

Biodome Project (Mars): Minimum Requirements

Directions

This handout outlines the *minimum* requirements for the Biodome project.

Definition

The Biodome is an encapsulated futuristic city (approximately 50 years in the future) that is self-sustaining. The city consists of 100 people. You are the supreme ruler of your Biodome. You have absolute power. You must make all the vital decisions to establish, develop, protect, and guide the Biodome community. Your project consists of a written report and a model of the city. Your work should be based on the following characteristics: your knowledge of how societies function, your knowledge of Mars, your concept of a utopia, and your creative expression.

Group Option

You will work individually, or with one partner, on this activity.

Components

REPORT

50% of Grade

Synopsis

A written response to ten questions about the Biodome (one paragraph per response minimum).

Question Categories

Location & adaptation, colonists, culture & values, government & laws, economy, education, entertainment, daily lifestyle, technology, and defense & crisis management

MODEL

50% of Grade

Synopsis

A detailed visual display of the Biodome (e.g. model, diorama, video, Power Point, etc.)

Mandatory Displays

Residential, commercial, industrial, political, cultural & entertainment, religion, medical care, emergency intervention, transportation, and natural resources

CLASS PRESENTATION

Not graded

Synopsis

Plan on making a 2-5 minute presentation to the class and answering questions.

EXTRA CREDIT: Biodome Newspaper

up to a 20% Bonus

Synopsis

Create a two to four page newspaper, complete with articles and illustrations.

Mandatory Sections

Front page, local, business, sports, and weather (one article per section)

Biodome Project (Mars): Report Details

Synopsis

The Biodome report is a written narrative of how your science fiction city functions.

The report is comprised of answers to twenty questions. Understandably, the answers to each question could easily be multiple pages in length, however you are only required to answer the questions in general terms.

Requirements

Each answer to *each question category* must be a minimum of one paragraph (four sentences) in length. Please include both an introduction and a conclusion.

Questions

1. *Location and Adaptation*
 - How will your Biodome's technology enable people to live on Mars?
2. *Colonists*
 - Describe the people you would want in your Biodome.
3. *Culture and Values*
 - What cultural events will be celebrated (e.g. holidays) and why?
4. *Government and Laws*
 - Describe your most important laws and government system.
5. *Economy*
 - How will the citizens obtain the resources they need (e.g. food, clothing, shelter, etc.)?
6. *Education*
 - How will children be prepared for adult life?
7. *Entertainment*
 - How will citizens be entertained and motivated?
8. *Daily Lifestyle*
 - What will be a typical day for one of the citizens (be creative)?
9. *Technology*
 - How will technology make life easier for the citizens?
10. *Defense and Crisis Management*
 - How will the city deal with threats and crime?

Biodome Project (Mars): Model Details

Synopsis

The Biodome report is a three-dimensional visual display of your science fiction city. The model is comprised of multiple displays representing key components of your city. The displays may be created via a plethora of means, from colored paper to wood sculptures. You are welcome to create your model in digital format (e.g. Google Slides).

Requirements

Create a three-dimensional display for each of the following categories. You must clearly *label* each display. Each display should look like the building. You only need one building per category (i.e. ten buildings total).

Mandatory Displays

The following lists are sample buildings and structures. Creativity is encouraged (e.g. flying cars and lasers).

1. *Residential*
 - Where will your citizens live?
2. *Commercial*
 - Share an example of a hi-tech store.
3. *Industrial*
 - Factory or construction site
4. *Political*
 - Government building
5. *Cultural & entertainment*
 - Examples: Academy, museum, library, arena, theater, game center
6. *Religion*
 - Churches, synagogue, or temple
7. *Medical care*
 - Hospital or medical facility (e.g. based on specific needs- e.g. dentist)
8. *Emergency intervention*
 - Law enforcement, fire response, and guards
9. *Transportation*
 - Public transportation systems (e.g. taxis, busses, trains, monorails, hover trains, and transporters)
10. *Natural Resources*
 - Farmland and land for animals or valuable minerals

Biodome (Mars): Rubric

Names _____

Each section is worth 2 points, unless stated otherwise.

Written Report

Points Earned

1. Introduction
2. Location and Adaptation
3. Colonists
4. Culture and Values
5. Government and Laws
6. Economy
7. Education
8. Entertainment
9. Daily Lifestyle
10. Technology
11. Defense and Crisis Management
12. Conclusion

Model

1. Labels
2. Residential
3. Commercial
4. Industrial
5. Political
6. Cultural and Entertainment
8. Power Supply
9. Medical Care
10. Emergency Intervention
11. Transportation
12. Natural Resources

Effort (*10 points*) _____

Overall Score Modification (if any) _____

Reason: _____

Newspaper (Optional): Maximum of 20% Bonus Points _____

Total Grade _____