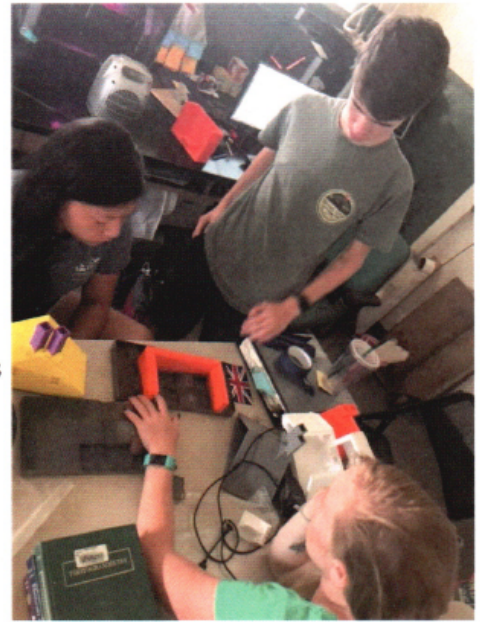


Fairfield Plantation Update: 3D Model Project

The summer isn't just about digging. Over the last three months we've made exciting progress on the interactive model of Fairfield that is helping us better understand the history and architecture of the manor house. As the project enters its third year, we have been joined by intern Harris Agnew (Jamestown High School) who is leading us into the next phase of model development- rebuilding the house.

As Jane Kim assists Ashley with modelling the layers of excavated soil and rubble, test unit by test unit, Harris is working literally from the ground up and taking the model to new heights. He is using the six surviving photos of the house predating the 1897 fire and methodically building the house brick by brick, and window by window, so that it fits seamlessly onto the archaeological model. He began by finishing the basement level up to the watertable, then moved on to the first and second floors, and capped it off with the roof, gable details, and the iconic chimney stacks. Each draft goes through a rigorous review and dissection as we debate minute details, from individual brick locations to the scale of the rake boards and dentilled cornice. The opportunity to look at every little detail is leading to new discoveries that are now



Jane Kim, Harris Agnew, and Ashley McCuistion review the recently printed basement foundation.



Each floor is printed separately and can be disassembled. And we can paint it!

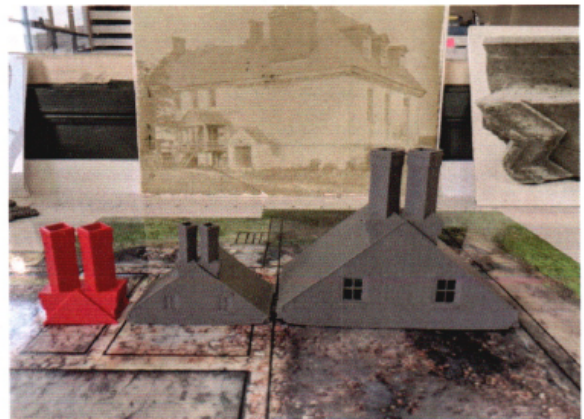
coming to light because of the attention we're putting on an accurate reconstruction of this magnificent manor house.

layer, to sculpt the portions of the site we can no longer document through photogrammetry. Her work is making possible that thrill of discovery that comes with taking each piece off the model, one by one, to discover what's beneath.

Printing the digital model allows us to hold in our hands each detail of the house, so that we can refine the appearance, fix problems that we find, and figure out how it will all fit together. Some of the more intriguing aspects of the structure would normally be lost to the average viewer, such as a course of "row lock" bricks on the building's c. 1704 addition that may indicate the level where the interior cellar vault sprang from the wall. The vault is a distinctive feature (see adjacent page) and is one of two vaulted rooms within the cellar, the earlier one located just to the north in the earlier (c. 1694) portion of the house. Experimenting with the south wing of the house will allow us to reconstruct a model of the entire building.

As you read this, we are printing the south half of the south wing (above), from the basement to the chimney caps. Before the year ends we will print the remainder of the addition - which extended the south wing of the manor house by 35 feet. Built for Nathaniel Burwell and his wife Elizabeth Carter Burwell, possibly aided by dower funds from her father, Robert "King" Carter, the addition housed their expanding family and added complexity to this elaborate Virginia manor.

Jane's work involves excavating through old paperwork to carefully reconstruct archaeological layers dug in the early 2000s. She uses field notes that record the thickness of soil and rubble deposits, complimented by early digital photos of each excavated



Three drafts of the Fairfield Manse south gable chimney stacks.