Seeing Green

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Setting	
Maple Rivers High School (ages 14-18) in the United States	
Primary Characters	
Ms. Maguire: Science teacher **Principal Lee:** Principal **Mr. Fawkes:** Ms. Maguire's teacher mentor **Ms. Ruiz:** Instructional support specialist **Chandelle:** Student	**Abby:** Student **Mason:** Student **Lindsey:** Student **Mrs. Tekin:** Lindsey's mother **Mr. Darrow:** Mason's father

Ms. Maguire had entered her first year of teaching science at Maple Rivers High School with excitement, her mind still buzzing with ideas from her senior year at Texas A&M. Although she wasn't from the area, Maple Rivers bore strong similarities to her own high school, and she felt a sense of kinship with the 150 teenagers who passed through her class each day. Ms. Maguire also loved the Maple Rivers community, marveling each day as her drive wended through rich farmland, past the oil derricks, and into the wealthy neighborhood where Maple Rivers High occupied pride of place. Among the families who weren't in agriculture, many worked as engineers and senior managers in the oil and natural gas industry. They often moved to the area specifically to send their children to Maple Rivers Public Schools, which had garnered a reputation for a close-knit parental community and excellent state-issued report cards.

Ms. Maguire had quickly built a strong rapport with students and administrators alike. Her students in particular appreciated her passion for science and her commitment to incorporating local issues into classroom discussions. For instance, during the last unit on erosion and the water cycle, she presented her class with a video clip of a nearby farm that had recently flooded. Afterwards, she asked her students to draw on the scientific principles they were learning to pinpoint areas in their community that they thought might be especially prone to flooding or erosion. That lesson had felt like a success—especially when two of her students subsequently decided for their Eagle Scout project to build a retaining wall to prevent erosion near a local park.

Today, however, frustrated student voices dominated, and a sense of tension filled the room.

Ms. Maguire had thought she would introduce their new unit on climate change by reviewing the big picture and connecting it to the power of local action. Students started by brainstorming what they already knew about the difference between weather and climate, how climate impacts the development of different weather systems, and the Earth's geologic history. Ms. Maguire then showed a video from National Geographic, "Causes and Effects of Climate Change," which connected climate change to

everyday human activity.[1] She figured the students would already be familiar with many of the ideas in the video, but liked how it set a level playing field of knowledge for the students to build on over the course of the upcoming unit. The moment the video ended, however, her usually well-ordered class erupted.

“This is not real science! Climate change happens all the time, and the people who made this video are freaking out for no reason,” Mason protested. Ms. Maguire was shocked; Mason frequently talked about how he planned to become an environmental engineer like his father, and he was one of the aspiring Eagle Scouts working on the retaining wall. She hadn’t expected Mason to object to the fundamentals of climate science.

To her further surprise, Mason’s comment prompted a chorus of “yeahs” from different parts of the classroom. In response, Chandelle’s hand shot into the air, her eyes imploring Ms. Maguire to call on her.

“Chandelle?”

“You all are *wrong*,” Chandelle declared, turning towards the class. “Can’t you just accept the facts? The video showed all the evidence that humans are causing climate change!”

“All those numbers came from the EPA,” Mason retorted. “In case you haven’t heard, Chandelle, the EPA has been filled with liberals for years. We can’t make our decisions based off of politics.”

“Mason, you can’t call science political just because you don’t like it,” Abby burst out, without waiting to be called upon.

“Yeah, but you shouldn’t be defending the video just because it *does* agree with your politics,” Lindsey responded. “Like, Ms. Maguire is always teaching us that scientists question things, look at the data, and challenge assumptions. The only reason you think this video is automatically true is because it backs up what you already believe. You don’t know any better than Mason does if their interpretation of the stats is right, so why take it on faith?”

Ms. Maguire wasn’t sure what to make of her students’ unexpected debate. Of course, she wanted her students to have the ability to argue their point, and she guessed she should feel pleased they were so charged up about the material, but this debate just seemed like warring factions. Plus, she knew that the science behind climate change was solid!

Needing some time to think, she quickly improvised a plan. “It seems like we have a bunch of different viewpoints here,” she said as calmly as she could. “Since we only have a few minutes, why don’t you each take out a sheet of paper and write down your position on humans’ responsibilities for climate change, along with the evidence supporting your claim. Make sure you address information from our brainstorm and the video.”

The classroom quieted as pens scratched across papers. Ms. Maguire let out a small sigh of relief when the bell rang. “Okay, class! Finish your responses for homework tonight, and we can use them to continue our discussion tomorrow. Don’t forget to clean up around your desks!”

The next day’s class went much more smoothly. Ms. Maguire had her students review one another’s opinion papers, comparing what they wrote with the evidence presented in a UN climate-change report that Ms. Maguire helped them find. While there was still some grumbling about politically motivated science, Ms. Maguire felt better about launching the unit, and she was looking forward to next week, when she would introduce a group project on modifying human behavior to mitigate climate change.

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[1] National Geographic Partners, LLC. (2019). *Causes and Effects of Climate Change*[Video]. Retrieved from https://video.nationalgeographic.com/video/101-videos/0000015d-3cb1-d1cb-a7fd-fcfd49980000

Humming to herself, she walked down to lunch duty, where she was surprised to be pulled aside by Mrs. Lee, the school principal.

“Can you come into my office after seventh period?” Mrs. Lee asked her. “I got a phone call this morning; a couple parents want to talk about what happened in class yesterday. Ms. Ruiz and Mr. Fawkes will be there, too; shouldn’t take too long.”

“Uh, sure,” Ms. Maguire responded, “Can I ask--?” But before she could finish her question, Mrs. Lee dashed off to calm down a rowdy group of sophomores, leaving Ms. Maguire to wonder who had been so upset as to contact the principal, and why.

As soon as the school day ended, Ms. Maguire made her way to the conference room, her heart hammering double-time. Ms. Ruiz, Maple River’s instructional support specialist, met her eyes with a smile, gesturing to the seat between her and Mr. Fawkes, Ms. Maguire’s assigned teacher mentor. Ms. Maguire sank down, grateful for their presence. Looking around the table, she saw Mason’s dad, Mr. Darrow, and Lindsey’s mom, Mrs. Tekin, along with Mrs. Lee.

Mrs. Lee opened the meeting. “Thank you all for taking the time out of your Wednesday to be here. As I’m sure you’ve all heard me say before, at Maple Rivers, we believe in fostering strong academic communities, and, as a community, I am sure we can resolve this.” *Resolve what?* Ms. Maguire thought.

“Thank you, Principal Lee,” Mr. Darrow nodded. “Now, I want to be clear about why I’m here. It’s important that the classroom be a politically neutral space, and, yesterday, it wasn’t.” His voice was friendly, and the way he talked with his hands reminded Ms. Maguire of Mason. But there was an edge to his demeanor.

“I’m sorry to hear you say that,” Ms. Maguire ventured. “I agree the classroom should be neutral. But I actually didn’t – and, well, I guess I still don’t – consider global warming to be a political issue. It’s just science.”

Mr. Darrow leaned in towards the table, “Our children should have the right to use the facts to draw their own conclusions. After all, school is where they learn to think for themselves.”

Mrs. Tekin propped her arms up on the table and smiled. “Now, I know that Ms. Maguire is just trying to teach, and that’s fine.” She directed her gaze towards Ms. Maguire. “In fact, I don’t think you were trying to be political, either. I just think you don’t have the entire story.”

“What story? Climate science is pretty well established by now,” Ms. Maguire responded in confusion.

“But science is different from policy,” Mrs. Tekin explained. “Many academics demonize the petroleum industry, in spite of the fact that we all know how much our economy depends on oil. Especially right here in Maple Rivers, where energy jobs help to put food on our tables. Gosh, I bet half our parents would lose their jobs if we enacted some of the more out-there liberal proposals I hear floating around!” There were nods around the room.

“So,” Mrs. Tekin continued, “when Lindsey comes home and tells me that she was made to watch a video criticizing petroleum engineering in class, we have two problems. One, that’s another woman who doesn’t want to go into STEM. Two, we’ve needlessly villainized the very industry we depend on. Look, I’m not saying ‘don’t talk about climate change.’ I just want to make sure that our kids don’t come home ashamed of what it is that their parents do. Teach them about climate science, but then teach them about importance of energy independence, about the benefits of natural gas – about all the other stuff the media likes to ignore!”

“Um,” Ms. Maguire started, unsure how to respond. To her gratitude, Mr. Fawkes sensed Ms. Maguire’s uneasiness and tried to bail her out.

“First year teachers often have a difficult time balancing classroom and curriculum—I’m sure we can all trust Ms. Maguire was trying to do right by her students,” Mr. Fawkes said. Ms. Maguire smiled at the words of support as Mr. Fawkes continued. “The question I’m hearing from both of you is, ‘how can we balance academic and community values at the same time’? Mrs. Tekin, I think you offer a very fair middle ground. Let’s teach the science – all of it. We can talk about CO_2, and we can talk about clean-burning natural gas, and we can learn about the importance of the work folks in the community do.”

The smile dropped from her face, and Ms. Maguire felt even more confused—that wasn’t the defense she was expecting! Making sure that her voice wasn’t confrontational, she gently asked, “I’ll be honest…This compromise worries me. Climate scientists agree that we all need to do our part to keep the worst possible outcomes of global warming at bay, which includes reducing fossil fuel use. If the consensus of the scientific community is considered political, then how am I supposed to teach science?”

“I get your worry,” Ms. Ruiz tried to reassure her. “And you’re teaching the curriculum, just as we expect you to. But there’s a difference between science and activism. You could – in fact, you should! – spend some time teaching climate change, but you should also teach students about the community you live in. And, hey, I’ve seen you teach! I know you can do a really great job in connecting school and community!”

Principal Lee seemed relieved by Ms. Ruiz’s proposition. “Yes, I think that is a wonderful way to proceed. This way, the students can discuss current events and science without making anyone feel left out. Let’s just incorporate the importance of the petroleum industry into the conversation!”

“Of course, I think it’s important for my students to hear a range of opinions and formulate their own conclusions,” Ms. Maguire tried once more, “Still…teaching climate change like *this* feels political. The scientific consensus is that, well, global warming is a major threat to all of us. I just don’t want that to get lost in the debate. I don’t know that changing the curriculum in this way feels right.”

“Regardless of how you may feel about the issue, your job is to work in tandem with the community and its values. I mean, you’re a teacher, and it’s your responsibility to let the students debate the issues, not dictate your version of the truth. ” Mr. Darrow responded, now visibly annoyed.

Mr. Fawkes smiled at Mr. Darrow, his voice striking a conciliatory tone. “Ms. Maguire loves this community, and I have no doubt that she is going to use the ideas from this meeting to grow as a teacher.”

All of the participants in the meeting looked to Ms. Maguire, clearly expecting that she would concur with the “compromise” that the others had reached. But she still wasn’t sure. Would incorporating more work on the economic benefits of natural gas and petroleum engineering minimize the legitimate scientific work coming out every day about the dangers of global warming? Or could she somehow teach both, and separate science from policy? This route troubled her, especially as a number of her students – and, evidently, their parents too! – doubted the basic veracity of climate science. That made it feel particularly important to represent the science accurately. But how could she continue teaching climate science the way she planned if she would run into constant opposition? And didn’t she have some obligation, as Mr. Darrow suggested, to teach in tandem with the community’s values—or at least, not to undermine its very economic foundation? Even if she did teach climate science this year without compromising, what would that mean for her staying at Maple Rivers High School in the future? She was still two years away from getting tenure. Would she be willing to lose her job over this? All eyes were on her, as Ms. Maguire answered…

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