让纸飞机飞得更远，靠的不是运气：一次实验带给我们的启示

敬爱的老师、亲爱的同学们：大家好！我演讲的题目是《让纸飞机飞得更远，靠的不是运气》。上个月，咱们班举行了纸飞机大赛。我折了一只自认为最帅的飞机，轮到我扔的时候，我用尽全力一掷——它像一块石头，栽在离我三米远的地方。而同桌那只看起来普普通通的飞机，轻轻一转，飞到了教室最后一排。同学们都笑我，有人说我运气不好。可是那天晚上我躺在床上想：真的只是运气吗？

第二天，我把同桌的飞机和我的飞机放在一起，一张一张拆开对比。我发现他的机翼又宽又平，我的机翼窄窄地翘着；他的机头折了好几层，沉甸甸的，我的机头轻飘飘。我把这些不同一条条记下来，然后开始做实验。第一次，我把自己的机翼折宽，飞机从三米飞到了六米；第二次，我在机头多折两层，它稳稳地滑到了九米；第三次，我把两个改动合在一起，它撞上了黑板。我这才明白，不是改得越多越好，两个改动加在一起，飞机太重了。于是我只保留机头的配重，把机翼调回原来的宽度，第七次试飞，它飞过了整个教室，落在最后一排的桌脚旁。

从三米到教室尽头，我一共试了七次。这七次里没有一次靠运气，每一次都是改一个地方、扔一次、看结果、再改下一个。实验教会我的道理，比名次重要得多：猜一百次，不如做一次；输了不要怪命，要把输的原因一条条拆出来。

同学们，我们每天都会有那么多为什么：为什么他的飞机飞得远？为什么盐化在水里糖却化得慢？为什么影子早上长中午短？这些问题，光靠猜是猜不出来的，光靠问别人，答案也是别人借给你的。只有自己的手才能给自己一个真正的答案。所以我倡议：第一，遇到疑问，先想一个办法自己动手验证，哪怕只是两杯水、一张纸；第二，做实验时一次只改一个地方，不然你不知道是哪一步帮了你；第三，把失败的那几次也记下来，它们和成功一样珍贵。下学期，我们全班再来一场纸飞机大赛，用实验说话，不用运气说话。

同学们，把手举起来，把纸拿出来，把疑问交给实验去回答。你会发现，科学的大门不锁着，它一推就开，而推门的力气，就在我们小小的手里。谢谢大家！

Making a Paper Plane Fly Farther Is Not Luck: Lessons from One Experiment

Respected teachers, dear fellow students: good morning! My speech is titled Making a Paper Plane Fly Farther Is Not Luck. Last month our class held a paper plane contest. I folded a plane I thought was the coolest of all, and when my turn came I threw it with all my strength — it dropped like a stone three meters away. My deskmate's plain-looking plane, given a gentle toss, glided all the way to the last row. Everyone laughed at me. Some said my luck was bad. But that night, lying in bed, I asked myself: was it really just luck?

The next day I put his plane and mine side by side and unfolded them one by one to compare. His wings were wide and flat; mine were narrow and curled up. His nose

was folded many times over, heavy and solid; mine was light and airy. I wrote down every difference, then began experiments. First try: I widened my wings, and the plane went from three meters to six. Second try: I added two more folds to the nose, and it glided steadily to nine meters. Third try: I combined both changes — and it crashed into the blackboard. That taught me more changes are not better changes: together they made the plane too heavy. So I kept only the nose weight, returned the wings to their original width, and on the seventh test flight it crossed the entire classroom and landed by the feet of the last-row desk.

From three meters to the far end of the room, I made seven attempts. Not one of them relied on luck. Each one changed a single thing, threw, watched the result, then changed the next. The lesson the experiment taught me matters far more than the ranking: guessing a hundred times is worth less than doing it once; when you lose, do not blame fate — take the reasons apart one by one.

Fellow students, every day we carry so many whys: why does his plane fly farther? Why does salt vanish in water while sugar is slower? Why are shadows long in the morning and short at noon? Guessing will never answer these, and asking others only borrows their answers. Only your own hands can give you an answer that is truly yours. So I propose: first, when a question appears, think of a way to test it yourself, even if it takes just two cups of water or one sheet of paper; second, change only one thing at a time, or you will never know which change helped; third, write down the failed attempts too — they are as precious as the successes. Next term, let the whole class hold a rematch of paper planes, and let experiments speak instead of luck.

Students, raise your hands, take out your paper, and hand your questions over to experiments to answer. You will find that the door of science is not locked. It opens with a push, and the strength to push it lies right in our small hands. Thank you!