How to Build a Buckyball

Step 1

Un-pack the parts and separate the straws. The black connector pieces are your carbon atoms. The red and white straws are the bonds that hold the atoms together.

Step 2

Connect 5 black atoms with five red straws to make a pentagon.

Repeat this to make 6 pentagons in total.

Step 3

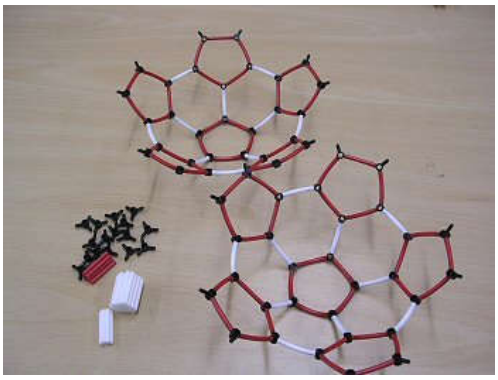
Put one pentagon in the middle and use 5 white straws to join the 5 other pentagons onto it in a star or snowflake shape.

Step 4

Use 5 more white straws to join the outer circle of pentagons together. This will make the structure start to curve-up and form a bowl. The bowl is made out of 6 pentagons, and 5 hexagons.

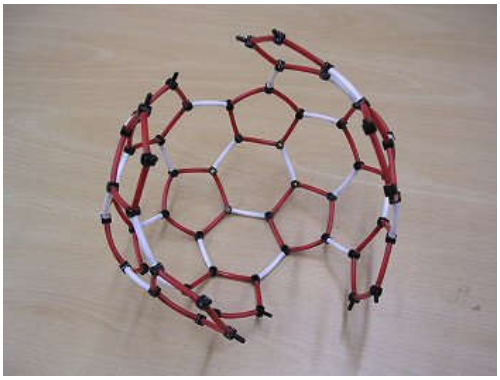
Step 5

Repeat steps 2-4 to make a second bowl.



Step 6

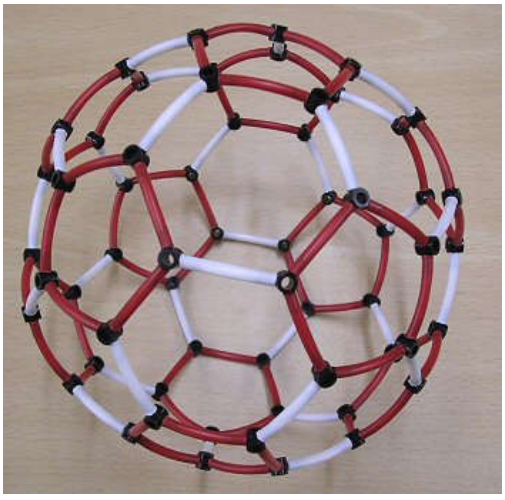
Use 10 more white straws to join the two bowls together to make the Buckyball. Make sure that when you add these straws, you are making more hexagons, **NOT** squares or octagons.
Handy tip: although the hexagons can be side-by-side, the pentagons never touch each other.



Step 7

Congratulations! You should now have a complete Buckminsterfullerene model or "Buckyball"!

Don't worry that you have some leftover carbon atoms and connecting straws – the packs have more than you need!



Questions

1) How many red pentagons make up your Buckyball? .....

2) How many hexagons are there in your Buckyball? .....

3) Scientists use the formula C_{60} to describe the Buckyball molecule...why do you think this is?

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