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| **Stem** Challenge | Materials Needed |
| PhetBuild a Circuit | **Electricitys NestArtifact sifterChallengers**None |
| Mystery ScienceMagnets and Engineering  | Magnetism* Cardstock
* Dot Stickers
* Index Cards
* Paper Clips
* Paper Fasteners
* Post-its
* Ring Magnets
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| Biomimicry | Cells* Paper
* Pencil
* Markers or colored pencils
* Ruler
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| [All About Water](https://www.teachengineering.org/view_lesson.php?url=collection/cub_/lessons/cub_drink/cub_drink_lesson01.xml) | **Microorganisms*** top half of a two-liter plastic bottle
* coffee filter
* zip-lock sandwich bag
* 2 plastic cups
* [A Matter of Leaching Worksheet](https://www.teachengineering.org/collection/cub_/activities/cub_drink/cub_drink_lesson01_activity1_worksheet_tedl_mhf.pdf)
* [Water Worksheet](https://fultonk12-my.sharepoint.com/%3Aw%3A/g/personal/fergusons_fultonschools_org/ERoFrPLvwF1CuiPNpVAeR-AB-HCc0OxZoL5jljGuTxEANQ?e=wEBvQN)

Optional materials:* sand
* gravel
* cotton balls
* screening
* activated charcoal or carbon (optional, can be purchased on amazon.com or at some garden centers)
* garden soil, not potting soil
* permanent marker
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| Engineer a Building to Withstand a Earthquake | **Constructive and Deconstructive Processes**None |
| Science Lab Experiment Kits | **Physical and Chemical Change**None |
| Biodomes Engineering | * [Biodomes Engineering Design Project Workbook: Lessons 2-6](https://www.teachengineering.org/content/cub_/activities/cub_bio/cub_bio_lesson02_activity1_bedp_workbook.pdf%22%20%5Ct%20%22_blank)
* 2 plastic containers (1- and 2-liter bottles with lids work well, or other inexpensive clear plastic trays, bowls, covers and lids)
* seeds
* soil
* sand
* supply of miscellaneous materials, such as pebbles, rocks, wire, small paper cups, plastic wrap, string, foil, popsicle sticks, chopsticks, etc.
* Insects if available, found from outside

Classification |
| Heredity | **Inherited and Non-Inherited Traits*** Brown paper lunch bags
* Toothpicks
* Jellybeans
* Construction Paper
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