立起来的鸡蛋，和我先跳了起来

十月十八日 星期六 晴

这周科学老师布置了一个任务：回家让一个生鸡蛋自己站起来。我一到家就把书包扔到沙发角上，跑去厨房准备材料：冰箱里挑一个生鸡蛋，一个平盘子，一小碟盐，还有一杯水。我把这几样东西在桌上摆开，觉得自己像个正经做实验的人。

我把鸡蛋往盘子里放，两只手扶着，慢慢松手，它啪一下躺倒了，还转了个圈。再来一次，又躺倒。第三次它滚出了盘子，撞到桌脚，吓我一跳，我赶紧蹲下去看，蛋壳没裂，才放心。鸡蛋趴在桌上，像睡着一样的，怎么都不肯为我起来。

我想起老师提过一句小窍门：可以用盐。我在盘子里撒了一小堆盐，把鸡蛋立在盐堆上，特别特别慢地松手。鸡蛋晃了两下，站住了！盐粒像许多小脚，托着它的底。我盯着它，连气都不敢出，等我把气吐出来，它还站着。

我没停。我往杯子里倒盐，搅啊搅，水都变浑了。再把立起来的鸡蛋放进盐水里，它一开始沉在杯底，后来慢慢地、慢慢地往上浮，浮到露出了头顶，像小鸡从蛋里探出脑袋。我数了数手指头，一共加了六勺盐。

我跑到门口喊妈妈，声音大得邻居家的狗都叫了两声。妈妈以为我摔了，跑过来，我拉她到桌前，让她蹲下来看那个立着的鸡蛋。妈妈说，哇，怎么做到的？我说，盐帮它站起来，盐水帮它浮起来，水里的盐有力气，托着鸡蛋。妈妈给我竖了大拇指，我比考了一百分还神气。

晚上爸爸回来，我又给他表演了一遍。这回我贪快，盐撒得太少，鸡蛋又倒了。我重新补了一撮盐，它才站稳。爸爸笑我，说实验还带彩排砸的。我说不是砸，是我发现盐少了不行，多了倒没关系，这个是我自己试出来的，书上没写。

睡觉前我把这些写进日记。鸡蛋那么圆，自己站不起来，可盐堆在底下一垫，它就站起来了。我想，我大概也一样，做不到的事不是我不行，是我还没找到那堆盐。

The Egg Stood Up, and I Jumped First

Saturday, October 18. Sunny.

This week our science teacher gave us a task: go home and make a raw egg stand up by itself. The moment I got home I threw my schoolbag into the corner of the sofa and ran to the kitchen to get my materials: one raw egg from the fridge, a flat plate, a small dish of salt, and a glass of water. I lined these things up on the table and felt like a real person doing a real experiment.

I placed the egg on the plate, held it with both hands, let go slowly, and it flopped over and spun around. I tried again, and it flopped again. The third time it

rolled off the plate and bumped into the table leg, and I nearly screamed. I crouched down to look: the shell was not cracked. What a relief. The egg lay on the table as if it had fallen asleep, and it refused to get up for me.

Then I remembered a hint the teacher once gave: use salt. I sprinkled a little pile of salt on the plate, stood the egg on the salt, and let go very, very slowly. The egg wobbled twice, and it stood. The grains of salt held its bottom like many tiny feet. I stared at it and did not dare to breathe, and when I finally breathed out, it was still standing.

I did not stop there. I poured salt into the glass of water and stirred until the water turned cloudy. Then I put the standing egg into the salt water. At first it sank to the bottom, and then it floated up, slowly, slowly, until the top of it showed above the water, like a chick poking its head out of the shell. I counted on my fingers: six spoonfuls of salt.

I ran to the door and shouted for Mom, so loud that the neighbor dog barked twice. Mom thought I had fallen and came running. I pulled her to the table and made her crouch down to look at the standing egg. She said, wow, how did you do it? I said, the salt helped it stand, and the salt water helped it float. There is strength in the water now, holding the egg up. Mom gave me a thumbs-up, and I felt prouder than when I scored one hundred on a test.

When Dad came home at night, I performed the whole thing for him again. This time I was in a hurry and used too little salt, and the egg fell over. I added another pinch of salt, and only then did it stand firm. Dad laughed and asked whether experiments come with rehearsal failures. I said it was not a failure: I discovered that too little salt does not work, while too much is fine. I found that out by myself, and it is not written in any book.

Before bed I wrote all of this in my diary. The egg is so round that it cannot stand by itself, but with a pile of salt under it, it stands. I think I am the same. When I cannot do a thing, it is not because I am no good. It is because I have not found my pile of salt yet.

彩虹住进了我的杯子

十一月三日 星期三 多云转晴

今天放学路上我就在想实验的事，因为科学书上看到一个彩虹牛奶的实验，我想今晚就做。一回家写完作业，我就开始准备材料：一盒全脂牛奶，盘子要平的那种，红黄蓝三瓶食用色素，

几根棉签，还有一小瓶洗洁精。我把东西一样一样摆上桌，数了一遍，齐了，就开工。

我先往盘子里倒牛奶，倒得小心翼翼，生怕洒出来挨说。牛奶铺了盘底一层，白白的，平平的，什么动静都没有。我在牛奶上滴色素，红的三滴，黄的三滴，蓝的三滴，它们安安静静待在原地，像三朵小云彩落错了地方，掉进了白棉花里。这时候什么都不会发生，我有点紧张，手心都出汗了。

关键的一步来了。我拿棉签，一头蘸了一点点洗洁精，屏住呼吸，把棉签轻轻点进牛奶正中间。就一下。颜色轰的一下炸开了！红的黄的蓝的往四边跑，跑着跑着又卷起来，转成旋涡，一个叠一个，盘子里像刮起了彩色的风。我啊地叫出声，赶紧又点第二下、第三下，颜色就跟着棉签跑，我点到哪儿它们追到哪儿。我玩了好多下，盘子变成了一整片会动的彩虹。

我跑去客厅拉妈妈，她正叠衣服，被我拽过来，低头一看，咦了一声。我说妈妈你看，颜色会跑！妈妈问为什么呀。我说，牛奶表面本来有一层紧紧的、手拉着手的东西，洗洁精一来，把它们推开了，它们一跑，就带着颜色一起搬家了。这是我今天从书上查到的词，叫表面张力。妈妈笑着说，你这是变魔术吧。我说不是魔术，是实验，魔术是骗人的，实验是真的。

后来我把盘子端到窗台上看，彩虹还在慢慢转。我想到一件事：牛奶白白平平的时候，什么故事都没有；点一下，故事就全跑出来了。原来安静的东西里面藏着这么多动静，就差一小点洗洁精。

今天真好玩。我要把这个实验留着，下个月科学课上表演给全班看。

A Rainbow Moved Into My Cup

Wednesday, November 3. Cloudy turning sunny.

On my way home from school I was already thinking about experiments, because in my science book I saw one called rainbow milk, and I decided to do it tonight. As soon as I got home and finished my homework, I started getting the materials ready: a carton of whole milk, a plate with a flat bottom, three bottles of food coloring in red, yellow and blue, a few cotton swabs, and a small bottle of dish soap. I laid everything out one by one, counted them, all present, and got to work.

First I poured milk into the plate, very carefully, afraid of spilling and getting scolded. The milk covered the bottom in a white, flat layer, with no movement at all. Then I dropped in the coloring: three drops red, three drops yellow, three drops blue. They sat quietly where they landed, like three little clouds that fell into white cotton by mistake. Nothing happened yet, and I got a little nervous, my palms even sweaty.

Then came the key step. I took a cotton swab, dipped one end in a tiny bit of dish soap, held my breath, and touched it gently to the center of the milk. Just

once. The colors exploded outward! Red, yellow and blue rushed to the edges, then curled around into whirlpools, one on top of another, as if a colored wind were blowing across the plate. I shouted out loud, then touched the milk a second time, a third, and the colors chased the swab wherever I pointed. I did it many times, and the plate became one moving rainbow.

I ran to the living room and pulled Mom. She was folding laundry and got dragged over. She looked down and gasped. I said, Mom look, the colors are running! She asked why. I said, the surface of milk is like a tight skin where everything holds hands, and when dish soap comes along it pushes them apart, and as they run they carry the colors with them, like a moving day. That is the word I looked up today: surface tension. Mom laughed and said it looks like magic. I said it is not magic, it is an experiment. Magic tricks people; experiments are real.

Later I carried the plate to the windowsill, and the rainbow was still slowly turning. I thought of something: when the milk was white and flat, there was no story at all; one touch, and the whole story ran out. So much movement hides inside quiet things, waiting for just a little dish soap.

Today was truly fun. I am saving this experiment to perform for the whole class at science next month.

气球吸起了碎纸屑

十二月二日 星期四 阴有小雪

今天外面冷，放学回家我哪儿都不想去，就想做科学作业里那个吸纸屑的实验。我在客厅茶几上准备材料：一个气球，几张旧报纸，一把塑料尺，还有我自己身上这件粗毛衣。材料不多，我数了两遍，怕少带一样做不成。报纸是我撕的，撕成指甲盖那么大的小片，堆在茶几中间，像一小堆雪。

我把气球吹大，扎住口。先试了一下没蹭过毛衣的气球：把气球靠近纸屑，纸屑躺着不动，一点面子都不给。我又拿塑料尺在头发上蹭了蹭去吸，也只吸起来两片，还马上掉了。我心里想，难道书上写错了？

然后我照书上的办法，把气球在毛衣上蹭，一下、两下……我数到二十下，越蹭越快，气球表面蹭得有点发热。我把气球慢慢靠近那堆纸屑，不敢碰它们，就停在上面一寸的地方。纸屑动了。先是两三片跳起来，贴在气球底下，接着哗一下，一大半纸屑都往上跳，像有一双看不见的手从下面把它们托起来。我举着气球走，纸屑跟着我走，掉下去的又再跳上来。我乐得在客厅转圈，气球像拖着一串小尾巴。

我把妈妈从厨房喊出来。妈妈手上还拿着锅铲，她问我怎么了，我把气球举到她面前，底下

挂着一排纸屑。我说妈妈你看，气球吸住纸了！妈妈说哪有吸力，你偷偷抹糨糊了吧。我说才没有，我摘给你看。我把纸屑抖掉，重新在毛衣上蹭二十下，又在妈妈眼前吸起来。妈妈哦了一声，说这下信了。我说这叫静电，毛衣和气球互相蹭，气球身上就攒了电，电把轻的纸屑拽上来，重的书它拽不动，我还试过，吸不起来。

我还发现塑料尺蹭头发也能吸，就是吸得少，蹭十下只吸起来三四片。我把这个也写进日记。原来电这个东西，头发里也有，毛衣里也有，平时看不见，一蹭就跳出来干活。

今天手有点忙，心里很满。明天我想蹭三十下试试，会不会吸得更多。

The Balloon Picked Up the Paper Bits

Thursday, December 2. Cloudy with light snow.

It was cold outside today, and after school I did not want to go anywhere. I just wanted to do the paper-picking experiment from our science homework. I set up my materials on the living room table: one balloon, some old newspapers, a plastic ruler, and the chunky sweater I was already wearing. Not many materials, and I counted them twice, afraid that missing one thing would ruin it. I tore the newspaper myself into pieces the size of a fingernail and piled them in the middle of the table, like a little heap of snow.

I blew up the balloon and tied it. First I tried the balloon without rubbing it on anything: I brought it near the paper bits, and they lay there, not giving me a single bit of face. Then I rubbed the plastic ruler on my hair and tried that, but it only picked up two pieces, and they fell right off. I started to wonder, is the book wrong?

So I did what the book said. I rubbed the balloon on my sweater: one time, two times, and I counted to twenty, rubbing faster and faster until the balloon felt a little warm. I moved it slowly toward the pile of paper, not touching, stopping one inch above. The paper moved. First two or three pieces jumped up and stuck to the bottom of the balloon, then whoosh, most of them jumped, as if a pair of invisible hands were lifting them from below. I walked around holding the balloon, and the paper walked with me; the pieces that fell jumped back up again. I spun around the living room laughing, the balloon dragging a little train of paper behind it.

I shouted Mom out of the kitchen. She still had the spatula in her hand and asked what was wrong. I held the balloon in front of her with a row of paper hanging under it. I said, Mom look, the balloon is holding the paper! She said there is no such pulling force, you must have secretly smeared paste. I said no way, watch me redo it. I shook the paper off, rubbed the balloon twenty times on my sweater again, and

picked the paper up right in front of her eyes. Mom said oh, and believed me. I said this is called static electricity. When the sweater and the balloon rub each other, the balloon collects electricity, and the electricity pulls up light paper. It cannot pull up a heavy book; I tried, and it failed.

I also found that the plastic ruler rubbed on hair works too, just weaker: ten rubs picked up only three or four pieces. I wrote that in my diary as well. So electricity hides in hair and in sweaters all the time, invisible, until a little rubbing calls it out to work.

My hands were busy today, and my heart is full. Tomorrow I want to try thirty rubs and see if it picks up even more.