

# Alternative Energy Project

On the following page is a diagram of the area where the newly designed city of Ogoville will be located.

You and your team are the city planners. You may work as an individual or in groups of no more than 3 people.

## **Ogoville will need to have:**

200 single family homes to accommodate family sizes of 2-8 people.

100 townhomes to accommodate family sizes from 1-4 people.

300 apartments.

Basic services- hospital, city hall, courthouse, jail, etc.

A community shopping area

An industrial area

An office park

Park area(s) with natural areas and ball fields

An elementary, middle, and high school

A transportation system

You are to design Ogoville using the principals of smart growth. Your representation should be a 3-D model with a key that explains each component included. You will present your design and alternative energy source to the class. The winning design will earn bonus points.

## **You will be graded as follows:**

Possible score	Your Score	Requirement
100	_____	Design includes all the features listed above.
100	_____	Design includes renewable energy features, focusing on one specific type from the following list: Solar, Wind, Geothermal, Hydrogen Fuel Cell
100	_____	Design includes open space/ habitat conservation features
100	_____	Transportation is both user friendly and sustainable
100	_____	Good use of available space, sustainable design
100	_____	Design is neat , clear, and creative
400	_____	APA cited research paper on the main alternative energy focus of your city see paper requirement handout
1000	_____	Total Grade_____

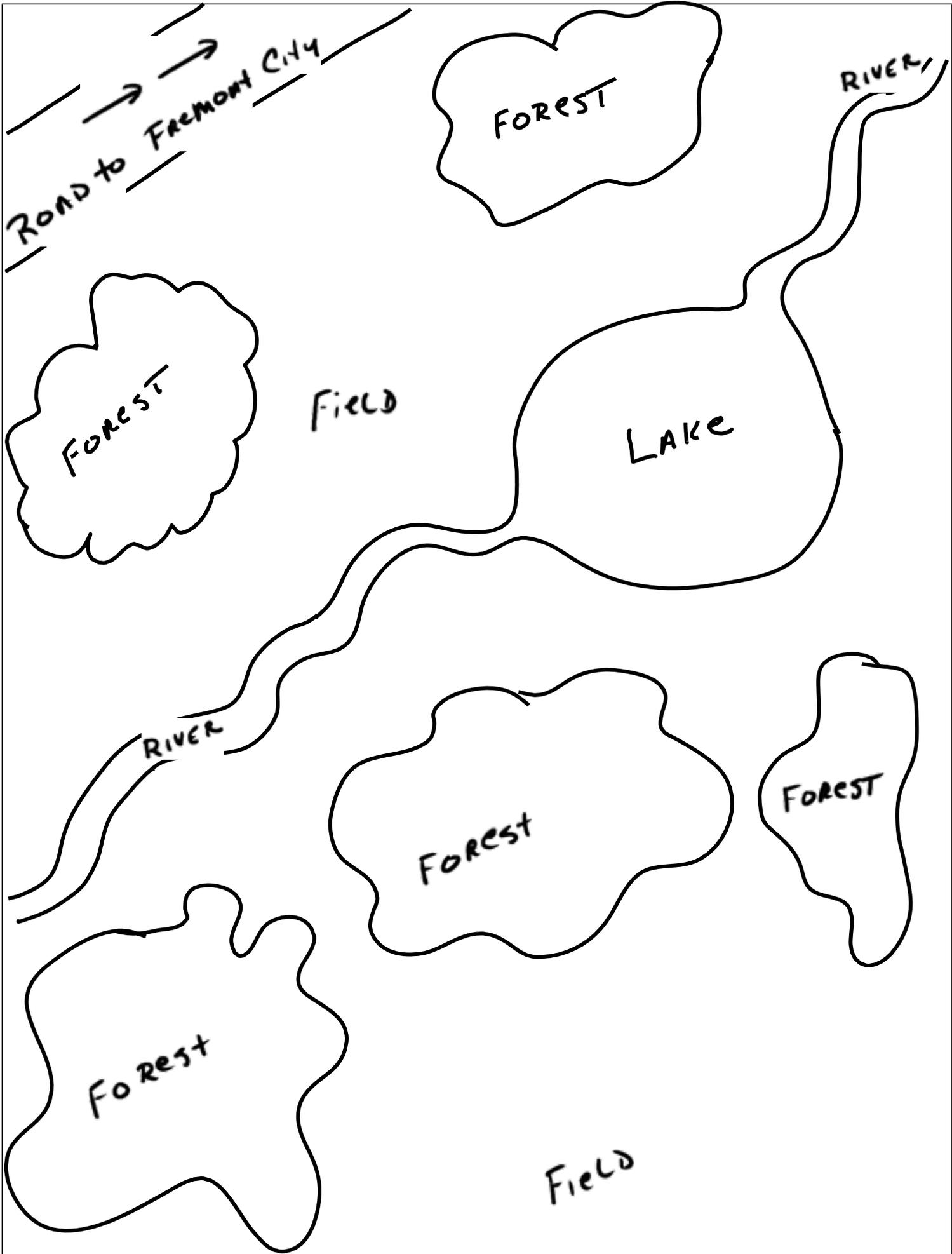
## **Some resources on Smart Growth to help you with your**

**project:** <http://www.epa.gov/smartgrowth/> <http://www.smartgrowthamerica.org/>

<http://www.smartgrowthamerica.org/> <http://www.smartgrowth.org/news/bystate.asp?state=AZ>

[http://cms3.tucsonaz.gov/planning/prog\\_proj/projects/genplanupdate/smartgrowth.html](http://cms3.tucsonaz.gov/planning/prog_proj/projects/genplanupdate/smartgrowth.html)

*If you find other good resources, these would be wonderful to post on your scrAPES.*



## **Alternative Energy Project Research Paper**

You will need to write at least 1 page (*double spaced, 12 point Times New Roman font*) on each of the sections below. You will need to cite your sources in **APA format**. You should include a bibliography AND parenthetical citations. While one person will be the leader for this section ALL group members will be required to contribute to the paper. You should divide up the topics among members of your group. Some sections will require more work than others. Please also note that each member will be responsible for turning in their section to the research leader.

### **1: History of the Energy Source:**

*Who* founded this type of energy (*development pioneers?*)

*When* was it invented, developed, or used

Any other *historical information* about the energy source

### **2: Specific Use of Your Energy Source?**

*What* do we use it for? *How* do we use it? *How* is it being used?

*Where* is this type useful (*applications?*); not useful (*or not efficient?*)

Is it used to produce electricity? Is it used to produce heat? Is it used to move objects (machines)

### **3: How Has the Function of the Energy Source Changed Throughout History?**

*How* is the function different today than before?

### **4: How Much Does Your Energy Source Cost?**

How much do consumers pay to use this energy? *Is it cost effective to create?*

What is the *estimated cost* of maintenance?

Are costs per joule (J) or kilo joule (kJ) of energy? BTUs? available?

### **5: How Much More Effective (Efficient) is this Energy Source Than Others in Doing a Task?**

Is it better at providing *heat, energy, or electricity* than other methods?

### **6: Where is Your Energy Source Most Often Used (Where Would We See It)**

Describe these locations (sites) in order for audience to visualize it

### **7: Environmental Effects of Your Energy Source**

What are some positive/negative effects of your energy source on the Environment?

Are there any plans to use this energy source to produce new types of energy in the future?

What is the latest research taking place with this energy source?

Why should humans continue using this energy source in the future?

Why is this the best energy source for your city?