STS Script

Good morning everyone. So today we are going to talk about nanotechnology.

But first of all, let us first observe the objects that we see today. Let us take an object, for example, a glass, and observe its properties. One might say that the glass is useful for containing water, it is transparent, but it is also a little fragile and therefore should avoid being hit or dropped. Now if we look closely, we will see that this glass is made of teeny tiny particles of matter called atoms. These atoms are one of the smallest forms of matter in the universe, and they make up the objects which we use today, such as the glass. Now how these atoms are formed together are interesting because their properties depends on how these atoms are structured as a whole. Now since these properties depend on how these atoms are formed together, it is therefore important because we can make then rearrange these atoms in a way that we get the properties of an object that we want. However, rearranging atoms in such a way is very difficult due to their size. An atom is one million times smaller than your pinky fingers, hence very difficult to manipulate. However, over the years, scientists and researchers have found a way to manipulate atoms and create things by rearranging them. They have also found that creating stuff in the nanoscale enabled them to unlock some hidden properties of these materials, such as antibacterial properties, and super durable materials. The creation of these materials in this ultra-small scale is called nanotechnology.

When we say something is nano, we say that it is VERRRYY small. The size of a nanometer is one billionth of a meter, which is about one hundred thousand times smaller than the width of a human hair. Nanomaterials are already present in the world around us, such as on volcanic ash, ocean spray, fine sand and dust. Nanostructures are also present in plants and animals. Nanostructures on insect eyes ensure anti reflection and water-resistant properties, making flying safe. Nanotechnology enables us to exploit the magical properties of matter in the nano scale, which can then be useful in many applications of science. For example, you may find that silver is only good for its conductivity and as a form of jewelry, but nano silver has antibacterial properties which can be applied on knives and chopping boards. Nano ingredients in food supplements increase absorption of nutrients, and a grain of salt fine grained into nano sized particles hugely increases its surface area, making you worry less in eating biscuits.

However, the applications of nanotechnology into these objects should also be carefully controlled and study. With these kinds of technology, regulation and careful assessment of the effects of nanotechnology into our food and everyday objects should be taken into account. This is in order for us to make sure that the use of this kind of technology is safe and healthy.

But for now, let us take into account the magical applications of nanotechnology, and how it helps us unlock the hidden properties of matter and atoms to be used in our daily lives.