**Intelligent Scuba Diving Nitrogen Level Sensor**

A pleasant afternoon/evening, Ms Koh and fellow classmates. I am Han Simeng.

Today, Yong Hao and I will be presenting the topic---Intelligent Scuba Diving Nitrogen Level Sensor. Here is our agenda. I will first go through the **background** and **problem**. Then Yong Hao will share with you our **amazing solution** followed by its **benefit**s. Finally, I will talk about the **implementation, cost** and **conclusion**.

First of all, the background.

Let’s have a quick show of hands. How many of you have seen the Disney animation “The little mermaid”?

Wow, almost everyone. This animation shows us a **vivid** picture of the world **under the sea**. The blue world is **stunning**. The crystal clear water, colourful reefs and myriads of fish never cease to impress. And that’s why scuba diving is becoming more and more popular. Each year, as many as one **millio**n new divers start their journey under the sea to explore the territory of the most **unspoilt** beauty **brimming** with the most **untouched** life.

However, going underwater can be **dangerous**. An average of 80 **fatalities** and 2000 injuries are reported annually. 25% of them are caused by decompression sickness and nitrogen narcosis. What are these two diseases?

Due to the **high** pressure of seawater, the **nitrogen concentration** in the blood vessel **rises** when a scuba diver is underwater. When the concentration reaches a certain level, nitrogen narcosis happens. It causes **impaired judgment and poor concentration()**. Furthermore, the dissolved nitrogen will **form bubbles()** inside the body if a diver **surfaces too fast**. This is the decompression sickness, which makes the diver feel numb() and dizzy(). In the worst scenario, a diver may not be able to come up and lose his life from **drowning**.

Now you may be wondering, what’s the current solution to this issue and why it does **not** work well? The traditional diving regulator actually provides the diver with a table. As you can see here, the numbers on the vertical axis are the depths and the time and the numbers on the horizontal axis are the corresponding lengths of time for which a diver should stay without experiencing decompression sickness or nitrogen narcosis. All right, it seems fine. What’s the problem with it? Well, **different** divers have **different** body conditions, causing such time to **vary** greatly among them. However, the same table is given to everyone and the data certainly won’t work perfectly for all of them.

To sum up the background and the problem, there are a large number of scuba divers out there enjoying the **wonderful** diving experiences. However, the current **flawed** solution to decompression sickness and nitrogen narcosis leaves their safety **unguaranteed**.

Now let’s welcome Yong Hao to introduce our **incredible** product.

Moving on, let me share with you the three steps we will take to develop the product.

We will first cooperate with a research team to produce a **prototype**, secondly collaborate with a company for **mass production** and finally make **more improvements** with the **feedback** of customers.

Lastly, how much will this device cost?

Basically, our device consists of these **four** parts.

A Nitrogen flow capacity and concentration sensor is at 200 Singapore dollars, a pre-programmed chip at 10 dollars, a Bluetooth transmitter and a Bluetooth receiver both at just 5 dollars. In total, it only costs a diver 220 dollars to avoid painful accidents.

In conclusion, the data on the current no-stop time table is not accurate enough while our product provides **accurate and timely** alerts for surfacing. With a low cost, it ensures safety, saves lives and prevents tragedies. It makes scuba-diving a safer kind of sport as a whole so that divers can better enjoy the **gorgeous world** under the sea.

At the end of our presentation, allow me to **implore** you to support our gainful product to avoid painful accidents. With that, I thank you very much for your attention and wish you a great evening!

These are our references.

1. Background second slide

Dangerous---dead people

1. Little mermaid and…one at a time.
2. Graph---explain
3. Cost: Highlight 220 and a smiling face of the scuba-diver or thumbs up.
4. Conclusion: three parts appear one by one.

Intro