Name: _____

Period:_____ Due Date: _____

Tiny Houses Design Brief

Criterion A: Inquiry and Analysis

Part 1: What is a Home?

1.) *What* makes a home? **Create** a Mind-Map (a brainstorm chart using images and/or words) with what you associate with the idea of 'home'.

2.) Using research and your own knowledge, **create** a definition of a house:

_____

_____

_____

3.) In your opinion, **explain** the difference between a house and a home?

_____

_____

_____

4.) From the video *'Mankind: The Story of Us All'*, they state that "farming is the most important ingredient in human civilization." **Explain** what you think is meant by this and *how it relates* to homes.

_____

_____

_____

_____

5.) Using research and your own knowledge, **create** a definition of community:

_____

_____

_____

_____

_____

6.) **Describe** the kind[s] of community you belong to. *What* common interests, values, attitudes and goals bring you together with other people? *How* are those attributes brought together within your community?

_____

_____

_____

_____

_____

7.) **Create** a detailed drawing of the ideal home for you and your family.

8.) From the video '*Home is Where the Hearth Is'*, thinking about how housing structures have changed over time, **outline** what you:

See: _____

_____

Think: _____

_____

Wonder: _____

_____

Criterion A: Inquiry and Analysis

Part 2: What is a Carbon Footprint?

1.) Using research and your own knowledge, **create** a definition of a carbon footprint**:**

_____

_____

_____

2.) RESEARCH: **Outline** 2 man-made greenhouse gasses. *What* do they do? *How* are they created? *What* effect do they have on the environment?

a.) Name: _____

What it does: _____

_____

How is it created: _____

_____

Effect on the environment: _____

_____

b.) Name: _____

What it does: _____

_____

How is it created: _____

_____

Effect on the environment: _____

_____

3.) According to a British study, building a new home creates about _____tons of CO_2 and refurbishing an old home to be more energy efficient creates about _____tons of CO_2.

4.) **Outline** 6 energy efficient features a greener home might include.

1.) _____

2.) _____

3.) _____

4.) _____

5.) _____

6.) _____

5.) **Calculate**, as best you can, your estimated carbon footprint at http://carbonindependent.org.

What is your carbon footprint score: _____

Describe how it compares to other parts of the world: _____

_____

_____

_____

What does your score make you *think* or *wonder* about: _____

_____

_____

_____

Criterion A: Inquiry and Analysis

Part 3: What is the Problem?

1.) Should our environmental impact on the world influence how we choose to live? **Explain**.

_____

_____

_____

_____

_____

_____

_____

From the video '*Our Canada: Do Our Cities Still Work?'*, answer the following questions:

2.) **Outline** 2 issues that create unhealthy and dangerous cities.

a.) _____

_____

_____

_____

b.) _____

_____

_____

_____

3.) **Outline** 2 solutions to creating healthier and safer cities.

a.) _____

_____

_____

b.) _____

_____

_____

4.) **Describe** some positive solutions or negative issues that you see in your city.

_____

_____

_____

_____

_____

_____

Criterion A: Inquiry and Analysis

Part 4: What are Some Solutions?

1.) From the '*Citizen Architect'* trailer, designer and builder Steve Badanes says, "we have the responsibility to use our skills to make people's lives better, not just the rich people that hire us to do stuff, but everybody [people]." In terms of building communities, structures, and homes, *what* does this mean? And, do you agree with this statement? **Explain.**

Space to answer this question is on the top of the next page

2.) “Traditional architects and builders are sometimes skeptical about the work that we do because it is so simple.” **Outline** the building style Cal-Earth is using and **describe** one benefit to this style of building.

3.) From the video, ‘*Portland: We Build Green Cities*’, **outline** 2 features of Portland that inspire solutions to a healthy city.

a.)

b.)

4.) Using research and your own knowledge, **create** a definition of biomimicry:

5.) Using research and your own knowledge, **create** a definition of sustainable architecture:

6.) Using research and your own knowledge, **create** a definition of vertical farming:

_____

_____

_____

7.) **Outline** what you have learned from this section, '*What are Some Solutions*?' (We talked about Rural Studio, Cal-Earth, Portland, biomimicry, sustainable architecture, vertical farming, eco bridges and shipping container homes.)

See: _____

_____

_____

Think: _____

_____

_____

Wonder: _____

_____

_____

Criterion A: Inquiry and Analysis

Part 5: Tiny Houses

1.) Using research and your own knowledge, **create** a definition of a **tiny house**:

_____

_____

_____

2.) *How much* space do you think that people (in general) need **or** that you *need* in order to live comfortably? **Explain**.

_____

_____

_____

_____

_____

_____

_____

3.) *What is* the average cost range of a tiny house, including labor? _____

Source U.R.L: _____

4.) *What is* the average cost of a house in Minneapolis? _____

Source U.R.L: _____

5.) *What is* the average cost of a house in North Oaks? _____

Source U.R.L: _____

6.) *What is* the average cost of a house in Shoreview? _____

Source U.R.L: _____

7.) **Explain** how much you think a house should cost. *What* is your opinion of how much they currently cost?

_____

_____

_____

_____

_____

8.) **Describe** 4 places you can live with a tiny house:

_____

_____

_____

_____

_____

9.) Through research and your knowledge, **create** a definition of zoning:

_____

_____

_____

10.) From '*Jay Austin's Tiny House*' video, **outline** 1 negative factor zoning creates.

_____

_____

_____

11.) **Describe** 3 reasons why someone might choose to live in a tiny house.

a.) _____

_____

_____

b.) _____

_____

_____

c.) _____

_____

_____

Tiny Houses Vocabulary

Building codes - set of rules that specify the minimum standards for constructed objects such as buildings and nonbuilding structures.

Carbon dioxide - heavy colorless gas that is formed by burning fuels, by the breakdown or burning of animal and plant matter, and by the act of breathing and that is absorbed from the air by plants in photosynthesis.

Carbon neutral - term used to describe the action of organizations, businesses and individuals to remove as much carbon dioxide from the atmosphere as each puts into it. Overall goal of carbon neutrality is to achieve a zero carbon footprint.

Cultivating - try to acquire or develop a quality, sentiment, or skill.

Ecosystem - community of living organisms in conjunction with the nonliving components of their environment (things like air, water and mineral soil), interacting as a system.

Emissions - to send forth or emit or give off: liquid, light, heat, sound, particles,etc.

Energy efficiency - Using energy wisely means being efficient. By saving energy you're helping to save the world's energy resources like natural gas, oil and water.

Social values - form important parts of culture in our society. They give us guidelines for social conduct. Values such as respect, individuality, equality, love, etc. guide our behavior.

Frivolity - not having any serious purpose or value.

Greenhouse gas - gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide, methane, ozone, and the fluorocarbons.

Innovation - make changes in something established, especially by introducing new methods, ideas, or products. introduce or create something new.

Liability - an obligation or responsibility.

Metric ton - unit of mass and weight equal to one million grams, or 2204 pounds.

Mortgage - charging of property by a debtor to a creditor as security for a debt.

Per capita - for each individual person.

Photovoltaic cells - electrical device that converts the energy of light directly into electricity by the photovoltaic effect, which is a physical and chemical phenomenon.

Refurbish - to repair and make improvements to.

Poverty - the state or condition of having little or no money, goods, or means of support.
Public health - the science and art of preventing disease and promoting health.
Solar panels - large, flat piece of equipment that uses the sun's light or heat to create electricity.
Sustainability - the capacity to endure. it is how biological systems remain diverse and productive indefinitely.
Square foot - area of a square with sides 1 ft in length [length x width].
Urbanization - population shift from rural to urban areas. Gradual increase in the number of people living in urban areas and the ways in which each society adapts to the change.
Utility cost - cost of electricity, heat, gas, water, sewer, trash.
Wind turbine - tall structure with large blades attached to an engine and that is used to produce electricity.
Zoning - control by authority of the use of land and buildings. Areas of land are divided by authorities into zones within which various uses are permitted, such as residential, industrial and commercial.

Notes / Comments / Questions:

_____

_____

_____

_____

Self-Checking Guide: Before you turn in this assignment, complete the checklist below to help ensure you are turning in **high quality Work.**

Check for the following:	**Student Initials:**
High quality responses	
Good organization of ideas	
Complete sentences	
Academic Writing: punctuation, spelling , etc.	
Handwriting OK	

TEACHER: Additional comments and scores, to be filled out by **TEACHER.**

Additional comments:	
	Criterion A: Inquiry and Analysis Score