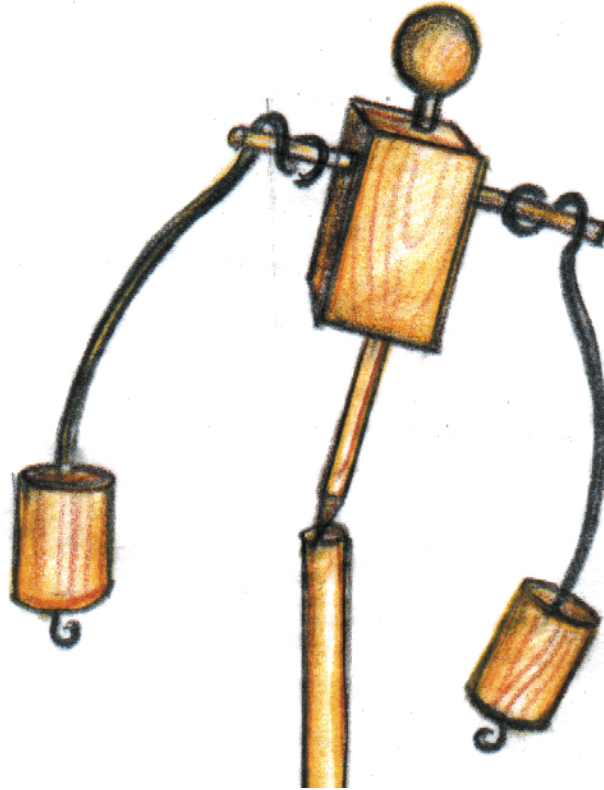


Educational Innovations^{INC}[®]

WK-4

Center of Gravity Kit



- Materials:
- 1 block of wood, 9x9 cm. with hole
 - 1 dowel, 30 cm long
 - 1 wood & wire assembly
 - includes 3 pieces of wood on 70cm. wire
 - 1 dowel, 8 cm. long
 - 1 dowel, 9 cm. long
 - 1 sphere with attached peg

Note: You will need to provide sandpaper, white glue, and a mechanical pencil sharpener.



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Please note: Wooden parts can expand or shrink depending on temperature, humidity and other factors. It may be necessary to sand down dowels and other parts to improve fit.

Building the Balancing Block:

1. Sand the three (3) pieces of wood that are attached to the wire.
2. Push the 9 cm. dowel through the hole in the middle of the rectangular block and directly under the wire. Center the dowel in the wooden block.
3. Adjust the wire through the middle of the rectangular block so that it is centered. The length of wire on each side of the block should be equal.
4. Wrap the wire around the dowel on each side of the block as shown in the illustration.
5. Use a *mechanical* pencil sharpener to put a point on the 8 cm. dowel.
6. Glue the flat end of the sharpened dowel into the hole in the end of the block furthest away from the wire.
7. Glue the wooden head into the hole in the other end of the wooden block as shown.

Building the Base:

Sand the edges of the wooden base block (ca. 9 cm²). You may want to write your name on the bottom. One end of the longer wooden dowel has a red mark. Use white glue to fasten this end into the base.

A Note on Balancing:

Adjust the wire so that the block of wood balances on the wood base. For the block to balance, the center of mass must be below the balance point. The lower the center of mass, the easier it is to balance. To make it even easier to balance, use a pencil sharpener to shorten the stick with the point. Enjoy!