Greenhouse Structure and Function Website Project

**Directions: With your team you will develop an informative website about Greenhouses. This website is to be done using Google Sites. When you are finished with your website, email the link to Mrs. Riedel at jriedel@wcpss.net. The home page will have a general overview of greenhouses and your names will be on that page. The links down the left-hand side of the first page will be the categories below (except #1 is your home page).**

**Resources: You will be given an amazing resource- two chapters to my new textbook. Check Edmodo for the link. Use the internet- try** [**www.jaderloon.com**](http://www.jaderloon.com)**,** [**www.growerssupply.com**](http://www.growerssupply.com)**, and** [**www.turnergreenhouses.com**](http://www.turnergreenhouses.com)**.**

#  Home- Greenhouse Purpose <https://sites.google.com/site/whshrt2greenhouseproject/>

1. Describe the basic purpose of a greenhouse. Why would someone need one?
2. What is the role of a greenhouse in plant production? Include the following points:
	* + Light
		+ Temperature
		+ Pest Control
		+ Nutrition
3. Include at least one picture on the home page related to a greenhouse.

##  Greenhouse Types

1. List and describe the different types of greenhouses that are listed below.
2.
3. Include one advantage and one disadvantage of each type of greenhouse structure.

C. Include at least one picture of the outside shape.

D. Greenhouse types:

* + - Lean-to
		- Quonset
		- Even Span
		- Ridge and furrow
		- Barrel Vault
		- Dutch Venlo

####  Greenhouse Functions

1. Describe the greenhouse effect and explain how it aids in greenhouse production.
2. Be sure to include a diagram of greenhouse effect or how radiant energy is produced.
3. Describe how greenhouse effect can also be a bad thing and what three ways that a greenhouse grower can combat the greenhouse effect when it becomes too hot.
4. **55**

##### Greenhouse Coverings

1. Identify and describe the various types of greenhouse coverings listed below.
2. Include the description of each greenhouse covering material and one benefit and one disadvantage of the covering material. (Hint compare them to each other, cost, durability, how often to change).
3. Be sure to include at least one picture of the outside of a greenhouse using this type of material and a picture of the material itself on the webpage for each type of greenhouse covering material.
	* + Acrylic panels
		+ Polyethylene Film
		+ Polycarbonate
		+ Solexx panels

######  Greenhouse Heating and Cooling

1. Define and tell the importance of the temperature regulation equipment listed below.
2. Include a picture of each device.
3. Describe the location of each item in the greenhouse.
* Heaters
* Thermostat
	+ Exhaust Fans
	+ Circulation fans (also called Horizontal Air Fans)
	+ Evaporative Cooling
	+ Shade Cloth
	+ Horizontal Fans
	+ Natural Ventilation

###### Greenhouse Watering

1. Describe the watering systems used in commercial greenhouses that are listed below.
2. Explain how they work and the parts of the system that are required to make it work.
3. Include a picture of the system in a greenhouse and one picture of the system itself.
	* Hand Watering
	* Mist System
	* Overhead Sprinklers
	* Drip Tubes (Spaghetti Tubes)
	* Flood Floor
4. Describe how fertigation works in a greenhouse.
5. Include a picture of the following items.
* Proportioner- Positive Displacement
* Proportioner- Venturi type
* Holding Tank containing fertilizer concentrate
1. **Lights**
2. Describe each of the following lighting systems.
3. Include a picture of each.
4. List one advantage and one disadvantage of each.
5. List the price for each.
	* Sodium
	* Halogen
	* Fluorescent

Adapted from Michael Johnson of Wake Forest-Rolesville High School.

**Greenhouse Project is due on February 8th, 2016. If it is late, you will all need to submit a Slacker Pass**.

|  |  |  |  |
| --- | --- | --- | --- |
| **CATEGORY** | **10** | **5** | **1** |
| Greenhouse Purpose (Home Page) | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Types | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Parts | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Functions | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Coverings | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Heating and Cooling | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Watering | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Greenhouse Lighting | All questions are answered and the appropriate number of pictures is in place. | Half of the questions are answered or not all of the pictures are in place. | Very few items are discussed or no pictures are present. |
| Professionalism | The look of the website is of high school grade quality. | The look of the website is a middle grade level. | The look of the website is an elementary grade level. |
| Website Function | The website is organized. Fonts and colors are employed throughout the website to emphasize topics. | The website it somewhat organized. Fonts and colors are sometimes employed. The website does not have a continuous flow. | The website is not organized. It does not have a good flow of material and does not follow the layout of the project. |

**How to make a Google Site**

**Start- Create the site**

1. Go to sites.google.com
2. If you already have a Gmail account, just sign in. If you do not, then you will need to register. Go to the sign up tab that is in the top right corner in red.
3. Next, create a google site.
4. Choose a blank template or one that you like. Create a name for your google site. Click on create site.
5. Select a theme. Retype the text and click on create site.

**Make a new page**

1. To add a new page, which will go under the Home Page, simply click the + page icon on the top right of the page.
2. Now, name the page.
3. Click put the page under home.
4. Click create.
5. You can now begin editing this page.

**To edit a page**

1. Click on the page you want to edit.
2. Click on the pencil icon, when you scroll over it, it will say Edit.
3. You can now begin editing. You can upload, copy and paste, change fonts. The sky is the limit.
4. Make sure you save.

**When finished**

1. Make sure that all of your names are on the website.
2. Send the link to jriedel@wcpss.net by February 8th, 2016.
3. Yes, you could use a slacker pass, but you would all need to submit one.