

Topic	Static electricity	Level	For students aged 11-16
Outcomes	Students are able to use models to describe and explain static electricity		

Instructions for teachers: show students what happens when you rub a balloon against hair and pose the question 'what is happening to the hair?'. Allow students to think, pair and share. Students then copy down the table on slide 3 and move around the room using clues 1,2 and 3 to complete the table. Finally the class comes together to discuss what is actually happening and students do the writing task. To really challenge students you can ask them to explain how the balloon 'sticks' to the wall. You may want to introduce atomic structure before you start teaching this lesson.

What is happening to the hair in this picture?

Think | Pair | Share

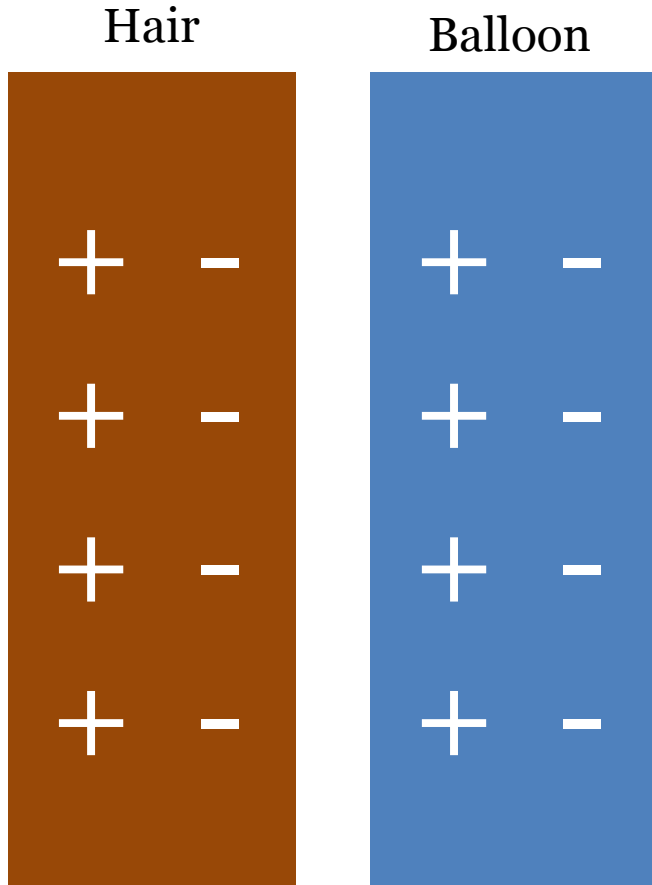


Gathering your information

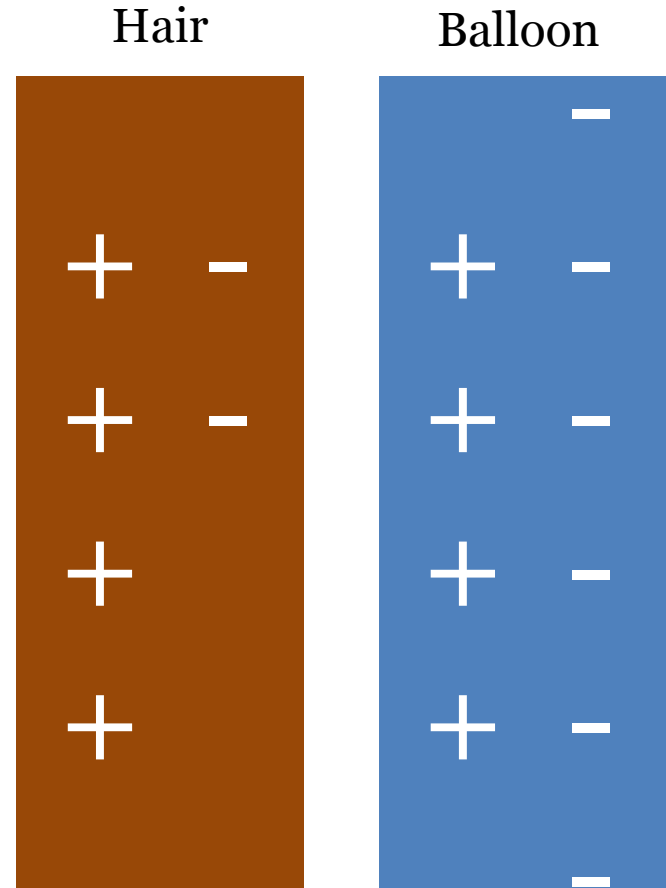
Clue	What does the model tell you about what happened to the hair?
Model 1	
Model 2	
Model 3	

Clue 1!

**Before rubbing the hair
with the balloon**



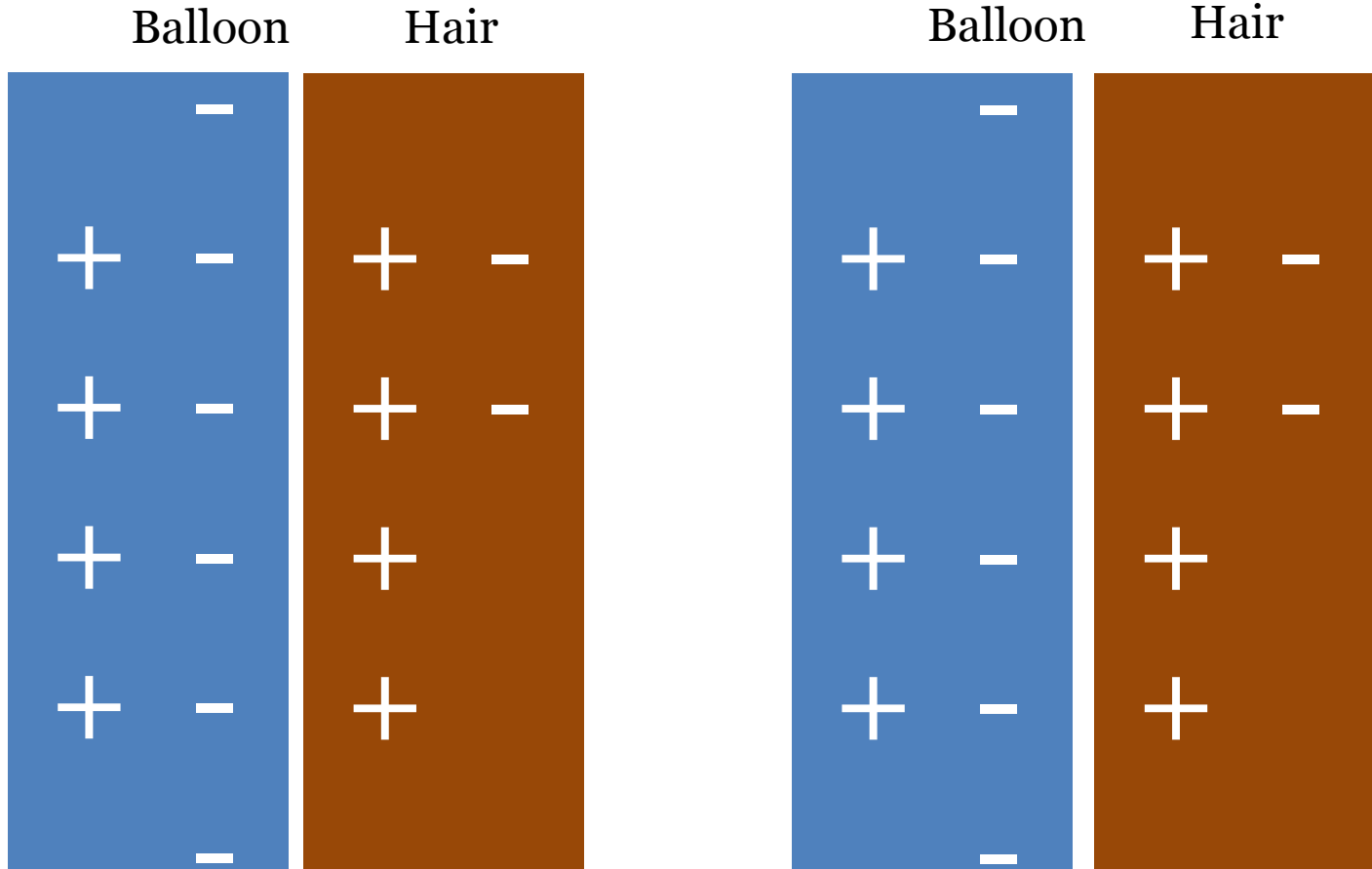
**After rubbing the hair
with the balloon**



Think! What has changed? What caused this change?

Clue 2!

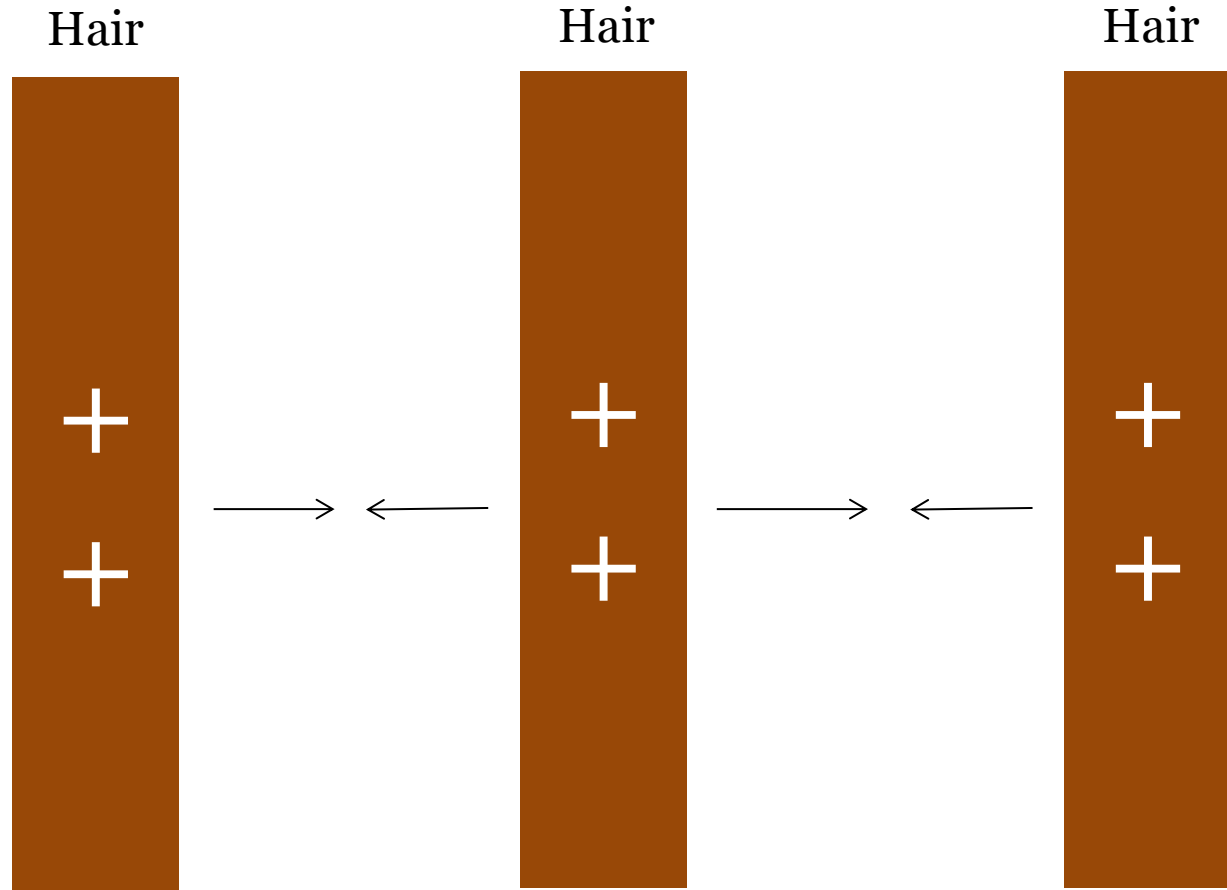
**After rubbing the hair
with the balloon**



Think! Count the charges

Clue 3!

After rubbing the hair
with the balloon



Think! Why are there only + symbols shown in this diagram?

Use the models in clues 1, 2 and 3 to help you explain what is happening to the hair in this picture.

Key words:

Charge

Friction

Transfer

Electrons

Repel

Attract



Think! Why would this not happen if the ladies arms were made of metal?

What is happening to the balloon and the wall in this picture?

Think | Pair | Share



https://phet.colorado.edu/sims/html/balloons-and-static-electricity/latest/balloons-and-static-electricity_en.html