

**Teachers answers**  
**Ready, Aim, Mutate**

**Part I**

1. ALARA stands for As Low As Reasonably Achievable. By increasing the distance from the radioactive source, decreasing the time spent around the radioactive source, and using adequate shielding, an astronaut can decrease their radiation exposure.
2. Each group will describe their results. Make sure to explain the relationships between:
  - A. Time: only squirting the gun one time should only show one spot on the DNA.
  - B. Distance: the further the distance between the DNA and the shooter, the harder it is to hit the DNA target.
  - C. Shielding: the screen acted as a shield. The screen deflected some of the paint, decreasing the radiation exposure to the DNA.
3. Astronauts could use a space weather map to track solar storms, predict when solar flares may occur to avoid being in space at that time, find more ways to effectively use shielding, and keep time at the ISS at a minimum.