Additional Parts Required: Duct Tape and Baling Wire!

WHIZ KIDS (and Colorado State University engineering students) Curtis and Dennis built a cool learning toy that tests the user's knowledge of binary numbers. A microcontroller generates a random 16-bit number that is converted to 8-bits and displayed in binary form using eight LEDs. If the user's guess (entered in decimal form) matches the number, a motor activates a shaft, releasing a gumball. If the guess is wrong, an appropriate sound for a loser is produced through a digital sound module.

For complete instructions on how to build your own binary-to-decimal learning machine, go to http://rbi.ims.ca/3848-531.