没有喷发的火山，和第二次机会

白醋倒进去的那一刻，我们全组都屏住了呼吸。可是杯子里只冒出几颗细小的泡泡，没有泡沫涌出来，更没有顺着山坡往下流。前排有人小声说：失败了。我盯着那座捏了半节课的火山，指尖还沾着没干的浆糊。

火山模型是上午做的。我们先用报纸团出一个瘦高的锥形骨架，一层层缠上胶带，再糊上从花坛边挖来的黏土。我负责山顶，把杯口修成一个规整的圆，用湿黏土把杯壁和山坡之间的缝抹严实。同桌笑我抹得认真，我说，火山漏气就不是火山了。黏土糊得厚薄不均，干下去以后裂了几道细缝，我们又拿湿泥补了一遍，等到表面发白才敢往里面放东西。

加小苏打的时候大家都想抢那把勺子。最后按人头发，一人一勺，五勺倒进杯底，粉末堆成小小的一座白雪山。我顺手捏了一小撮红色颜料粉按在顶上，想着等它喷出来，颜色要像真的岩浆。

问题出在倒醋上。第一次是组长倒的，他手快，半瓶醋一口气冲下去，又高又急。我后来蹲下去看杯子里的情况：粉末被冲得贴在杯壁上，醋积在杯底，安安静静地冒泡，像一杯放久了的汽水。我忽然想起科学老师提过一句，反应要攒够了气才有劲。我们把杯里的残液小心倒掉，重新加了两勺小苏打。这一次我扶着瓶口，先沿着杯壁慢慢渗进去一点，等杯里滋滋响起来、顶起一层白沫，再把剩下的醋全部倒下去。

泡沫是从山顶鼓出来的，先是一个圆顶，然后裂开，红色的沫子一股一股往外涌，顺着黏土的山坡淌下来，淌过我们画的那条小河。教室里炸开了，我们组叫得最响。科学老师走过来，看了一眼表，说从第一次失败到喷发，你们用了四分钟。

后来我常在想，如果第一次没喷出来我们就把杯子收走，那座火山在成绩单上就只是一次失败。可动手实践本来就不是照着步骤走一遍就算完。气要攒够才会喷，这句话我记住了，不只是说给小苏打和醋听的。

The Volcano That Did Not Erupt, and the Second Chance

The moment the vinegar went in, our whole group held its breath. But only a few tiny bubbles rose inside the cup. No foam surged out, and nothing ran down the slope. Someone in the front row whispered: it failed. I stared at the volcano we had shaped for half a class period, paste still drying on my fingertips.

We built the model in the morning. First we crumpled newspaper into a tall, narrow cone, wrapped it layer by layer with tape, then coated it with clay dug from the edge of the flower bed. I was in charge of the summit. I trimmed the rim of the cup into a neat circle and sealed the gap between the cup wall and the slope with wet clay. My deskmate laughed at how careful I was. I said a leaking volcano is no volcano at all. The clay dried unevenly and cracked in a few thin lines, so we patched it with wet mud again and waited until the surface turned pale before we

dared to put anything inside.

Everyone wanted the spoon when it came time to add the baking soda. In the end we went by turns, one spoonful each, five spoonfuls piled into the bottom of the cup like a small white snow mountain. I pressed a pinch of red pigment powder on top, thinking that when it erupted, the color should look like real lava.

The problem was in how we poured the vinegar. Our group leader poured the first time. He was in a hurry and dumped half the bottle in one go, high and fast. Later I crouched down to look inside the cup: the powder had been washed flat against the wall, the vinegar pooled at the bottom, bubbling quietly like a soda left out too long. It suddenly hit me that our science teacher had once said a reaction needs to gather enough gas before it can push hard. We carefully poured out the leftover liquid and added two more spoonfuls of baking soda. This time I held the bottle at the rim and let the vinegar seep slowly down the inner wall first. When the cup began to hiss and a white foam lifted on top, I poured in the rest.

The foam bulged out of the summit, first as a round dome, then it split, and red froth pushed out in waves, running down the clay slope, running over the little river we had painted on it. The classroom erupted. Our group shouted the loudest. The science teacher walked over, glanced at his watch, and said: from the first failure to the eruption, you took four minutes.

I often think about it since. If we had cleared the cup away after the first failure, that volcano would have been nothing but a failure on the record. But hands-on practice was never about following the steps once and calling it done. Gas must gather before it can erupt. I remember that sentence, and it is not only about baking soda and vinegar.