

NAIL PUZZLE

The object of the nail puzzle (*Figure 81*) is to balance six nails on top of the standing nail. I usually just show kids how to do it since it is a very hard puzzle to figure out. Kindergartners can learn to do the nail puzzle if they're motivated, although it may take more than one try.



Figure 81.
The nail puzzle.

Tools

- Handsaw.
- Vice.
- Low-temperature hot glue gun and glue sticks.
- Drill and bit slightly smaller than the nails used.
- Sandpaper.
- Hammer.
- Eye protection.

Materials

- 1 X 3, 8" long for each puzzle.
- 7 eight- or tenpenny sized nails. Others will work if they have large heads. Finish nails or siding nails won't work. Nails have sharp points so children need to be cautioned not to poke themselves or others.
- Thin wood strips approximately $\frac{1}{8}$ " thick by $\frac{3}{4}$ ", enough to make boxes to hold the nails.
- Small piece (approximately 1" X 2") of flexible leather for the box hinge.
- Thin piece of wood wide enough for the top of the box.
- Mineral oil or paint.

Construction

1. Select wood for the base. Cut and sand.
2. Drill a hole for the upright nail and pound in, but not so far as to come out the bottom. If the nail protrudes through the base piece, it will scratch any table the nail puzzle is placed on.

3. Select and cut the four thin strips for the nail box sides: two long (longer than the nails) and two short.
4. Assemble the box without glue first to make sure it is big enough to hold the nails. It is easiest to start the box at one corner of the base piece. Fasten it together with hot glue.
5. Decorate.
6. Have kids practice assembling the puzzle several times. It is easy to forget how to do it.

How to Do the Nail Puzzle

The trick is to set all the nails up so they interlock while they are lying flat on the table and then lift them to the top of the standing nail (*Figures 82a, b, and c*).



Figure 82a.



Figure 82b.

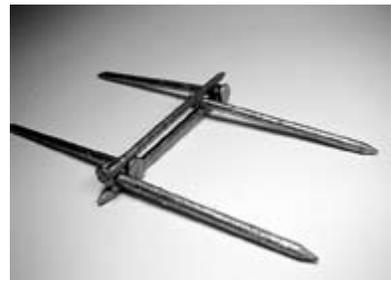


Figure 82c.

1. Lay down one nail.
2. Lay four nails across the first nail. Two are at the head and two at the point as shown.
3. Now lay the last nail on top of the first nail with its head opposite the head of the first nail.
4. Grasp the first and last nails in the center with the thumb and forefinger, pinching the first and last nails together, and balance on top of the standing nail. Another way to do this final balancing act is to use both hands, pinching the top and bottom nails together at either end. *Figure 83* shows Allison excited about putting her nail puzzle together.



Figure 83.
Allison is excited about putting her nail puzzle together.