

The boy who built a fusion reactor

He made his own nuclear fusion reactor at the age of 14. He's helped the US government fight nuclear terrorism, and at 21, he has plans to improve cancer treatment. Does anything make Taylor Wilson nervous? Yes ... asking a girl out.

An unusual boy

Kenneth Wilson and his wife Tiffany always knew their first son, Taylor, was unusual. Wanting to be an astronaut at the age of nine seemed normal enough, but, 'whatever he was involved in, he went at it non-stop,' says his father.

Taylor wrote to astronauts, built his own rockets, and gave talks at school about space exploration. 'Everyone loved watching him,' his head teacher said, 'and when he was in the room, he just took control.' Some of his neighbours weren't so happy about the explosions next door when Taylor experimented with rocket fuels.

For his 10th birthday, Taylor's grandmother got him a book about a bright teenager who nearly caused a disaster by trying to build a nuclear reactor at home. 'Know what?' said Taylor. 'The things that kid was trying to do, I'm pretty sure I can actually do them.'



Not just for fun

It wasn't just for fun. Taylor's grandmother had cancer, and he realized cancer treatment could be improved if hospitals had small fusion reactors to make the necessary radioactive materials in. He learned all the physics and engineering he needed, and collected radioactive materials from gadgets. It made his parents nervous, and he knows he was lucky they were so tolerant. 'When I said I wanted to build a nuclear fusion reactor in the garage, I think most parents would say no.'

One day, Taylor's mother came into the garage and saw him looking at a pool of liquid on the floor.

'Tay, it's time for supper.'

'I think I'm going to have to clean this up first.'

'That's not the stuff you said would kill us if it broke open, is it?'

'I don't think so. Not instantly.'

His parents asked some university physicists to talk to Taylor. They told his parents that Taylor knew what he was doing. He says he's never careless about safety. 'I'm very cautious. I'm actually a bit of a hypochondriac.'

Fusion success

His reactor worked, and he became one of the few people in the world to achieve nuclear fusion. And of course, at 14, he was also the youngest. He thinks youth helps. 'Kids sometimes have an advantage when it comes to invention.' Older scientists might say 'it can't be done or you shouldn't even try it, whereas kids are not so closed-minded. I hope I never lose that.'



Taylor received a \$100,000 two-year fellowship, on condition he didn't go to college and focused on his own projects. The fellowship has ended, but Wilson still isn't going to college. He's going to work on his inventions, and travel, and give talks. After Intel CEO Paul Otellini spoke to Taylor at a science fair, he said, 'All I could think was, "I am so glad that kid is on our side."'"

The US government expressed interest in one of Taylor's inventions, which could help them in the fight against nuclear terrorism. He met the Under Secretary for Energy, who said, 'He's not just smart – he's cool and articulate. I think he may be the most amazing kid I've ever met.'

A big head?

Are his parents ever worried about Taylor becoming self-centred and arrogant? 'He's not being selfish, it's just that there's so much going on in his head,' says his sister. And if Taylor appears arrogant, it's because 'Taylor doesn't understand the meaning of "can't"', his father says. 'And when he does,' his mother adds, 'he doesn't listen.'

Taylor does think selfishness was a problem at first. 'I was exploring things because I was interested in them. It was fun, but in a way it was selfish too. Then it turned out that I was really good at it, and it became a responsibility. I realized I had the capability of doing things that could really change the world.'

He's confident his weaknesses will stop him getting too big-headed. He's not good at foreign languages or sport, and although this outgoing, expressive young man isn't the typical shy geek, he admits, 'What makes me nervous? Asking a girl for her number.'