

# George Washington Carver

George Washington Carver was a Scientist, Teacher and Inventor.

He was born in Missouri in 1864, the year before slavery was abolished in America. He was born into slavery, but despite this he was encouraged to learn and discover new things. In 1894 he became the first African American to earn a Bachelor of Science Degree in America, having studied Botany at Iowa State University.

His love for nature and agriculture moved him to Tuskegee, Alabama where he became the head of the agricultural department at the university for the next 47 years.

Because of the politics and societal norms of the time he lived, George would have been unable to live openly, and as such he never confirmed his sexuality. We do know that he had relationships with men, to whom he wrote loving letters. They became known as "Carver's Boys". He also had relationships with women but never married.

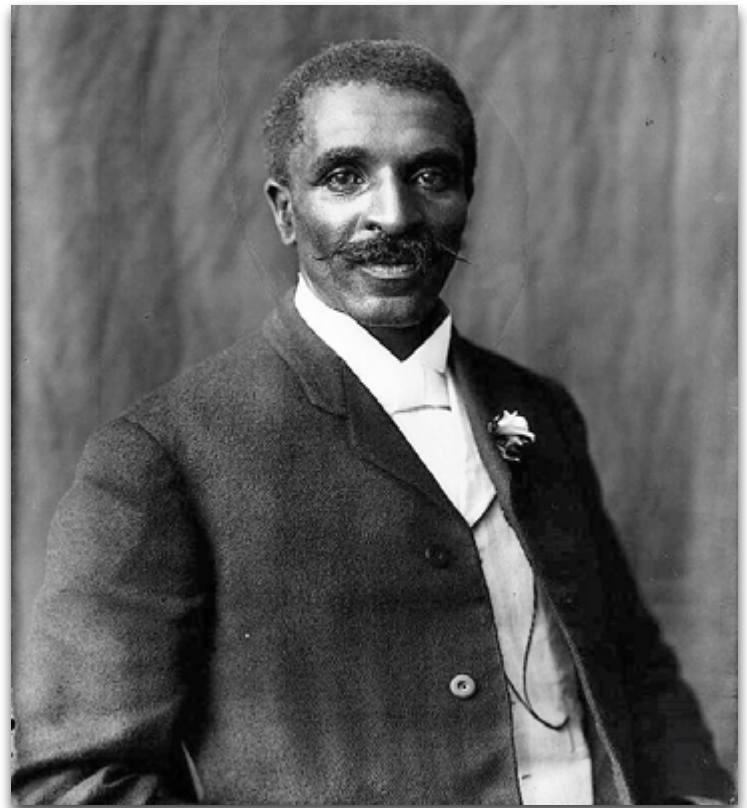


Image Credit: National Park Services USA

He was a smart, passionate man and was always experimenting on soil and crops.

Farmers at the time were struggling to grow food as decades of growing Cotton had ruined the soil quality. One of his first inventions was the Jesup Wagon, which you can see in the picture. This was a mobile classroom that allowed farmers to test their soil and learn how to grow new crops.



A Jesup Wagon

Image Credit: The Alabama Cooperative Extension System



Carver introduced Sweet Potato, Soybeans and Peanuts to replace the nitrogen in soil that had been depleted by the overproduction of cotton. He taught farmers about crop rotation and how to keep soil healthy and nutritious.

He also came up with hundreds of ways to use these crops including different ways to eat them, using them in lotions, soaps and dyes and even as fuel. Carver was the first person to suggest growing Peanuts in the USA and it rapidly became the 6th leading crop in America. This gave him the nickname the Peanut Man.



*A cropduster plane over a field of soybeans in the US. Up until 2020, the US was the world's biggest producer of soybeans.*

## Try your own Soil Experiments

### You will need:

- 1 Soil sample – Minimum 6 tablespoons
- ½ cup of vinegar
- ½ cup of baking soda
- Water
- 3 glasses

### What to do:

1. Put 2 tablespoons of your soil sample into 3 different glasses.
2. Add water to one of the glasses and write down if anything happens.
3. Add ½ cup of vinegar to the second glass of soil and write down if anything happens.
4. Add a few tablespoons of water and ½ cup of baking soda to the last glass and write down if anything happens.
5. Repeat with different Soil Samples.
6. You can use a table like the one on the next page to help you record the reactions.

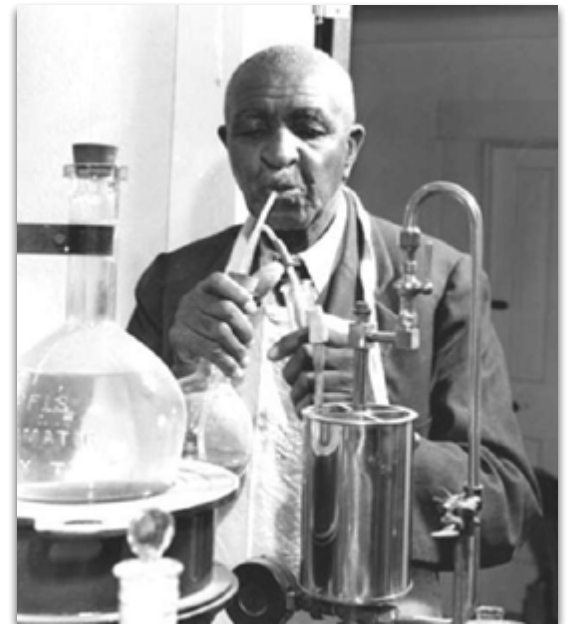
Glass No.	Ingredients	What happened?
1	Just water	
2	Vinegar	
3	Water and baking soda	

**What’s happening?**

In this experiment you are testing the pH of the soil. If soil is too acidic or too alkaline most plants won’t grow. If you saw fizzing/ bubbles when you added the Vinegar you have an alkaline soil, if you saw fizzing/bubbles when you added baking soda you have an acidic soil. If nothing happened your soil is neutral!

By adding just water to one glass we are making sure nothing else is affecting our results, this is our control and nothing should happen except the soil getting a little wet!

You can also find out the pH of soil by mixing it with and equal amounts of water and testing it using litmus paper or a pH indicator.



*Carver in his laboratory where he tested soils and crops*

