NASA's Commercial Crew Program Virtual Reality 360 Tour

SpaceX Crew Dragon

Video link: https://youtu.be/Rc5D2Jb7qXQ

Description

In Part 2 of NASA's Commercial Crew Program (CCP) Virtual Reality (VR) 360 Tour, a NASA communications specialist takes students on a tour of SpaceX Headquarters in Hawthorne, California. This immersive VR experience exhibits the design and manufacturing of the SpaceX Crew Dragon.

Next Gen STEM and the Commercial Crew Program

The CCP (https://nasa.gov/exploration/commercial/crew/index.html) plays an integral role in NASA's deep space exploration goals as it works with commercial partners to launch astronauts to the International Space Station from U.S. soil on American-built rockets and spacecraft.

NASA's Next Gen STEM CCP project is introducing immersive technology into classrooms. The 360° videos and VR field trips take students along on a journey into the heart of the CCP without leaving the classroom. The virtual field trips to NASA centers and the Boeing and SpaceX facilities showcase where next-generation, human-rated spacecraft and rockets are being developed and tested.

Follow this link to access NASA's CCP virtual field trips:
https://www.youtube.com/playlist?list=PLTUZypZ67cdumL1V4yFWlfoxwjb3rDCzb

Crew Orbital Docking Simulation (CODing Sim)

In this activity, students use a programming language to create an interactive simulation of a spacecraft docking to the International Space Station. The Crew Orbital Docking Simulation (CODing Sim) engages students in computational thinking, problem solving, and real-world applications of mathematics. The activity guide includes recommendations for both beginner-level and advanced-level programming. The advanced option requires more complex and sophisticated code, encourages higher level thinking, and is more appropriate for students with experience using block-based programming languages. Educators may opt to select a different combination of program requirements based on the skill level of the students and the focus of the lesson.

https://nasa.gov/sites/default/files/atoms/files/crew-orbital-docking-simulation.pdf

Activity
Crew Orbital Docking Simulation (CODing Sim)

Grades
5 to 8, 9 to 12

Duration
60 to 120 minutes

Subjects
- Computer Science
- Space Station

Standards
Next Generation STEM Science Standards (NGSS)
MS-ETS1-2

Common Core State Standards (CCSS) for Mathematics
MP1, MP2
5.G.A.2, 6.RP.A.3, 7.EE.B.4, 8.F.B.4
Modeling

International Society for Technology in Education (ISTE)
3a
4d
5d

NASA STEM Engagement
https://nasa.gov/stem/nextgenstem/index.html