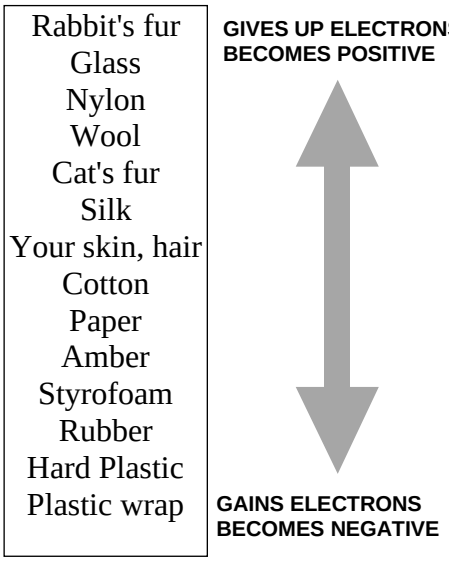
CHARGING BY FRICTION Name **Key**

Some materials tend to accumulate extra electrons on their surfaces; others tend to lose electrons from their surfaces. When two different materials are rubbed together, electrons usually are transferred from one to the other. The list shows which way electrons will be transferred between various materials. Use the list to complete the following:

ACTION	RESULT: Electrons go **From**:	**To**:
Comb hair with rubber comb	**hair**	**comb**
Stroke a cat	**cat**	**hand**
Slide bare feet on nylon carpet	**carpet**	**foot**
Dust plastic furniture surface with cotton cloth	**cotton**	**plastic**



2. Go back to the actions described above and circle the item that will be + after rubbing and box the item that will be − after rubbing.

3. Explain why your hair may rise towards a comb or brush after you have run it through your hair several times.

Electrons have been transferred from your hair to the hard plastic comb. Your positively charged hair is then attracted to the negatively charged comb.

4. A Styrofoam cup could be given a net negative charge by rubbing it with **silk fur amber etc.** (rubber)
It could be rubbed with **hard plastic** (plastic wrap) to give it a net positive charge.

5. The materials on this list ARE (ARE NOT) good electrical conductors. (circle one)