

## **Welcome to the 21<sup>st</sup> Century (Teacher)**

### **Background Information (Teacher Only)**

This is very much a culminating event for this unit. The design of this project would be best served if all previous topics had been handled as mini-projects. However, if you chose to, you could do this as an ecological problems project. This project is written to be done individually but could be adapted to groups if you chose.

The rubric for this project is very generic. There will have to be a component created based on the type of product they chose to submit.

Topics for this project were chosen from 20 Current Environmental Problems That Our World is Facing, by Rinkesh Kukreja. There was no posting data noted for the article, but all problems seem to be consistent with 2020. The [Environmental Protection Agency](#) is an excellent source. Finding alternative topics is easy to search for if you would like to find some for a specific sub-topic of ecology or for your region.

### **Option 1: Worksheet**

This could be completed as a worksheet if you skipped to Step 5 and just had students answer the 10 questions over a topic you pick or a topic of their choice.

### **Option 2: Mini-Project**

This could be simplified to a mini-project by skipping to Step 5 and requiring a uniform method of presentation such as an essay or a PowerPoint.

### **Option 3: Problem Based Learning**

This is designed to be a culminating project. Previous lessons in the unit have led to an end result of each group producing something different that when presented to the class or community would create an entire overview of George Washington Carver's life and impact on ecology. The suggestion would be to use this as a final presentation if you have done all of the other stages at Mini-Projects.

### **Accommodations for younger or lower level learners:**

You can adjust Steps 1-4 as you choose, providing as much choice as works for your students. With regard to Step 5, the project can be simplified by doing only the bolded questions.

### **Step 1: Pick your audience**

Who do you want your audience to be?

- Young children
- Teens
- Young adults
- Educational leaders
- Politicians
- CEO's

### **Step 2: Pick your presentation method**

Keep in mind that your audience should drive your choice of presentation:

- Children's book
- Vlog
- Blog
- Podcast
- Documentary
- Data driven slide show
- Essay
- Other: check with your teacher

### **Step 3: Review the expectations**

The expectations for each of the presentation methods are listed below. Make sure you review them thoroughly and are willing to fulfill them before moving forward.

**REMEMBER:** this is a rough set of expectations. Items like proper grammar, spelling, neatness, creativity, etc. are required regardless of your presentation method. Also make sure for a written presentation you choose a font type, size and color appropriate to your presentation method.

**Blog** - Your Blog MUST have a minimum of 10 entries. You should create an actual blog platform like Wix or Blogger (focus on free platforms). Each of your entries should be at least a paragraph long. You can spread out your answer to the questions below (a good idea would be to do one question per post).

**Children's book** - Your children's book must be illustrated. You need to DRAW your pictures (do not just cut and paste generic pictures from google). Your book should answer all the questions but be creative, colorful, and in a language young students could understand.

**Data driven slide show** - For use with politicians or CEOs your presentation will focus on the data around your topic. Be sure that you can correctly interpret your data. You should have some sort of data for the majority of the questions and each data set should have an explanation.

**Documentary** - Your documentary should be 10-15 minutes long. You can use no more than 2 minutes of clips from other sources otherwise you can use video and pictures from other sources as long as any voice over is your own. You can take one of two roles: you can be the interviewer and have a guest to represent George Washington Carver or you can act as Carver creating his own documentary. You must post your documentary to YouTube.

**Essay** - Your essay should be 5-7 pages. You need an introduction and conclusion paragraph. You should follow all proper grammar rules and use in text citations for your sources. Your paper should be double spaced, Arial or Calibri, font size 11.

**Podcast** - Your podcast should be a 10-15 minutes long. You can take one of two roles: you can be the interviewer and have a guest to represent George Washington Carver or you can act as Carver creating his own documentary. You must post your documentary to YouTube. Make sure you can record somewhere with limited background noise. You also need to incorporate music somehow (it can be an introduction and conclusion and a transition). You need to post your podcast to YouTube.

**Vlog** - Your Vlog MUST have a minimum of 10 entries each of 1-2 minutes long. You should create a YouTube channel that has your vlogs posted. You can spread out your answer to the questions below (a good idea would be to do one question per post).

**Other** - If you have another idea, reach out to your teacher for permission.

## Step 4: Topic

Pick one of the following topics (if you have something else in mind ask your teacher):

- Global warming
- Melting ice caps
- Acid rain
- Oceanic trash gyres
- Contaminated fresh water
- Depletion of natural resources
- Hyper-consumption and unsustainable waste production
- Waste disposal
- Deforestation and desertification
- Loss of biodiversity
- Oceanic acidification
- Ozone layer depletion
- Urban sprawl
- Overfishing
- Genetic engineering (GMO)

## Step 5: Content

You need to answer each of the following questions in your project:

### 1. Your background and definition of the problem

- a. Come up with a fake educational and/or career history for yourself that would make you an expert in your topic (why should your audience listen to you).
- b. What is the problem worldwide?
- c. Get specific. Pick a specific location to focus on for the rest of the presentation. Example: Trash gyres: there are 5 (list each of the five then pick one to be the focus of the rest of your presentation).

### 2. Why did you pick this topic?

- a. What makes it important in general?
- b. What makes it significant to you specifically?

### 3. When did scientists become aware of the problem?

- a. Was this a slow realization over decades or a sudden discovery?
- b. How was the problem discovered? By whom?
- c. What is the scientific proof that there is a problem?

#### **4. Provide a history of the problem**

- a. When was the problem at its worst? Its best?
- b. Look back at the last 10 years of data, what changes do you see?

#### **5. Species impact**

- a. What organism is MOST impacted immediately by the issue? (If this has affected the population size of a species be sure to reference that data.)
- b. Are there any organisms that have been impacted positively? If so what organism and what was the impact?

#### **6. Historic impact**

- a. How has your specific area of the world changed due to this issue? Try to find pictures or data about the region before the issue developed. (Before and after)

#### **7. The future**

- a. What would experts predict will happen if the issue is left unchanged? Worldwide? Your specific location?

#### **8. Current solutions (general)**

- a. What is currently being done to address the issue? Worldwide? In your area?
- b. Find and list at least three. Be able to give a brief, one sentence description of each current solutions (specific)

#### **9. Current solutions (specific)**

- a. Pick one of the solutions from above. Make sure this solution has been used in your specific area.
- b. Give specific data on how it has improved your area.
- c. What are any obstacles preventing implementation of the solution or alternative solutions?
- d. Many issues cross national boundaries and different countries have different levels of commitment to environmental issues. Also, many countries have traditions that may prevent the implementation of solutions. Example: Some Asian countries believe shark fin soup has medicinal properties which leads to the overfishing of sharks throughout the world with only their fins being harvested.

#### **10. Conclusion**

- a. What solutions do you think George Washington Carver would support?
- b. Where do you think we go from here?
- c. How can we improve?
- d. What does the future look like to you?

## **Step 6 Sources:**

Make sure you are tracking your sources.

- **Children's book:** Your sources should be at the bottom of each page.
- **Vlogs and Blogs:** You need to include your sources at the end of each entry.
- **Data driven presentation:** Your sources should be listed at the end of each slide
- **Essay:** You should have works cited page and you should use in text parenthetical citations.
- **Documentary:** Any videos included should be cited by the narrator and all sources should be listed at the in as part of the credits.
- **Podcast:** major sources should be announced as the information is shared. Your full list can be read through as the end credits (you can use general website not the full .html code).

**REMEMBER:** Data tables, graphs and pictures **MUST** be cited separately. Google is **NOT** a valid source. If you find something on google you need to track it to its original page and cite that page.