Lesson 8. Nuclear equations (page 1 of 1)

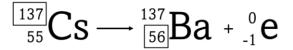
8.1 Changing elements

- A radioactive decay causes two events the nucleus of an atom changes and an alpha beta or gamma is given off
- Alpha and beta decay cause the element to change because the number of protons changes
- Alpha decay causes the nucleus to lose two protons (and two neutrons)
- Beta decay causes the nucleus to gain a proton (because a neutron changes into a proton)
- Gamma does not cause a change in element

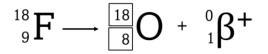
8.2 Effects of radiation on living things

- How to balance nuclear equations
- Total mass number must be the same on each side of the equation
- Total proton number must be the same on each side of the equation

Beta-minus decay answer



Beta-plus decay answer



Polonium-210 nucleus

210

Lead-206 nucleus

 $^{206}_{82}$ Pb + $^{4}_{2}\alpha$

Alpha

particle