HS-ESS1-f – Construct explanations from data for the formation of the solar system based on space exploration and astronomical evidence of the composition, structure, and motions of solar system bodies.

Engineering accomplishments in space have helped to raise and answer questions about our solar system. Evidence that our solar system formed from a disk of dust and gas drawn together by gravity includes: 1) the similarity between the direction of rotation of the sun, the orbits of the planets, and the directions of the rotations of planets, 2) patterns of impact craters on planetary surfaces, 3) the composition of meteorites, some of which show the make-up of the early solar system, and 4) the distribution of matter in the solar system with metal/rock-rich objects close to the sun and ice-rich objects far from the sun.

Details of the sequence of the evolution of the solar system, such as the timing of the late-heavy bombardment period, are not assessed.