How to Design A K-12 Benchmarks Strand

First, identify a topic.
This can be done by choosing a 12th-grade benchmark or a paragraph from *Science for All Americans (SFAA)*. Alternatively, one can select a topic from the "sequence of topics" that follows the section entry in the *SFAA* index.

Second, identify benchmarks that contribute to the understanding of the topic.
There are three sources of such K-12 benchmarks in *Benchmarks for Science Literacy*:
* benchmarks from the same section.
* benchmarks from other sections in the same chapter.
* benchmarks from other chapters.

Because any section includes several topics, one will have to decide which benchmarks in a section are relevant to the chosen topic. Relevant benchmarks from other chapters can be found by using the Also See box for the section. The Also See box references other chapters and chapter sections where benchmarks conceptually related to the section can be found. Where the connection is not obvious, a brief explanation is given in parentheses. As with the list of benchmarks in the same section or chapter, not all references in the Also See box will be relevant to the topic selected.

Benchmarks essays and Chapter 15: The Research Base are particularly helpful in identifying benchmarks that at first seem unrelated to the topic of the strand or to later grade benchmarks, but in fact are needed for some later understanding in the strand.

Third, identify the connections among relevant benchmarks.
This can be done by attaching them to Post-its or note cards and drawing in arrows to show conceptual connections. Cards of different colors can be used to distinguish different chapters. This method has the advantage of illustrating the interconnections among ideas in different chapters when the strand map is finished.

Alternatively, relevant benchmarks can be identified and assembled into a strand map using *Benchmarks on Disk* (see About Strands).