

## **Making 3D Cells**

- Materials:**
- balloons – fairly large, oval-shape work the best
  - white glue – mix 50:50 with water
  - yarn or wool ( different colours make for a nice variety when hanging from the ceiling)
  - large soup cans make excellent holders while the yarn dries
  - things such as uncooked macaroni, marshmallows for organelles

**Method: Day 1 Do only ½ the balloon – it must dry**

- cover tables with old newspaper and place containers of glue-water mixture on tables
- blow up balloons and knot tightly
- yarn needs to be cut into pieces that will go around the balloon with a slight overlap (looks like latitude and longitude lines)
- dip yarn into glue (messy ) and wrap around balloon
- yarn should be placed no more than 2 cm apart
- by using 2 pieces of yarn together, the cell will be much stronger
- when ½ the balloon is done, put somewhere to dry (minimum of 24 hrs )

**Day 2**

- turn the balloons over and repeat the above to the other half
- take care when removing balloon from can
- put extra glue where new yarn joins or overlaps dried yarn
- let dry – over a weekend is best

**Lastly**

- gently get balloon off of can
- with a pin, make a small whole at the top of balloon
- as air is slowly being let out, use your fingers to push balloon away from yarn (remember, the yarn is glued to the balloon so use pads of fingers to push balloon away from yarn)
- remove the balloon and you will now have the membrane of your cell