Modern Figures Activities

Let’s Go to Mars: Calculating Launch Windows
Topic: Math Grades: 9-12
NGSS: MS-ESS-1-2, MS-ESS-2-4
CCSS: Math.Content.HSG.GPE.A.3, Math.Content.HSG.C.A
Students use planetary-position data and algebraic computations to determine a launch opportunity to Mars.
http://go.nasa.gov/2glXzF1

What is an Orbit?
Topic: Science Grades: 4-8
NGSS: MS-ESS-1-2
CCSS: ELA-Literacy.RST.6-8
Students learn about the shape of an orbit, the effect of gravity on an orbit, and where satellites orbit the Earth.
http://go.nasa.gov/2glUBRn

Rover Races
Topics: Engineering/Programming Grades: 3-12
NGSS: 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4
CCSS: ELA-Literacy.3.1 - 11.12.1
Students simulate operating a rover on Mars by providing directions to navigate the Martian terrain.
http://go.nasa.gov/2glX3qX

NASA Langley & Human Computers
Topic: History Grades: 9-12
Students explore the social impact of human computers at NASA Langley during the 20th century.
http://go.nasa.gov/2glXEsI

Gravity: It’s What Keeps Us Together
Topic: Math Grades: 6-12
NGSS: MS-ESS-1-2, MS-ESS-2-4 CCSS: Math.Content.HSG.GPE.A.3, Math.Content.HSG.C.A
Students solve 10 gravity-related problems using the distance, rate and time formula; evaluating functions; analyzing graphs; and using mathematical modeling.
http://go.nasa.gov/2gLXCRN
Students learn about the phases of the moon by acting them out. In 30 minutes, they will act out one complete, 30-day, moon cycle.

http://go.nasa.gov/2glV2v3

Students use their knowledge of gravity, motion, and forces to design and build a shock-absorbing system.

http://go.nasa.gov/2glX03j

Students review a series of articles and resources related to Katherine Johnson and the Human Computers.

http://go.nasa.gov/2glYoOG

Discover videos, historical references, and STEM materials through the links below.

Each title includes the appropriate topic and grade level to inspire and educate students.