NAIL 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
- 21 7 Inch Gutter Nails
- Wooden Block
- Hammer

INSTRUCTIONS
STEP 1: Using a hammer, have an adult hammer one of the nails into the center of the wooden block, so that the nail stands upright.
STEP 2: Place another nail on a flat surface and then place all except for one nail, alternating, head to head, across the nail. Place the last nail on top of these nails.
STEP 3: Carefully and patiently, pick up the nails and balance them on the nail, sticking out of the wooden block.
STEP 4: Slowly remove each nail. What happens to the remaining nails? Provide evidence of the effects of balanced and unbalanced forces on the nails.

EXPLANATION
You were able to balance 20 nails on one nail due to center of gravity or center of mass. The center of gravity or center of mass is the place where you were able to balance the 20 nails on the one nail. The mass of the nails are evenly dispersed and all sides are in balance, until you start slowly removing each nail.

NEXT GENERATION SCIENCE STANDARDS CONNECTION
3 – Forces and Interactions

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