

Math Topic Area Structure Frequently Asked Questions

How did the WWC review math interventions from 2006–2015?

The WWC began reviewing math interventions in the elementary and middle grades as part of its initial set of topics, with the first math intervention reports published in 2006. At that time, Elementary School Math generally covered grades K–5, while Middle School Math generally covered grades 6–9. Not all math programs or research studies divided student grades in this way, so more specific rules were used (and defined in the review protocols) to determine how to review studies when there was an overlap of the study or intervention sample across the Elementary and Middle School grade levels. In 2010, the WWC began reviewing High School Math interventions. At that time, Middle School Math was changed to generally cover grades 6–8, but potentially also students in grades 5 or 9, depending on the study. Again, a set of rules defined in the review protocols determined which of the three topic area protocols would be used to review a study when it included students in multiple areas. From 2010–2013, all aspects of the WWC systematic review process—including protocol, prioritization, literature searches, screening, and reports—were completed separately for the three math topic areas. Depending on the grade span of their coverage, interventions may have had WWC intervention reports in one, two, or all three of the math review areas (Elementary, Middle, and/or High School Math).

How did the WWC review of math interventions change in 2015?

In June 2015, the WWC restructured its math reviews into two areas: Primary Math and Secondary Math. Primary Math includes courses and interventions in which math is presented through multi-topic materials and curricula, typically used in grades K–8. Secondary Math includes interventions that are organized by math content area or course (e.g., algebra, geometry, and calculus), typically taught in grades 9–12. In addition, Secondary Mathematics includes interventions that integrate high school math courses.

Why did the WWC make a change in how math interventions are reviewed?

All WWC topic area review teams include content experts, methodological experts, and teams of WWC certified reviewers. As part of the prioritization process for identifying interventions for review, the math review team became concerned that having three topic areas for reviewing math interventions was not the best way of organizing the WWC summaries of existing research in math. They were concerned that:

- (1) Having multiple intervention reports across grades did not provide information in a direct way. For example, a district considering *Saxon Math* as its core curriculum would need to know to look for each of the three intervention reports and determine which report's evidence was most relevant.
- (2) The rules used to assign studies to review areas (as defined by the protocols) caused some intervention reports to be published in one of the three topic areas when readers may have expected it elsewhere. For example, between 2006 and 2013, algebra interventions were primarily reviewed under the Middle School Math topic area, but many districts teach algebra primarily in high school.

- (3) Many High School Math reports aggregated findings across courses, masking variation in effectiveness. For example, a WWC review might find that an intervention’s algebra course is effective, its geometry course is ineffective, and there is insufficient rigorous research to reach any conclusions as to the effectiveness of the trigonometry component. The reports published under the High School Math area aggregated this information to a single effectiveness rating for the entire intervention and did not report the course-level nuances.

To address these concerns, the WWC established a new structure for reviewing math interventions in 2015, so that WWC reports will be organized in a way that is more relevant for decision-makers.

How does the 2015 reorganization from three math topic areas to two math topic areas affect existing and future math intervention reports?

Starting in 2015, all new WWC reports on math interventions will be reviewed under either the Primary or Secondary Math topic areas. There are two main changes to intervention reports that result from this reorganization: (1) the definitions of “updated” and “new” math intervention reports, and (2) how high school courses are treated in intervention reports and Find What Works.

First, existing reports reviewed under Elementary, Middle, and High School Math topic areas will continue to be available on the WWC site until they are updated, which occurs as a regular part of the WWC process. When intervention reports previously released under Elementary, Middle, or High School Math are updated, the review team may determine that the research evidence should be regrouped to produce a report under the Primary or Secondary Math topic area. During this process, if the review team uses information from two or more existing intervention reports to produce a single Primary or Secondary Math intervention report, the report will be considered **new**. For example, the review team for a Secondary Math intervention report on an algebra curriculum may draw from the research evidence identified in the existing Middle and High School Math intervention reports on that algebra curriculum. However, if the review team uses information from only one existing intervention report, the report will be considered an **update**, which is consistent with other WWC topic area reviews.

The second change to intervention reports is that the research, findings, and improvement indexes for distinct high school courses (e.g., algebra, geometry, and calculus) within an intervention will be reported separately, since secondary courses are often purchased and implemented individually. The intervention report will still have a Report Summary web page with a link to view or download the single intervention report. In addition, the Report Summary page will have links to web pages for each course, which describe the findings for each individual course. The findings will appear separately by course in Find What Works.