



BLOCK BALANCE

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

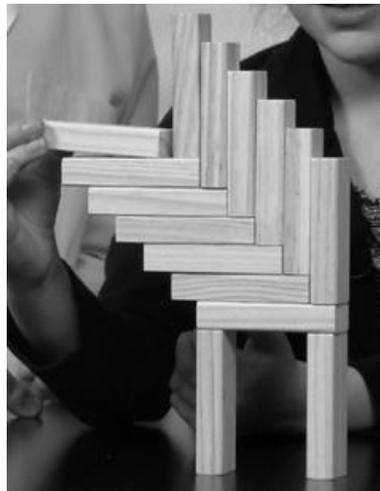
INGREDIENTS

- 15 Identical Rectangular Blocks

INSTRUCTIONS

STEP 1: Arrange the 15 identical rectangular blocks according to the picture on the right.

STEP 2: Carefully remove the bottom vertical block on the right side and observe. What are the effects of balanced and unbalanced forces on the motion of the blocks?



EXPLANATION

Adding blocks to your structure allows the center of gravity, of your structure, to shift from right to left. Once you remove the bottom vertical block, your structure perfectly balances over the bottom left block.



SCIENCE BACKGROUND

A force is a push or pull, which can cause an object to be in motion. Pushes and pulls can have different strengths and directions. Motion is a change in position. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. Speed is how far an object moves over a specific period of time. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

3 – Forces and Interactions

