Our white blood cells protect us from illness. Most viruses will not harm us but we know about them when we get unwell. When we are young our immune system is only just starting to get good at spotting intruders. If our white blood cells are unable to destroy an intruder fast enough, we can quickly become unwell and need help. A vaccine contains a safe form of the virus to encourage our body to make antibodies. Once exposed to the virus from the vaccine our immune system ‘remembers’. This means our body is ready to recognise the virus and destroy it before it can make us unwell. This means you will have immunity to this virus.

**What is rubella?**
This illness is caused by a virus that can be caught from other people through touch or the air. Rubella is associated with fever, joint pains and swelling. In some rare cases it can develop into meningitis. For women who are pregnant this can affect their developing baby leading to problems with their heart, brain, vision and hearing, or lead to a miscarriage. With viruses, antibiotics will not work, so the only way we can protect ourselves and others is through a vaccine.

Take a look at the drawing to see the surprising beauty of rubella. At such a tiny scale viruses are so small they can only be seen using an electron microscope – but even then, are not clearly seen. Viruses have an outside called a capsid to attach and enter cells with genetic material to direct the cell to make more viruses. The line is a scale and represents 100 nanometres (ten thousandths of a millimetre). More than 1,000 viruses would fit across the width of a human hair.