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**Scientists make biodegradable plastic – 24th April, 2021**

## Level 4

Plastic has polluted the countryside and endangered wildlife for decades. Environmentalists told us to cut the amount we use or switch to biodegradable alternatives. Scientists have now made a biodegradable plastic, so the billions of plastic bags, cups, straws, etc. that we throw away each day could be "compostable". They could break down like organic waste. The plastic breaks down within weeks, rather than centuries, using just heat and water.

This new plastic has enzymes inside it. When these enzymes are exposed to heat and water, they eat away at the plastic and turn it into nutrients for the soil. A professor said 98 per cent of the plastic her team made degraded. She said: "We are...saying that we are on the right track. We can solve this continuing problem of single-use plastics." She added: "Look at all the wasted stuff we throw away - clothing, shoes, electronics....We are taking things from the earth at a faster rate than we can return them."

## Level 5

Plastic has polluted the countryside and been a threat to wildlife for decades. Environmentalists have pleaded with us to cut the amount of plastic we use or switch to biodegradable alternatives. There may be a solution. Scientists have made a biodegradable plastic. This means the billions of plastic bags, cups, straws, etc. that we throw away each day could be "compostable" - they could break down like organic waste. The scientists are from the University of California. They have invented a plastic that could break down within a few weeks, rather than centuries, using just heat and water.

The new, biodegradable plastic has polyester-eating enzymes inside it. When these enzymes are exposed to heat and water, they eat away at the plastic and turn it into nutrients for the soil. Professor Ting Xu said up to 98 per cent of the plastic her team made degraded into tiny particles. She said: "We are basically saying that we are on the right track. We can solve this continuing problem of single-use plastics." She added: "Look at all the wasted stuff we throw away - clothing, shoes, electronics....We are taking things from the earth at a faster rate than we can return them."

## Level 6

Plastic has been a blight on the landscape and a deadly threat to wildlife for decades. Environmentalists have issued many pleas for us to reduce the amount of plastic we use or switch to biodegradable alternatives. One solution to this problem may be at hand. Scientists have developed a form of biodegradable plastic. This means that the billions of plastic bags, cups, straws and utensils that we dispose of each day could be "compostable" - they could decompose and break down as naturally as organic waste. The scientists are from the University of California, Berkeley. They say they have invented a plastic that could break down within a few weeks, rather than centuries, using just heat and water.

The new, biodegradable product involves embedding polyester-eating enzymes into the plastic during the production process. When these enzymes are exposed to heat and water, they eat away at the plastic and reduce it to lactic acid. This provides nutrients for the soil when composted. Professor Ting Xu said up to 98 per cent of the plastic her team made degraded into small molecules. She said: "We are basically saying that we are on the right track. We can solve this continuing problem of single-use plastics." She added: "Look at all the wasted stuff we throw away - clothing, shoes, electronics like cellphones and computers. We are taking things from the earth at a faster rate than we can return them."