

## Nest Construction: Building artificial nests to study predation

### A Nest Above the Rest



**Scenario:** After completing a native bird population survey in the Tree Project of KCHS and grounds at Worton Park, the Department of Natural Resources staff are concerned about declining populations of certain native bird species. The DNR would like to investigate possible causes of the decline including human impact, climate change, and predation in the area. In order to study the impact of predation on bird populations, they have asked for a study to be conducted which will investigate the types and methods of predation in the area.

**Your Task:** In order to accommodate this study, 3D bird nests will need to be designed and printed, in order to be placed into different locations in both the Tree Project and Worton Park. Eggs will be molded from various malleable materials and placed into the nests. Students are asked to observe the nests over periods of specified time in both the fall and spring to report and analyze signs of predation.

**Constraints:**

- Use parametric modeling to create a design to be 3D printed
- The nest needs to be mountable onto a tree

**Criteria:**

- Nest design must mimic a natural nest in both size and structure