A Definition of Alignment
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Suppose you’re a middle school science curriculum specialist, and your district has interpreted state standards and benchmarks to include an objective to be learned in middle school general science on photosynthesis. To begin the process of curriculum planning, you start thumbing through textbooks, and you quickly discover (no surprise) that every book you have that touches on plant biology includes some kind of discussion on photosynthesis! Does that mean that all of these books are aligned to your curriculum standard? Does that mean that all of the books would be of use in teaching photosynthesis in your district’s middle school science curriculum?

Of course not. To make an intelligent choice of the best book(s) for your teachers and students to use, it’s not enough to know that the topic of photosynthesis is addressed somehow in a book. You also need to obtain answers to questions such as:

- Is the depth of the discussion of photosynthesis appropriate for the objective?
- Is the relative emphasis on photosynthesis appropriate for our scope and sequence?
- Do the learners do activities that use the concepts and principles of photosynthesis in a way that corresponds to the objective?
- Does the level of difficulty reflect the intent of the objective?

These are all curriculum alignment questions. They are important, but not sufficient, to develop a final curriculum plan. To make a final decision on what book(s) to incorporate into daily lesson plans and assignments, you also need to ask practical questions such as:

- Are the books appropriate, interesting and contextually meaningful for our students?
- Are the books accessible to our special needs students?
- Where in the sequence of instruction does photosynthesis, and this book, belong?

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- Do we have enough of the books, or can we buy them?
- Will our parents accept the book?
- Can our teachers figure out how to use the book?

Authors on curriculum alignment seem generally to agree that the alignment questions used in the example are the key ones (La Marca 2001; Rothman, Slattery et al. 2002) Using the CCSSO paper’s terminology, a sound alignment requires:

**Content Match**: topical coverage, or comprehensiveness and level of detail  
**Depth Match**: level of difficulty, or cognitive complexity  
**Emphasis Match**: the relative length of the discussion (vs. other topics or prerequisite review)  
**Performance Match**: the type of performance required by the objective. More specifically, this describes the type of cognitive activity required as well as the context of performance.

These alignment considerations play out differently when aligning tests, materials, and instructional activities. For example, in aligning a test, depth match and performance match will guide selection of test question format and activity type. Emphasis match will help determine the number of items to use across various content topics. When aligning learning materials, content and depth match are important for explanations, and depth and performance match are important for interactions and activities. Emphasis match is only a secondary issue because it’s often possible to make selective assignments if the emphasis is too great. It is usually addressed in curriculum planning rather than alignment.

**References**
