科学小组的周五下午

带班的第五年，我在教室后排支起了一个小小的科学小组，八个孩子，每周五放学后留一小时。家长群里有人担心耽误学习，我没辩解，只把每周五的照片发进群里。照片里那些仰起的脸，比什么解释都管用。

这周的主题是溶解。材料是我提前一周就开始攒的：方糖、粗盐、奶粉、洗衣粉、几块肥皂头，还有六个透明杯和一支温度计。孩子们一到就围上来，像一群侦察兵清点粮草。我让他们自己列单子：要研究什么、需要什么、怎么倒、怎么搅。有个男孩郑重地写下：老师，搅拌的筷子要一样粗，不然不公平。

实验开始了。方糖在热水里化得飞快，粗盐沉在杯底打盹，奶粉一入水就腾起一团白雾。孩子们轮流搅拌，杯壁上全是小漩涡。忽然靠窗的座位爆发出一声惊叹：老师！洗衣粉的水是温的！我跑过去摸，果然，杯壁微微发热。六个杯子前，六双眼睛一齐亮起来，那种亮，是课本翻页声里永远听不到的动静。

我们没有放过这个意外。我拿出平板，跟孩子们一起查溶解吸热和放热的资料。他们看得极慢，一个字一个字地念，念到氢氧化钠会放热时，那个写公平筷子的男孩举手：老师，所以洗衣粉里也有那种东西？我们顺着往下查，查到洗衣粉成分表，查到溶解时热量跑进跑出。一小时到了，没人走，最后是家长在走廊喊了三声才散。

锁门前我擦着桌子，忽然想起自己小学时的科学老师。他也是这样陪我们瞎折腾的，折腾得我一辈子看见糖水就想去搅一搅。原来教育可以这样传下来，不靠讲义，靠的是那一小时里共同弯下的腰。

我在小组记录本上写下这一页：本周五，发现洗衣粉的水会发热，全班震惊，查资料半小时。写完我又加了一句：下次让他们自己带材料。当老师这些年，我越来越相信，孩子惊叹的那一声，就是课堂真正的上课铃。

Friday Afternoons with the Science Club

In my fifth year as a homeroom teacher, I set up a tiny science club at the back of the classroom: eight children, staying one hour every Friday after school. Some parents worried in the group chat that it would hurt grades. I did not argue; I simply posted photos from each Friday into the chat. The upturned faces in those photos explained better than any argument.

This week's theme was dissolving. The materials I had been collecting for a week: sugar cubes, coarse salt, milk powder, laundry powder, a few soap ends, six clear cups, and a thermometer. The children swarmed in the moment they arrived, like scouts inventorying supplies. I asked them to make their own list: what to study, what is needed, how to pour, how to stir. One boy wrote solemnly: Teacher, the stirring sticks must be the same thickness, otherwise it is not fair.

The experiment began. Sugar cubes melted fast in hot water, coarse salt dozed at the bottom of its cup, and milk powder rose into a white cloud the instant it met water. The children took turns stirring, little whirlpools spinning on the cup walls. Suddenly the seat by the window erupted: Teacher! The laundry powder water is warm! I ran over and touched it - indeed, the cup wall was faintly hot. Six pairs of eyes lit up at once across six cups, a brightness that the sound of turning textbook pages never produces.

We did not let the accident go. I brought out the tablet and looked up dissolving heat absorption and release together with them. They read extremely slowly, word by word, and when they reached the line that sodium hydroxide releases heat, the boy who wrote about fair sticks raised his hand: Teacher, so laundry powder has that stuff in it too? We followed the trail - to the ingredient list of laundry powder, to heat running in and out during dissolving. The hour ended and nobody left; finally a parent shouted three times down the hallway before they dispersed.

Before locking up I was wiping the desks when I suddenly remembered my own primary school science teacher. He too had accompanied us in such wild tinkering, tinkering so thoroughly that a lifetime later I still want to stir any glass of sugar water I see. So education can be passed down like this - not through handouts, but through the bent backs of one shared hour.

In the club logbook I wrote the page: This Friday, discovered that laundry powder water turns warm; the whole class stunned; thirty minutes of research. Then I added one line: next time let them bring their own materials. These years of teaching, I believe more and more that a child's cry of wonder is the real school bell of any classroom.