Hair Today!

Hair is the fastest growing tissue in the body, second only to bone marrow. 35 meters of hair fibre is produced every day on the average adult scalp. How strong is your hair?

You are a textile engineer, who has to find out how strong hair is and try to find a synthetic equivalent. First you will need to develop a test to find out how strong your hair is.

You have:
Some samples of hair and other types of thread or string.
(You can get the hair from hair brushes or ask people with long hair very nicely!)
Board with a nail tapped in or clamp stand to secure hair
Paper clips or weights
Balance recording sheet

Activity
1. Decide how you are going to test the strength of the hair. Are you going to add one clip at a time?

2. Predict how many weights or paper clips you think the hair will be able to carry. If you put a ruler behind the hair you can measure how much the hair will stretch before it breaks. If possible, have a look at the hair under a microscope before and after breaking. Can you see any differences?

3. Can you find a thread or string which is as strong as hair? Does it behave in the same way as hair when it is stretched? Does the colour of the hair affect how strong it is?

4. Some people dye or bleach their hair, could you devise an experiment to see if these processes affect the strength of hair?

Useful Questions
• What is hair made of?
• All mammals have hair all over their bodies. Why do you think this is important?
• When you are cold what happens to the tiny hairs on your skin?
• Why is this effective in keeping you warm?
• Why is it important to tie hair back when preparing food or working in a science laboratory?
• We also have hairs in our noses. Why do you think this is important?
Research Opportunities

• Find out the life cycle of the common head louse. Can you make a leaflet advising parents and children about ways to stop them spreading? What other parasites can live on our bodies?

• Make some hair gel using the following ingredients: 1/2 to 1 teaspoon unflavoured gelatin 1 cup warm water Try different amounts to make the gel firmer as required. Keep it in the fridge and use as a bought gel. You might like to add scents to make it more appealing.

• Research how hairstyles and fashions have changed over the past 200 years. How have they changed and why? Can you find out how hair products have changed as well?

Useful Websites
http://www.hairboutique.com/tips/tip1412.htm
Lots of really useful hair facts.

http://www.headlice.org/
Excellent information all about head lice.

http://www.costumegallery.com/hairstyles.htm
This site will help you learn all about hairstyles through the ages.