Add a Real Space Element to the Education Infrastructure with a Desktop KatySat
Desktop KatySat

Kids Aren't Too Young for Satellites
Build a Class Tech Room

Add Radios

Operational Engineering Model CubeSat

S-band Radio

UHF/VHF Radio

Add Desktop Cubesat

S-band Radio

UHF/VHF Radio

Communicate
Configure Your Lab

Connect to Internet

STC ISDN Server

Internet

Operational Engineering Model CubeSat

CS-1

S-band Radio

UHF/VHF Radio

Check Orbits on Server

Select Orbits from Server
Communicating when in orbit is in view of class room earth station
What else can be learned from the simulator?

Using the Server

CS-1 simulated environment

Earth magnetic field model

Real?
What else can be learned from the simulator?

Using the Server

CS-1 simulated environment
Radiation model
What else can be learned from the simulator?

Using the Server

Combine Radiation & Magnetic Field

Effects of Sun and Magnetic Fields?

STC ISDN Server

Internet

CS-1

Aurora

SOA
What else can be learned from the simulator?

Using the Server

Earth’s Atmospheric model

Effects of Low Earth Orbits?

\[ \log_{10} P \approx 5 - \frac{h}{15500} \]
Another Class Room

Mission Control…

…in the classroom!

Internet Gateway and Display

Desktop Model

Ground Station

Internet Connection
Form Schools in Groups for Collaborative Missions

in each school...

Locally Nationally Internationally

Virtual Space Simulator and Server

Internet Gateway and Display PC

Group of networked schools

Desktop Model

Online Teaching Tools

Ground Station
KatySat

Moon Flyby & Return

1 Day Mission

Virtual Space Simulator and Server

Internet

Group of networked schools

Moon

CubeSats

Carrier

GTO

Earth

Deep Space
What Have We Got?

Hands On Education
International Interactions
Collaborative Missions with Gov. & Ind. Engineers
Phase into the Real Space World
What Have We Done?

Provided a Real Educational Window into Space For Students
Thanks