

Balancing Points

Have you ever tried to make a mobile? It can be tricky if you don't pay attention to balance. The best mobiles have parts that are balanced and move freely.



If the parts aren't balanced, you can end up with a tangled mess, not a mobile! That's no fun! Want to learn the secrets of making one that balances just "right"?

Let's make a balanced mobile!

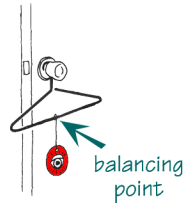
Here's all you need

- objects for your mobile*
- string, thread, or fishing line
- hanger
- rulers or sticks

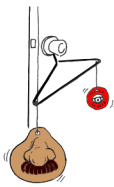
*Use objects that can hang on a thread. Or cut shapes out of cardboard and decorate them.

Here's what to do:

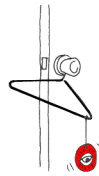
1. Tie an object on the hanger. If it balances, your object is at the balancing point.



3. How can you make a heavy and a light object balance?

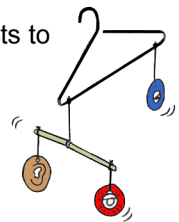


4. Make a tier (level). Slide it off-center. Where do you add objects to balance it?



2. Slide the object to one side. Where do you add an object to make the hanger balance again?

5. Use what you learned to make a well-balanced mobile!



Follow up

Do tiers make the mobile more stable or less stable?

Here's more about balance:

To be able to seesaw with a sumo wrestler, you must sit at the end of the seesaw. The wrestler must sit near the center. It's like putting heavy objects near the center of your mobile. (Try it!)

Which plastic bowl is easier to balance? (Try it!) The mass of the first one is at the same height as the balancing point. The mass of the second bowl is mostly below the balancing point. Tiers on a mobile put more mass below the balancing point.

