Homemade Periscope

You don't have to be a secret agent or some kind of hide-and-seek jedi to see around corners; you just need a couple of milk cartons and mirrors! This simple household physics activity will turn your child into an honest-to-goodness Master of Reflection, and he'll get a super-cool new gadget that won't break the bank.

What You Need:

- 2 cardboard milk cartons
- 2 small rectangular mirrors, small enough to fit inside the milk cartons
- Scissors or box cutter
- Packing tape

What You Do:

1. Open the tops of the cartons completely so that the openings are square.
2. Using the scissors or box cutter, cut a square hole on one side of each carton about 1/2" from the bottom. The hole should go all the way across one side of the carton and an equal height up, to form a square.
3. Position the cartons together so the open tops are touching and the cut holes are facing opposite sides.
4. Overlap the open tops. Make sure the cartons are fairly straight so you will be able to see clearly out of the periscope! Have your child tape the cartons together while you hold them in place.
5. Now put each mirror in through a cut hole and help your child tape the front edge of the mirror to the bottom edge of the hole, just inside the carton. This is a great opportunity to ask your child about reflection. Why does he think the periscope needs two mirrors? When your child looks into one of the openings, what will he see?
6. Tape the opposite edge of the mirror against the far wall of the carton so the mirror rests at an angle.
7. When both mirrors are in place, your child should be able to look into one and see what is reflected in the other. You may have to fiddle with the angle of the mirrors or straighten the cartons to get the best view.

If your child wants something a little sleeker-looking than milk carton print on his new periscope, try painting it black or covering it with camouflage-print wrapping paper!

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