把心里的为什么，说给国旗听

尊敬的老师们、亲爱的同学们：早上好！今天我们在国旗下讲话，我演讲的题目是《把心里的为什么，说给国旗听》。站在这面鲜艳的五星红旗下，我想先问大家一个问题：你的心里，是不是也藏着一个为什么？为什么指南针的针总是指着北方？为什么秋天的叶子会变黄？为什么操场上的影子早上长、中午短？这些小小的为什么，就是科学递给我们的请柬。

我先讲一个发生在我们学校里的实验故事。上学期，三年级的一位同学在自然课上发现，手里的指南针无论怎么转，停下来时针尖总朝着同一个方向。她没有满足于老师告诉她的答案，而是做了一件了不起的事：她连续二十一天，每天放学后在操场同一个位置测量指南针指向，用粉笔画线记录，还借来一块磁铁放在旁边，看针会不会被带偏。二十一天后，她的记录本画满了线，也写满了发现：磁铁离得越近，针偏得越厉害；拿走磁铁，针又慢慢回到北方。全班同学在她的记录本前围了一圈，校长知道后，请她在升旗仪式上向全校汇报。一个小小的为什么，就这样变成了一次了不起的探究。

同学们，这个故事里藏着科学精神的三个词。第一个词是好奇。那位同学最了不起的地方，不是她发现了什么，而是她肯多问那一句为什么。第二个词是验证。她没有停在疑问上，而是用二十一天的测量去回答它。第三个词是坚持。一天两天容易，二十一天不容易，科学的门，往往要用坚持才能推开。好奇、验证、坚持——这六个字，比任何一次考试分数都更接近科学的模样。

今天，在国旗下，我代表全体同学向全校发出号召：第一，请珍视你的每一个为什么。它不是麻烦，是你和科学家之间唯一的相同点。第二，请动手回答你的为什么。问家长、查图书、做小实验，用自己的手去验证，别只等别人给你答案。第三，请把你的发现讲出来。像那位三年级的同学一样，让一个人的发现点亮五十个人的眼睛。学校也将开放科学实验室，每周三下午，欢迎同学们带着自己的为什么去提问、去实验。

同学们，五星红旗在风里飘扬，它在看着我们：看我们是不是敢想、敢问、敢做的一代。愿我们每个人都把心里的为什么，说给国旗听，说给实验听，说给每一天认真生活的自己听。愿好奇心像这面红旗一样，在我们心中永远高高升起。我的讲话完毕，谢谢大家！

Tell the National Flag the Whys Inside Your Heart

Respected teachers, dear fellow students: good morning! Today we speak beneath the national flag, and my title is Tell the National Flag the Whys Inside Your Heart. Standing under this vivid Five-Star Red Flag, let me first ask you a question: do you, too, keep a why hidden inside your heart? Why does the needle of a compass always point north? Why do leaves turn yellow in autumn? Why are shadows on the playground long in the morning and short at noon? These small whys are invitations science hands to each of us.

Let me tell you an experiment story that happened in our own school. Last term, a

third-grader noticed in nature class that no matter how she turned the compass in her hand, the needle always stopped facing the same direction. She did not settle for the answer the teacher gave. She did something remarkable: for twenty-one days in a row, after school she measured the compass direction at the same spot on the playground, recording it with chalk lines, and she borrowed a magnet to place beside it, watching whether the needle would swing away. After twenty-one days, her notebook was covered with lines and discoveries: the closer the magnet, the farther the needle strayed; take the magnet away, and the needle slowly returned to north. The whole class gathered around her notebook, and when the principal heard, he invited her to report to the entire school at the flag-raising ceremony. One small why had become a remarkable inquiry.

Fellow students, that story hides three words of the scientific spirit. The first is curiosity. What was most admirable about that classmate was not what she discovered, but that she dared to ask one more why. The second is verification. She did not stop at the question; she answered it with twenty-one days of measurement. The third is persistence. One day or two is easy; twenty-one days is not. The door of science is often pushed open only by persistence. Curiosity, verification, persistence — these six characters come closer to the true face of science than any exam score.

Today, beneath the flag, on behalf of all students I issue a call to our whole school: First, treasure every why you have. It is not a nuisance; it is the only thing you share with a scientist. Second, answer your whys with your hands. Ask parents, look up books, run small experiments — verify with your own hands instead of waiting for answers. Third, speak your discoveries out loud, like that third-grader, letting one discovery light up fifty pairs of eyes. Our school will also open the science laboratory every Wednesday afternoon; bring your whys there to ask and to test.

Fellow students, the Five-Star Red Flag flutters in the wind, and it is watching us — watching whether we are a generation that dares to think, to ask, and to act. May each of us tell the national flag the whys in our hearts, tell them to experiments, tell them to the self who lives each day earnestly. May curiosity rise high forever in our hearts, like this red flag. That concludes my speech. Thank you!

铃声消失的那一分钟，好奇心被点亮

老师们、同学们：早上好！今天我在国旗下讲话，题目是《铃声消失的那一分钟，好奇心被点亮》。清晨的国歌刚刚奏完，五星红旗正在升起。我想借这庄严的一刻，和大家谈一件同样庄

严的小事——好奇心。

先讲一个让我们全班屏住呼吸的实验故事。上个月科学课上，老师把一个正在响的小电铃放进玻璃罩，接通抽气机。铃声原本清脆，可随着机器嗡嗡地往外抽气，那声音越来越小、越来越远，像被谁慢慢捂住了嘴。最后，铃声几乎消失了——我们明明看见电铃的小锤还在一下一下地敲，却几乎听不见声音。教室里安静得能听见抽气机的喘息。老师放开阀门，空气涌回去，铃声又一点点回来了。那一分钟，没有一个人说话，可我知道，每个人心里都亮了一盏灯：声音原来要靠空气走路，真空里没有空气，声音就走不动了。这个看不见、摸不着的道理，就藏在一分钟安静的铃声里。

同学们，这个实验让我们懂得的科学精神，有三层。第一层，是敢于提问。声音为什么会消失？这个问题听起来很小，可所有大科学家的第一步，都和小问题一样小。第二层，是敢于猜想。当时有同学猜是不是电铃坏了，有同学猜是不是耳朵出了问题——猜想没有对错，敢说出来就是科学的态度。第三层，是小心求证。老师没有直接宣布答案，而是把空气放回去再听一次：声音回来了，说明电铃没坏，坏的只是路——空气这条路被抽走了。一次实验，胜过一百句讲解。

在此，我向全校同学发出三点号召。第一，做问题的收藏家。准备一个小本子，把每天冒出来的为什么记下来，一个月以后回头看，你会惊讶自己拥有过那么多珍贵的疑问。第二，做猜想的大胆者。课堂上、家里，把心里的猜想大声说出来，说错了不丢人，不敢说才可惜。第三，做求证的小小行动家。一片放大镜、一杯水、一只手电筒，就能验证许多猜想；学校科学社团每周四开放，欢迎带着问题来，用实验给自己一个答案。我们也请老师们多留一分钟安静，等一等我们心里那盏刚亮的灯。

同学们，铃声会在真空里消失，但好奇心一旦点亮，就不该被任何真空熄灭。愿我们在这面红旗下，人人都做眼睛发亮、心里发问、手上做事的少年。让好奇心带我们探索，直到今天小小的为什么，长成明天大大的发现。我的讲话完毕，谢谢大家！

The Minute the Bell Fell Silent, Curiosity Was Lit

Teachers and fellow students: good morning! Today my speech beneath the flag is titled The Minute the Bell Fell Silent, Curiosity Was Lit. The national anthem has just finished; the Five-Star Red Flag is rising. In this solemn moment, I want to speak with you about another solemn little thing — curiosity.

First, an experiment story that made our whole class hold its breath. Last month in science class, the teacher placed a small ringing electric bell inside a glass jar and switched on the vacuum pump. The bell had been bright and clear, but as the machine hummed and pulled the air out, the sound grew fainter and fainter, farther and farther, as if someone were slowly covering its mouth. In the end the ring nearly vanished — we could plainly see the little hammer still striking, strike after strike, yet we could barely hear it. The classroom was quiet enough to hear the pump breathing. Then the teacher released the valve; air rushed back in, and the sound

returned little by little. For that one minute nobody spoke, yet I knew a lamp had lit inside every heart: sound needs air to walk on; in a vacuum there is no air, so sound cannot travel. This invisible, untouchable truth was hidden inside one minute of silent bell.

Fellow students, the scientific spirit in that experiment has three layers. The first is daring to ask. Why did the sound disappear? The question sounds small, but every great scientist's first step was exactly as small. The second is daring to hypothesize. Some classmates guessed the bell was broken; others guessed their ears were at fault — hypotheses have no right or wrong, and speaking one out loud is already a scientific attitude. The third is careful verification. The teacher did not announce the answer; she let the air back in and listened again. The sound returned, which meant the bell was fine — what had been taken away was the road, the road called air. One experiment beats a hundred explanations.

So I call on our whole school in three ways. First, be collectors of questions. Keep a small notebook, write down every why that appears each day, and a month later you will be amazed at how many precious questions you once owned. Second, be bold proposers of guesses. In class and at home, say your hypotheses out loud; being wrong is no shame — staying silent is. Third, be little actors of verification. A magnifying glass, a cup of water, a flashlight can test many guesses; the school science club opens every Thursday — bring your questions and let experiments answer them. We also ask our teachers to keep one minute of silence now and then, and wait for the small lamp just lighting in our hearts.

Fellow students, a bell's sound can vanish in a vacuum, but once curiosity is lit, no vacuum should ever put it out. Under this red flag, may every one of us be a young person with shining eyes, a questioning heart, and a busy pair of hands. Let curiosity lead us to explore, until today's small whys grow into tomorrow's great discoveries. That concludes my speech. Thank you!

背对太阳，也能把彩虹请出来

尊敬的老师们、亲爱的同学们：早上好！今天我国旗下讲话的题目是《背对太阳，也能把彩虹请出来》。同学们，雨后的彩虹人人爱看，可是有人想过吗：彩虹能不能不靠下雨，由我们自己造出来？三个月前的一个下午，我们班的同学就真的在操场上，造出了一道小小的彩虹。

那天体育课自由活动时，一位同学拿着喷水壶朝空中浇水雾，忽然喊：快看，有彩虹！好几个同学围过去，果然，水雾里挂着一小段七彩的弧。可是第二天大家再去喷，彩虹不见了。为什么昨天有、今天没有？同学们你一言我一语：有人说太阳的位置不一样，有人说风把雾吹散了，

还有人说，也许要背对着太阳才看得见。科学老师听说后，把我们的疑问变成了全班的大任务。我们分小组连续观察了一周：背对太阳喷、侧着身子喷、上午喷、傍晚喷，把每次能不能看到彩虹、太阳在什么位置，全都记在记录单上。一周以后结论浮出来了：要背对太阳、太阳低低的、水雾细细的，三个条件都满足，彩虹才会出现。后来我们还在自然课上验证了它的原理——白光里藏着七种颜色，小水珠把光拆开，彩虹就出来了。从一声惊喜的喊，到一条被我们亲手验证的规律，只隔着一周的好奇。

同学们，这道小小的彩虹，教会我们三件关于科学精神的事。第一，好奇是起点。如果那天没有人多问一句为什么昨天有今天没有，彩虹就只是一次好运。第二，观察要讲证据。我们不是猜出答案的，是用一周的记录单把答案请出来的。第三，科学属于每一个人。造彩虹不需要昂贵的仪器，只需要一只喷水壶、一片阳光和一颗不肯走开的好奇心。

今天，在庄严的国旗下，我代表全体同学向全校发出号召：愿我们做追光的人，也做造光的人。第一，遇到惊奇，多留一步。看见彩虹、看见影子、看见水洼里的油花发亮，别急着走开，停下来问一句为什么。第二，把疑问交给观察和实验。用记录单、用对比、用重复，让事实开口说话。第三，把好奇分享出去。学校下个月将举办校园科学节，每个班都可以展示一个小实验，欢迎同学们把自家的喷水壶、放大镜、小磁铁带来，让全校一起造彩虹、一起提问题。也欢迎老师们加入，和我们一起惊讶、一起求证。

同学们，彩虹要背对太阳才能看见，探索路上也常有这样的提醒：换一个方向，光就来了。愿我们永远保有一颗好奇的心，像水珠拆光那样，把世界拆开看清楚；愿好奇心带我们探索，从操场上的小彩虹，走向未来大大的世界。我的讲话完毕，谢谢大家！

Turn Your Back to the Sun, and You Can Still Invite Out a Rainbow

Respected teachers, dear fellow students: good morning! Today my speech under the flag is titled Turn Your Back to the Sun, and You Can Still Invite Out a Rainbow. Everyone loves to see a rainbow after rain, but have you ever wondered: can a rainbow be made by ourselves, without waiting for rain? On one afternoon three months ago, students in our class really did make a small rainbow on the playground.

During free time in P.E. class, a classmate was spraying water mist into the air with a watering bottle when she suddenly shouted: look, a rainbow! Several classmates rushed over, and sure enough, a small colored arc hung inside the mist. But the next day, when they sprayed again, the rainbow was gone. Why yesterday but not today? Opinions flew: maybe the sun was in a different place; maybe the wind blew the mist away; maybe you have to stand with your back to the sun to see it. When our science teacher heard, she turned our question into a whole-class mission. By groups, we observed for a full week: spraying with our backs to the sun, spraying sideways, spraying in the morning, spraying at dusk, recording every time whether the rainbow

appeared and where the sun stood. A week later the conclusion surfaced: back to the sun, sun low, mist fine — only when all three conditions are met does the rainbow appear. Later in science class we verified the principle: white light hides seven colors, and tiny water droplets split the light apart — out comes the rainbow. From one shout of delight to a law we verified with our own hands, only one week of curiosity stood in between.

Fellow students, this small rainbow taught us three things about the scientific spirit. First, curiosity is the starting point. If nobody had asked that day why it appeared yesterday but not today, the rainbow would have been nothing but good luck. Second, observation demands evidence. We did not guess the answer; we invited it out with a week of record sheets. Third, science belongs to everyone. Making a rainbow needs no expensive instruments — only a spray bottle, a patch of sunlight, and a curious heart unwilling to walk away.

Today, beneath this solemn flag, on behalf of all students I call upon our whole school: may we be people who chase light, and also people who make light. First, when you meet something wonderful, stay one step longer. See a rainbow, a shadow, an oil slick glittering in a puddle — do not hurry off; stop and ask one why. Second, hand your questions over to observation and experiment. Use record sheets, comparisons, repetition, and let the facts speak. Third, share your curiosity. Next month our school will hold a Science Festival; every class may present one small experiment. Bring your spray bottles, magnifying glasses, and small magnets, and let the whole school make rainbows and ask questions together. Teachers, you are welcome too — come be astonished and verify with us.

Fellow students, a rainbow can only be seen with your back to the sun, and along the road of exploration there is often the same reminder: change your direction, and the light arrives. May we always keep a curious heart, taking the world apart to see it clearly the way water droplets split light; may curiosity lead us to explore, from the little rainbow on the playground to the great world of the future. That concludes my speech. Thank you!