The Balance Point Challenge

Ever seen a balancing eagle toy? Its beak sits on one fingertip and it just... stays there. Build your own out of K'NEX and find out how it works.

The eagle secret

The wings sweep forward and down, with heavy tips. That puts the weight below the beak, so when the eagle tips even a little, gravity swings it back upright.

Low weight = steady balance.

Materials

- K'NEX connectors, rods, and wheels or tires

When you're done, take it apart and put the pieces back for the next builder.

Level 1: build your balancing eagle

1. **Plan it.** Picture your eagle first: one beak in the middle, a wing on each side.
2. **Build the beak.** Use one connector in the center. This is the point that sits on your finger.
3. **Add two matching wings.** Same length on both sides, angled forward and down so the tips hang lower than the beak.
4. **Add weight to each wingtip.** Wheels or tires work great. Use the same amount on both sides.
5. **Test it.** Rest the beak on your fingertip. Let go slowly.

Level up

2 **Go Bigger**
Make the wings longer. Longer wings need more weight on the tips.

3 **Stack It**
Balance a second piece on top of your eagle. How many layers can you stack?