectiveness of an instructional practice and research that does not:

- Has the study been published in a peer-reviewed journal or approved by a panel of independent experts?
- Have the results of the study been replicated by other scientists?
- **Is there consensus in the research community that the study's findings are supported by a critical mass of additional studies?**

Q. Is evidence-based the same as scientifically based?

A. Today, the term “evidence-based” is part of the vernacular of prevention science. In general, the term “evidence-based” and similar terms—“research-based,” “science-based,” “model” programs, and “effective” programs—are used interchangeably to describe programs that have demonstrated empirical success in preventing problem behaviors.