

**WORKSHEET**  
Science on Saturday

**Biomedical Accelerator Mass Spectrometry:  
Improving Human Health One Atom at a Time**

**Video Link:**

[Improving Human Health One Atom at a Time](#)

**Presenters:**

Michael Malfatti, Ph. D. – LLNL Scientist

Katherine Huang - Science Teacher – Dougherty Valley High School

**Student Lecture Notes**

1. List examples of chemicals we exposed to.
2. What is Accelerator Mass Spectrometry? (AMS)
3. How are isotopes and Half- life related?
4. What is the half-life of Carbon?\_\_\_\_\_
5. AMS was originally used for \_\_\_\_\_.
6. AMS can detect 1- C14 atom per \_\_\_\_\_ atoms.
7. How does the AMS work? LLNL operates \_\_\_\_ AMS systems.

What is AMS Good for?		
Low Dose toxicology	Drug development	Personalized medicine
How humans different from rodents?	What are the benefits of micro dosing?	Are responses to drugs the same in all people? How can AMS help in cancer therapy and treatment options?