



# National STEM Scholar Program

## Wood Duck Project-Based Learning

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### Project Standards/Objectives:

Students will work on this project based learning opportunity to accomplish these main goals/objectives:

- Students will learn the role of wood ducks in our local ecosystem and how they interact with other species in the ecosystem
- Students will analyze the current population of wood ducks in our local ecosystems and current habitat status
- Students will identify what they can do in the community to promote the conservation of wood duck habitats

South Dakota Science Standards:

- MS-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. (SEP: 4; DCI: LS2.A; CCC: Cause/Effect)
- MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. (SEP: 7; DCI: LS2.C ; CCC: Stability/Change)
- MS-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.\* (SEP: 7; DCI: LS2.C, LS4.D, ETS1.B ; CCC: Stability/Change, Technology)

### Project Summary:

- *Prior to Start of Project students have background knowledge and skills in:*
  - Wood Duck species & nesting habits
- Phase 1: Learning about Wood Ducks
- Phase 2: Importance of Conservation Management
- Phase 3: Planning of Habitat Location
- Phase 4: Build Process: Assembling Equipment
- Phase 5: Establishing Habitat in Nature
- Phase 6: Active Monitoring & Data Collection of Established Habitats
- Phase 7: Site Evaluation/Effectiveness
- Phase 8: Reporting Findings to Stakeholders

### Project Materials & Resources:

- Woodlink Cedar Wood Duck House
- Reolink Argus 2 with Solar Panel
- Apple iPad Mini, 16GB, Space Gray
- 4x4 green treated posts-10' posts

