****

 **Findley Oaks STEM Connect**

 **3rd Grade Design Brief**

|  |  |
| --- | --- |
| **Challenge**Bird’s Nest | **Unit**Georgia Habitats |

**Standard:** Prioritized Standard: S3L1.b Obtain, evaluate, and communicate information about the similarities and differences between the habitats found within geographical regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia. Identify external features and adaptations (camouflage, use of hibernation, protection, migration, mimicry) of animals to construct an explanation of how these features/adaptations allow them to survive in their habitat.

Students should follow the **engineering design process.**

**Background/Problem:** Birds build their habitats out of natural resources that they find outdoors. They use mud, sticks, straw, twigs, leaves, feathers, and grass.

**Design Challenge:** Your design challenge is to build a bird’s nest out of the materials listed and see how many eggs it can hold.

**Criteria:** Your nest should:

* be shaped like a bowl.
* be made out of mud, twigs, sticks, grass, feathers, and leaves.
* be as strong as possible.
* be between 5 and 10 centimeters tall.
* Be at least 5 centimeters wide.

**Constraints:** You can use some of are all of the materials.

Test out your nest by placing it in a low branch of a tree, or you can tape 3 rulers or yardsticks together into a triangle to simulate a tree branch. Place hard-boiled eggs in it.

How many can it hold?

Materials:

Mud

Straw

Grass

Twigs

String

Sticks

Leaves

Feathers

6 Hard boiled eggs for testing –how many can your nest hold?

Tools:

Markers/crayons

Stapler

Hole punch

Rulers

Scissors

Crazy scissors

Glue and/or Glue Sticks

Sticks (a footlong) or rulers for testing

Paper/pencil for design planning

Options: weigh your nests, measure you nests, weigh the eggs.

