

Santa Fe Science Café For Young Thinkers

“Nature’s Architectural Design of Materials”

Jennifer Martinez
Los Alamos National Laboratory

Wednesday, April 22

6 – 7:30 PM

*Georgia O’Keeffe Museum Education Annex
123 Grant Avenue, Santa Fe*

In Nature structurally intricate and robust materials are made by the balanced addition of inorganic and organic materials. One example is the conch seashell. Largely made of structurally weak calcium crystals, the conch shell resists fracture by incorporating organized “plywood”-like panels of calcium surrounded by proteins. These structures are organized into stacks, then columns, and finally alternating layers of columns. The conch shell is only one example of an amazing and intricate natural material – Nature also makes tiny magnets, glass houses, camouflage and cloaking materials, and polarized sunglass-like materials with precision and beauty.

We will look at a series of pictures of natural materials; discuss how they are built, what they are used for naturally, and how scientists from vastly different fields contribute to understanding and mimicking these materials.

The Café is sponsored by the Santa Fe Alliance for Science, the Santa Fe Institute, the Santa Fe Public Schools, the Georgia O’Keeffe Museum and the New Mexico Public Education Department.

Admission is Free. Youth (ages 13-19) seating a priority. Light refreshments will be served.

Dr. Martinez is a scientist at the Los Alamos National Laboratory and an amateur naturalist.

Please call 603-7468 if you’d like more information.