



AL'S ARMY

Members of the public are taking to the streets to spread Al Gore's message of climate crisis. **Amanda Haag** meets the foot soldiers of global warming.

It's after hours at Monarch High School in Louisville, Colorado, and the hallways have fallen silent. In one classroom, a handful of high-school science teachers sit at desks usually occupied by biology students. Mark McCaffrey is giving a talk on how to teach global warming, and he points to a PowerPoint projection of the full-Earth shot snapped by Apollo 17 astronauts: the iconic 'blue marble'. "Everything that's ever happened in human history has happened on this fragile little spaceship Earth," he says, almost reverentially.

If this seems familiar, it could be because it sounds like Al Gore. McCaffrey is one of roughly 1,000 volunteers who, since last September, have been through a two-and-a-half-day training session with former US vice-president Gore and his staff in his home town of Nashville, Tennessee. The point is to spread the message of Gore's Oscar-winning documentary on climate change, *An Inconvenient Truth*. Trainees learn how to manoeuvre through the science of Gore's 300-plus slide presentation and to discuss weighty topics such as rising carbon-dioxide concentrations, the physics of hurricane intensity and the mechanics of sea-ice retreat.

They then return to their communities hoping to reach as many others as possible, in high schools, churches, city council meetings, businesses and retirement homes. McCaffrey, whose day job involves science education and outreach for a joint institute at the University of Colorado, Boulder, says that one of his

motivations was to improve his understanding of climate science so that he could respond to naysayers. "The sceptics would derail me and I'd get flustered and not know how to respond," he says. "Sometimes they're scientists from outside the field of climate, but they know enough about how to throw up uncertainty and plant doubts in people's minds."

Gore calls the trainees his "cavalry", but a more apt name might be missionaries, given the fervour with which they approach their roles. One volunteer, from Hackett, Arkansas, signs off his e-mails as "Robert McAfee, Climate Change Messenger". Gary Dunham, an independent voter from Sugar Land, Texas, says he had a near-religious conversion while watching *An Inconvenient Truth*. "I went to see the movie intrigued by what it was about but certainly not believing in the global-warming message," he recalls. "Within 15 minutes I completely changed my viewpoint. I don't think I've heard a political speech that really motivated me to get up and do something since John Kennedy's day." And volunteer Reggie Allen of Keller, Texas, says he sees the need to disseminate the "truth" about global warming as a mission akin to the

civil-rights movement, for which his parents used to march after church on Sundays.

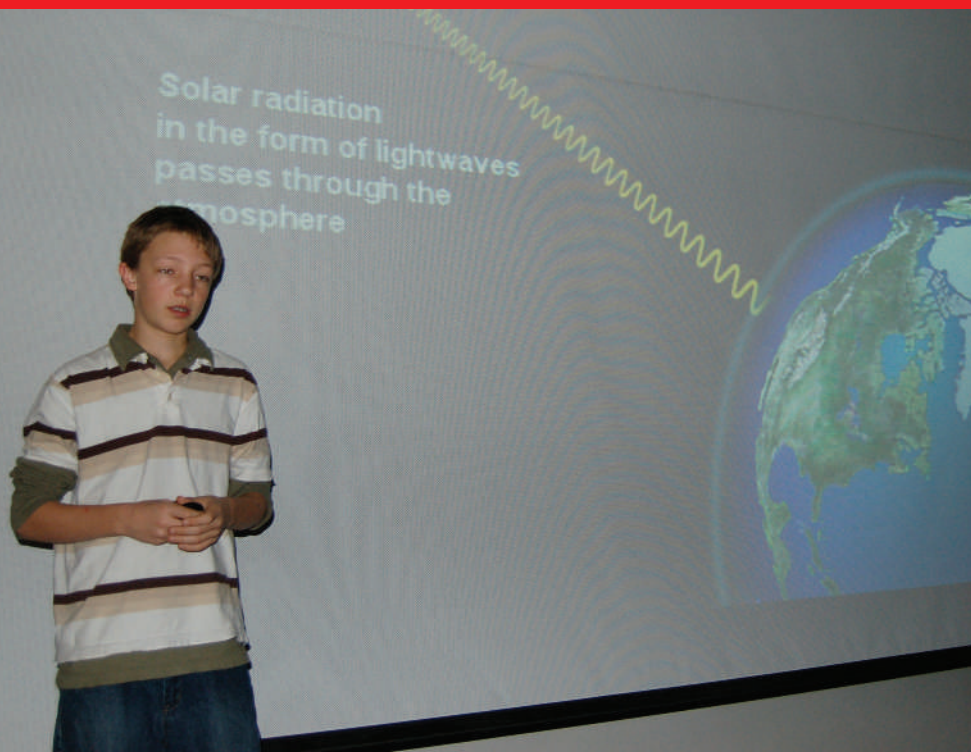
The volunteers were chosen from several thousand applicants, and include a middle-school student, priests, mayors, nuclear engineers, right-wing conservatives, Wal-Mart employees, Miss Rhode Island and Cameron Diaz. No matter what their walk of life, their motivation is the same: to tell their friends, families and neighbours that human activities are altering global climate and that each person can do something about it.

The mission begins in Nashville where, on the first full day, Gore himself leads 90% of the training, walking volunteers through the science slide by slide. He takes questions, and a scientist is always present to help answer them. Gore's team includes a rotation of four scientists, including Michael MacCracken, chief scientist for climate change at the Climate Institute in Washington DC and a longtime contributor to the Intergovernmental Panel on Climate Change, and glaciologist Richard Alley of Pennsylvania State University.

On the second day, the trainees break into smaller groups to practise giving the presentations themselves.



Al Gore's Oscar-winner has made climate change a hot topic for debate in the United States.



14-year-old Alex Budd is the youngest volunteer spreading Al Gore's message on climate change.

"They blow you out of the water because they're speaking from their hearts," says Carey Stanton, senior director for education at the National Wildlife Federation, and one of Gore's staff. "When they're backed up by really knowing the science, they're very good."

Trainees are encouraged to tailor their talks to individual audiences while still preserving the framework of Gore's presentation. For instance, the inspirational images of Earth from space are expected to bookend the presentations, as they do the film. In his presentation, McCaffrey shows about a third of the available slides.

Made to measure

McCaffrey veers away from the original presentation mainly to use examples he sees as effective for spreading the message to young people. "If you just have a laundry list it's going to go in one ear and out the other. At least that's my experience with a teenager in the house," he tells his audience. He also mentions opportunities for students to take the lead in being part of the solution, such as by initiating carbon-neutral school programmes.

The Gore campaign has garnered a near cult-like following. In December, the left-wing advocacy group MoveOn.org campaigned to have the documentary aired on the same day and time across the United States. Training sessions have taken place in Australia and the United Kingdom. And last week, Gore supporters flooded the website of Step it Up, a group planning a 'National Day of Action on Climate Change' on 14 April, and nearly shut the site down.

But the movement hasn't had a warm reception in all quarters. In November, the producers of the film sought to have it mass-distributed to high-school classrooms, offering to deliver 50,000 free DVDs to the National

Science Teachers Association. The association balked, saying that it doesn't send out unsolicited material to its members and that doing so would "constitute an endorsement" that might trigger other "special interests" to ask it to distribute material. Laurie David, one of the film's producers, publicly criticized the association's unwillingness to distribute the DVDs — even though the group offered to post links to the film on its website and to make it available to anyone who requested it.

And in January, the school board of Federal Way, a district near Seattle, Washington, made national news when it placed a temporary moratorium on showing *An Inconvenient Truth*. A parent had complained that the film presents only one side of the global-warming debate, and district policy states that teachers who choose to show material containing "bias" must also present a "credible, legitimate opposing view" and that the principal and superintendent must grant permission. The moratorium has since been lifted.

Even in school districts as left-leaning as Boulder, a quieter undercurrent of dissent brews about how — and how much — global warming should be taught in the classroom. Some Boulder Valley teachers showed *An Inconvenient Truth* in class and met with resistance from parents and other teachers afterwards. "Teachers tend to shy away because we don't have the political support and backing for controversial issues," says Kristin Donley, who coordinates science curricula for the Boulder Valley School District. She is

working to develop a unit on climate change for her classes. Some of the basic concepts, such as the carbon cycle and the greenhouse effect, are taught by default in physical sciences, Donley says. But the curricula offer a lot of leeway, and teachers can choose whether or not to broach the topic of global warming.

Lesson plan

McCaffrey came to the school after hearing that teachers in the district were interested in including climate change in their lessons. As he flips through his final slides, he charges the teachers to embrace the opportunity to reach today's youth. "We have a huge challenge in front of us," he says. "You as educators have a particularly important job in communicating the basics of climate and the context around it."

Afterwards, one teacher brings up the fact that the film uses the word 'truth' in its title. But isn't science only supposed to deal with theories, he asks, and how does one explain this to students? Another teacher points out that his students didn't understand the meaning of peer-reviewed science as discussed in the film. Isn't it likely that this point is missed by most of the American public, too, he asks. McCaffrey suggests that a role-playing activity on peer review might help drive the point home.

After all, not all teenagers are as attentive to the science of climate change as 14-year-old Alex Budd, of Boulder, who believes that doing something about climate change is a moral imperative. Alex heard about the programme from an aunt who lives in Tennessee, and was the youngest volunteer trained under Gore's tutelage. He and McCaffrey, along with another Colorado-based volunteer, Steve Wilton, have given the presentation together in the Boulder area. "We're destroying our planet," Alex says matter-of-factly. "That's not an issue of politics or economics. That's just morally wrong." He brings up what he learned from the Gore training over lunch at school



"Educators have a particularly important job in communicating the basics of climate."
— Mark McCaffrey

"or anywhere that I can just say a word or two". The biggest difference can be made by the small things people can do, he says, rattling off a list that includes compact fluorescent light bulbs and improving home insulation.

"I really wanted to make sure people at least know what's happening," Alex says. "It's not going to be easy. That's why they call it an inconvenient truth. It's true but it's not something that fits right into your schedule." ■

Amanda Haag is a science writer in Colorado.