



Spider Silk

What A Year! for September 2012

Have you ever had any clothing made of silk? The thread for that fabric came from silk moths (also called silk worms).

On the other hand, you've probably *never* had clothing made from spider silk, although spiders and their webs are all around us. Spider silk has valuable characteristics that would make it just right for lots of medical and non-medical applications.

This month's **What A Year!** story looks at the wonderful properties of spider silk, and the ways that scientists such as Dr. Randy Lewis at Utah State University are producing spider silk and manipulating its properties.

To get the entire story, go to [What A Year!](#) and click on the **09.12** icon.

To Think About:

- What are some other uses for spider silk and what characteristics would silk need to have for those uses? For example, in the story we read that spider silk used for artificial ligaments needs to be flexible but not strong.
- Are there other animals that produce things that we can use? Or could we genetically engineer something they already make to make it useful? Look beyond your kitchen and your clothes closet.
- The September story includes a Chinese old folk tale/myth about Empress Leizu's discovery of silk. Around the world there are lots of folk tales that explain "how things came to be". Sometimes it's the origin of a geological feature such as a mountain, cave or a valley; sometimes an astronomical feature such as a planet or constellation. Can you discover a folk tale that explains a custom, a building or a social belief?
- Have you heard the statement, "You're never more than 6 feet from a spider"? What does it mean? Where does it apply? And most important, is it true?
- Can you think of products or materials that were once produced by animals but are now synthetic (that is, made by people in laboratories and factories)? [Hint: how is flu vaccine produced? How was insulin for people with diabetes produced?]

