The James Webb Space Telescope, planned for launch in October 2018, will be the most powerful space telescope ever built. It will open new territories of astronomy, with observations ranging from the first stars, galaxies, and black holes, to the growth of galaxies, to the formation of stars and planetary systems, to the evolution of planetary systems and the conditions for life here on Earth, and perhaps elsewhere. I will show how we have learned about the history of the universe, how the Big Bang is a completely misleading name for the infinite expanding universe, and what new telescopes are being built now. I will illustrate with simulations of the formation of galaxies from the primordial material, and the possible evolution of the solar system through planetary orbit migration. The JWST telescope mirror has been assembled and the instrument module has been completely tested. After more tests at Goddard, the telescope/instrument combination will travel to Houston for cryo-vacuum tests in Chamber A in 2017. I will show the design of the observatory and discuss the opportunities for future observers to prepare to use it.