Name: _____

BRAIN BUILDERS
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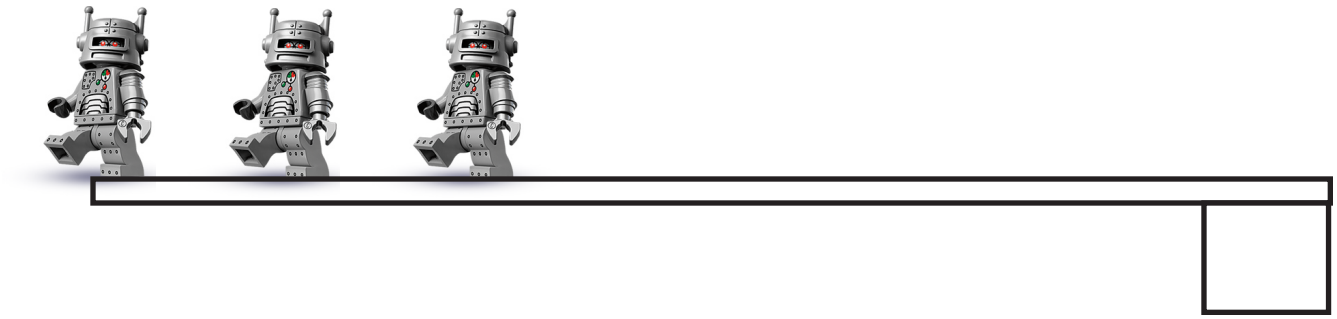
Cantilever

A cantilever is a long beam attached only on one end. Cantilevers are used all throughout construction. Some examples are bridges, balconies, some shelves, and brackets that stick out from a wall. If you point your arm straight out it is now a cantilever. Your arm is attached to your body on one end!

Can be a wall, column, or any strong structure

When a cantilever is built correctly, it can carry weight at the ends without breaking or falling over.

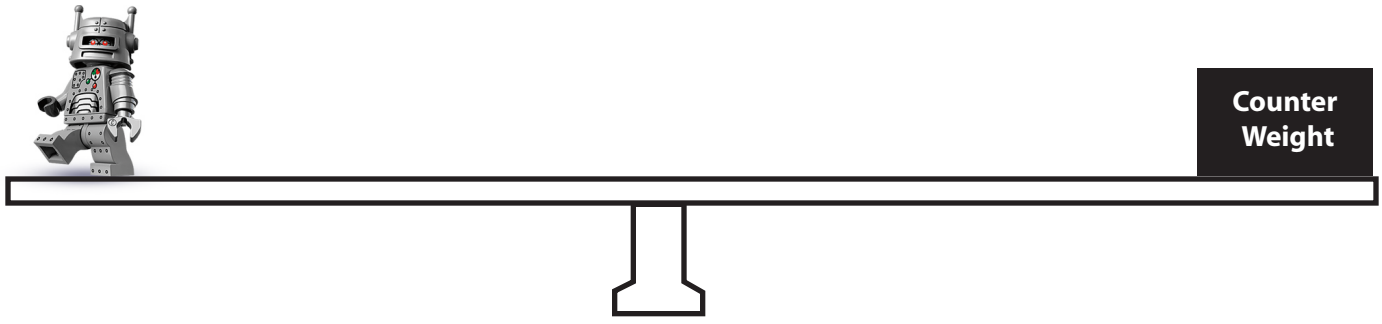


When designing a cantilever it is important that:

1. The beam is strong
2. The support is strong

You can construct a strong support by making its base big and heavy. Also, make sure the beam is attached securely to the support.

In this example, their is counter weight on one side of the cantilever to help it balance so that it won't tip over.



CHALLENGE - *Build a cantilever that can support a heavy weight at the end. The beam should be at least 4 inches long. Can you build one where the beam is 10 inches long?*