

Transcript for **Google Science Fair**

Elif My name is Elif, I'm sixteen years old and I live in Istanbul, Turkey. My favourite place to spend time is watching the view of the Bosphorus. It's the point where Europe meets Asia and it's beautiful. Istanbul is a city that never sleeps.

Bilgin:

Because I live in a big city I face environmental problems like pollution on a daily basis. I found out that petroleum-based plastics are causing a vast amount of pollution and that bioplastic is a solution. It is cheaper to make, and recycles a waste material. Bioplastics can be made from potatoes because of the starch in them. So the aim of my project was to see if I could make plastic out of organic waste material. Bananas contain a lot of starch and are therefore a potential plastic material. I researched the current methods for creating bioplastics and I worked for two years developing my project. I had to seek out equal-sized bananas with no bruises and they all had to be of the same official colour index. I did encounter some strange looks when I was picking them!

The peel is something we throw away every day but little do we know that it could be put to much more use. The process includes dipping the peel in sodium metabisulphite solution, boiling and puréeing them. The paste is transferred to a Petri dish and baked. I had twelve attempts at making the plastic and all but the last two were unsuccessful. The best part of the process was the moment when I got my first successful result. The type of plastic I have created can have many uses, including cosmetic prosthetics and the insulation of cables. The method I designed is so simple, it's possible to say you can actually make it at home. Anyone could use this plastic and our beautiful planet will be spared from the consequences of the production of plastics with petroleum derivatives. I can now say that I have perfected my recipe for banana cupcakes and I make an awesome banana split, and of course I've ended up eating a tonne of bananas!