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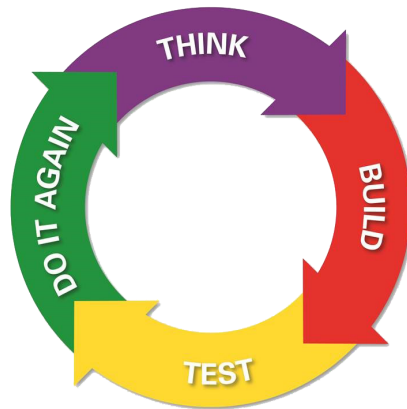
Solar Energy

Engineering Design Process

Think, Build, Test, Do It Again

That's the process engineers use when they tackle a problem. Engineers don't have official rules telling them to follow this set of steps. But, over time they've learned that **they get the best results this way**.

They **think** and brainstorm about a problem and factors they have to consider to solve it. They come up with an idea and **build** a prototype. They **test** the prototype. And, then they **repeat** the process to improve their results.



It Takes a Lot of Back and Forth

Engineers often **move back and forth within the loop**, repeating two steps over and over again before moving forward. It's a key to engineering success. Sometimes, engineers will focus on one specific step, and when complete, pass the project off to another team with a different skill set.

Engineers are creative problem solvers!

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Scientific Concept: Energy, simple machines

Recommended Ages: 8 to 12

Scientific Practice: Engineering

What to know about this kit:

With this kit you can build fully operational solar powered models as a jumping off point to learn about renewable energy sources. You can modify those models to see if you can make them more (or less) efficient. As you follow the lessons in the teachers guide, you can examine several variables that affect the models' movements. These models focus on physics concepts and simple machine concepts such as force, motion, leverage, work, energy, and efficiency.

Please note: This kit must be returned to a **staff member** at an **Anchorage Public Library** location.



| Kit Contents & Replacement Costs | | |
|----------------------------------|---|-------|
| Item Type | Description | Cost |
| Object | K'Nex Education Investigating Solar Energy Kit (288 pieces) | \$70 |
| Leaflet | K'Nex Education Teacher's Guide | n/a |
| Leaflet | K'Nex Education Building Instructions | n/a |
| Book | <i>Solar Cell and Renewable Energy Experiments</i> | \$35 |
| Packaging & Processing Fee: | | \$25 |
| Total Kit Replacement Cost: | | \$130 |



Please verify all parts are present before returning.