WORKSHEET
Science on Saturday

Biomolecular Action Movies: Flash Imaging with X-ray Lasers

Video Link:
Flash Imaging with X-ray Lasers

Presenters:
Matthias Frank, Megan Shelby – LLNL Scientists
Erin M. McKay - Biology Teacher – Tracy High School

Student Lecture Notes:

1. Before you watch the presentation …
   a. Why do you think proteins are important to life?

   b. What do you know about X-rays?

2. Explain the relationship between Structure and Function.

3. Understanding Scale

1,000 meters	= kilometer (km)
1 m	= meter
1/100 m	= centimeter (cm)
1/1,000 m	= _____(mm)
1/1,000,000 m	= _____ (μm)
1/1,000,000 m	= _____ (nm)

4. Describe an example of how structure reveals a proteins function

5. What are the limits of an optical microscope?

6. X-ray imaging: Describe

How Used:	Problem(s)	Crazy idea

7. SLAC: what surprised you and/ or impressed you?

8. What is meant by Biomolecular action movies: Flash imaging with X-ray Lasers?

9. Which example did you find more interesting Cathepsin B or Riboswitch? Why?

10. What research facility do you live near?