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| Month | Stem Challenge | Unit |
| August |  Bird’s Nest | * Mud
* Straw
* Grass
* Twigs
* String
* Sticks
* Leaves
* Feathers

6 Hard boiled eggs for testing –how many can your nest hold?Sticks/rulers/yardsticks(a foot long) 3 for testing s NestArtifact sifterChallengers |
| September | Mining Resources | * 30 Chocolate Chip Cookies (2 per group/team)
* 15 Small cups of water with dropper
* 15 Paper plates
* 30 Toothpicks
* 15 Large paperclips
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| October | Water Filter | * 2 – liter soda bottle cut in half (by an adult)
* napkins or paper towels
* gravel, sand, and cotton balls for you filter
* rubber bands
* coffee filters

dirty water – you can make it by adding cooking oil, food coloring, pieces of paper, and tiny pieces of Styrofoam to water |
| November | Reusable Object Project | * Have the students bring in recyclable items.
* String
* Tape
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| January | Erosion | * Large aluminum pans/trays
* Sand, sandbox quality
* Toy monopoly houses
* Fabric strips, 8” X 1” strips
* Wire mesh strips, 8” X 1” strips
* Clay
* Pipe cleaners
* Pantyhose, 8” X 1” strips
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| February | Engineering for the Three Little Pigs[**Teach Engineering Website**](http://tinyurl.com/npsmjy8) | **Each group needs:*** 6 bathroom-sized paper cups ("Dixie" cups)
* 1 small bowl for mixing ingredients
* 4 cups of sand
* 5 tsp. white glue
* 1 cup water
* 2 plastic spoons (about teaspoon-sized)

**To share with the entire class:*** 1 permanent marker, any color
* 1 watering can
* a few bricks
* 1 can of non-stick cooking spray
* safety glasses
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| March | Invisible Forces | * Paper cup (6- to 8-ounce)
* Strip of index card (2.5 x 12.5 centimeters) [1 X 5 inches])
* 30-centimeter (12-inch) length of flexible rope (e.g., clothesline)
* 1 steel ball (e.g., 60-millimeter [quarter inch] ball bearing)
* 1 strong magnet
* 1 target (e.g., “X” of tape on the table or an object to hit)
* Tape (any kind)
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| April | Heat Saving Device |  |

