

Static electricity investigation

This task is about critiquing the method used in an investigation.

Sandra did an experiment with static electricity. She ran a comb through her hair ten times and then held it over a pile of small pieces of paper.

She counted the number of pieces the comb picked up. She repeated the experiment three times. Her results were:

Trial	Number of pieces of paper picked up
1	3
2	7
3	5

a) She noticed her results varied quite a bit.

To make her experiment as fair as possible what is the best thing for her to do next?

- Take another reading and see which of the three trials it is nearest.
- Repeat the experiment with another comb.
- Choose the highest reading.
- Do the experiment several more times and average the readings.
- Calculate the average of the three readings.

b) Which of the following factors is most likely to increase the fairness of Sandra's test?

- Possible changes in atmospheric conditions
- Static electricity building up throughout the experiment
- Sandra's decision to comb her hair a set number of times before each trial
- Changing the distance Sandra held the comb above the paper
- Varying the shape of the pile of paper