1. This figure has two halves. On the left, we have a schematic depicting how different amounts of Radium will sorb to the surface of different minerals commonly found in many soils. The figure depicts sorption to iron (hydr)oxides (think of rust colored soils found commonly in the tropics), iron sulfides (such as pyrite), and clays. On the right, we show simulations of surface binding of Radium to ferrihydrite and sodium montmorillonite, which was also done in this work. These figures together show that variations in chemistry and soil minerals will result in differences in Radium retention.
2. Radium is a naturally occurring radioactive material that is not usually concentrated enough to be dangerous. However, human activities such as hydraulic fracturing can bring hazardous amounts of Radium to the surface, where it poses a health risk. The results of this data are important because it has helped us develop better understanding of how the composition of a soil (in particular, what minerals), will impact the fate of radium in groundwater, improving our ability to predict where Ra will go if released.

Answer 2 questions:

1. What does the figure show?
2. What is the importance of this data?

You have 30-60 sec