

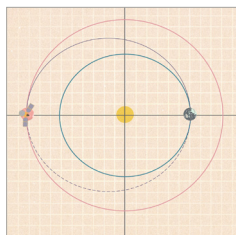
Modern Figures Toolkit



NASA EDUCATION

Modern Figures Activities

Locate lesson plans and articles by topic and grade level related to Katherine Johnson and her fellow Human Computers below.



Let's Go to Mars: Calculating Launch Windows

Topic: Math Grades: 9-12

NGSS: HS-ESS1-4

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/2glXzFi>



What is an Orbit?

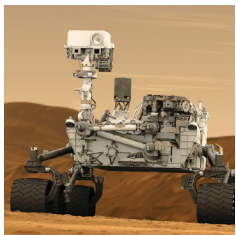
Topic: Science Grades: 4-8

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

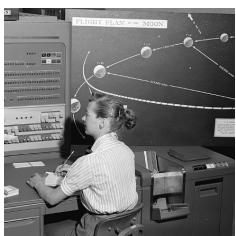
Topics: Engineering/Programming Grades: 3-12

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>



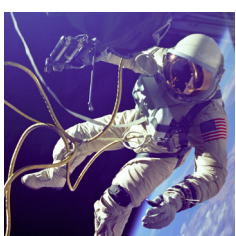
NASA Langley & Human Computers

Topic: History Grades: 9-12

CCSS: ELA-Literacy.RH.9-12.1, ELA-Literacy.RH.9-10.3, ELA-Literacy.RH.11-12.7, ELA-Literacy.RH.11-12.9

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>



Moon Phases

Topic: Science Grades: 1-6
NGSS: MS-ESS-1, 1-ESS1-1

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/2g1V2v3>



Touchdown

Topics: Engineering/Programming Grades: 3-8
NGSS: MS-ETS1-1, MS-PS3-1, 3-5-ETS1-2
CCSS: ELA-Literacy 3.1 - 11.12.1

Students use their knowledge of gravity, motion, and forces to design and build a shock-absorbing system.
<http://go.nasa.gov/2g1X03j>



Modern Figures

Topic: History Grades: 3-12
CCSS: ELA-Literacy.RH.6-12.1, ELA-Literacy.RH.6-12.2

Students review a series of articles and resources related to Katherine Johnson and the Human Computers.
<http://go.nasa.gov/2g1Yo0G>

Modern Figures Resources

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.

Pi in the Sky

Topic: Math Grades: 4-12
<http://go.nasa.gov/2g1Vrxj>

The Moon and More

Topic: Careers Grades: K-12
<http://go.nasa.gov/2g1YZjO>

When Computers Were Human

Topic: History Grades: 6-8
<http://go.nasa.gov/2g1YEgC>

She was a Computer When Computers Wore Skirts

Topic: History Grades: 3-12
<http://go.nasa.gov/2g1VV6B>

The Science: Orbital Mechanics

Topic: Science Grades: 6-12
<http://go.nasa.gov/2g1Y7LF>

Human Computers

Topic: History Grades: 6-12
<http://go.nasa.gov/2g1Vnhf>

Addition Blastoff


Topic: Math Grades: 1-3
<http://go.nasa.gov/2g1ZCcp>

Aspire to Inspire

Topic: Careers Grades: K-12
<http://go.nasa.gov/2g1VwBn>

STEM

Is the Future—How Will You Get Involved?

Inspire  Engage, Educate, Employ.