Cities in Space Student Competition and Conference

Planning With Your Team

Welcome to Cities in Space! As you begin to plan your project here are some guidelines to help you plan with your team!

Step 1: Decide:

- Teacher's decide who is going to be involved in the competition
- Who is the "Lead Teacher": the teacher who bring the team to the conference

Questions to think about:

- How will we integrate classes with art, science, technology, math?
- How will we get our team working together? Will there be a designated time, say during an X period, lunchtime or after school? One way to schedule is to have teachers rotate their time. For example, one week Visual Art assists the team, the next week Science.

Step 2: Everyone together

- Set up a meeting with your focus teachers, lead teacher(s), and participating student
- Discuss the project and the choices for entering
- There are 3 choices for the competition: 3D Modeling, Video, 3D Modeling with Video
- Ask your students which one they would like to work with and why.

- Let the team know there will be a written work requirement as well to be turned in on the day of the competition.

Step 3: Talent search

- as your team decides their chosen category begin to discuss your students talents and desires to pursue certain aspects of the competition. Divide and Conquer!
- Discuss options for students to focus on art and aesthetics of the colony; engineers focus on design; scientists focus on environmental needs and having a self sufficient colony.
- Form a research team to discuss the environment and needs for your chosen location of Mars, Moon or Free Space.
- Writers can begin to dialog with their team members on the written work portion of this project.
    - This written work should state;
        - the chosen location (moon, Mars or Free Space)
        - The dimensions of their work and name of the colony
        - Discussion of how the team went about researching and planning their project and the main aspects they chose to focus on
        - What did they learn from this project: aspects of their environment, experiences from teamwork.

    *In addition to describing their project, students may choose a portion of their written work to focus on something they have a passion about. For example: Sports in space, having a 100% recycled colony, performance arts or preserving history and making new traditions.

Step 4: Research Research Research

- As your team begins to research and design their plans, continue to think on what your colony needs to survive and thrive. This colony is going to grow!
- Here are some questions you might like to think about:
    - How will our colony be a self-contained environment?
    - How will our colony get power?

- How will your colony grow food?
- How will your colony get educated and learn?
- How will your colony preserve history and make new traditions?
- How will your colony gather in community?
- How will you decided on job opportunity and employment / political structure?

Step 5: Let the building begin!

- Gather your team to decide on how the building process will be divided.
- Divide up your sub-teams as described above
- Create a goals and deadlines calendar

CATEGORY SPECIFICATIONS:

*Please note: All projects must not exceed $150 in supply costs to keep Cities in Space an equal opportunity competition.

3D Model Specifications:
Colony building is based on a human population of 1,000 people.
Location choices: Mars, Moon or Free Space
Supplies are student teams choice: this can be created with board, wood, metal, recycled art, ceramic, 3D printed work, etc.
3D Model may be no larger than 20" (W) 50"(L)20"(H). Power sources must be self-contained (e.g. battery or sample circuit)

Video, Slides or Animation Presentation:
*Please note for Video presenters: Please send your presentation to Holly Melear holly.melear@newworlds.space by October 10 in addition to having your presentation available on a jump drive for large screen as well as having a laptop display at your table for day long presentation viewing.
Colony building is based on a human population of 1,000 people.
Location choices: Mars, Moon or Free Space
Teams may create a video presentation, slide or blueprint presentation or animation presentation.

Suggested Software listed below:
AutoDesk: http://www.autodesk.com/education/support#
AutoDesk: MAYA (suggested no younger than high school):
http://www.autodesk.com/education/free-software/maya
Google Sketchup: http://www.sketchup.com/
SimCity: Cities of Tomorrow https://www.origin.com/en-us/store/buy/simcity-cities-of-tomorrow-ep1-/mac-pc-download/addon/simcity-cities-of-tomorrow#details
SimCity 4: https://www.origin.com/en-us/store/buy/56334/pc-download/base-game/deluxe-edition?utm_campaign=origin-search-us-pbm-g-sim4-e&utm_medium=cpc&utm_source=google&utm_term=simcity%204&sourceid=origin-search-us-pbm-g-sim4-e&gclid=CjwKEAjwocKtBRCf9d_Q5ovcyHASJAAHhJYOn0oLg5supRB1b7TJXS4KAO0_NtJkNgq7kJtaQMMiohoC6N7w_wcB
Kerbal Space Program game:
https://kerbalspaceprogram.com/en/?page_id=7
Mindcraft: https://minecraft.net/

Written work requirements
High School: In addition to the colony model students must present a written work with a minimum 10 pages double spaced, which describes the project, the specifications and requirements of their chosen location and what issues they chose to dedicate their time to solving for long-term success of a colony. Some examples of this could be how to grow food, manufacturing of goods and textiles, energy and creating a 100% recyclable community. Other issues could be how to create and sustain a rich civilization in the new frontier such as the arts, education and sports.
Middle School 5 - 8 Grade: In addition to the colony model students must present a written work with a minimum 6 pages double spaced, which describes the project, the specifications and requirements of their chosen location and what issues they chose to dedicate their time to solving for long-term success of a colony. Some examples of this could be how to grow food, manufacturing of goods and textiles, energy and creating a 100% recyclable community. Other issues could be how to create and

sustain a rich civilization in the new frontier such as the arts, education and sports.

Step 5: Final Days

- Take time with your team for reflection
- Practice together for your presentation
- Are you choosing one speaker or is everyone taking a turn
- Discuss expectations for behavior at the conference
- **Plan it out and have fun!**