

## Modular Circuit for Oral Biosensor Team Tickle Me Pink

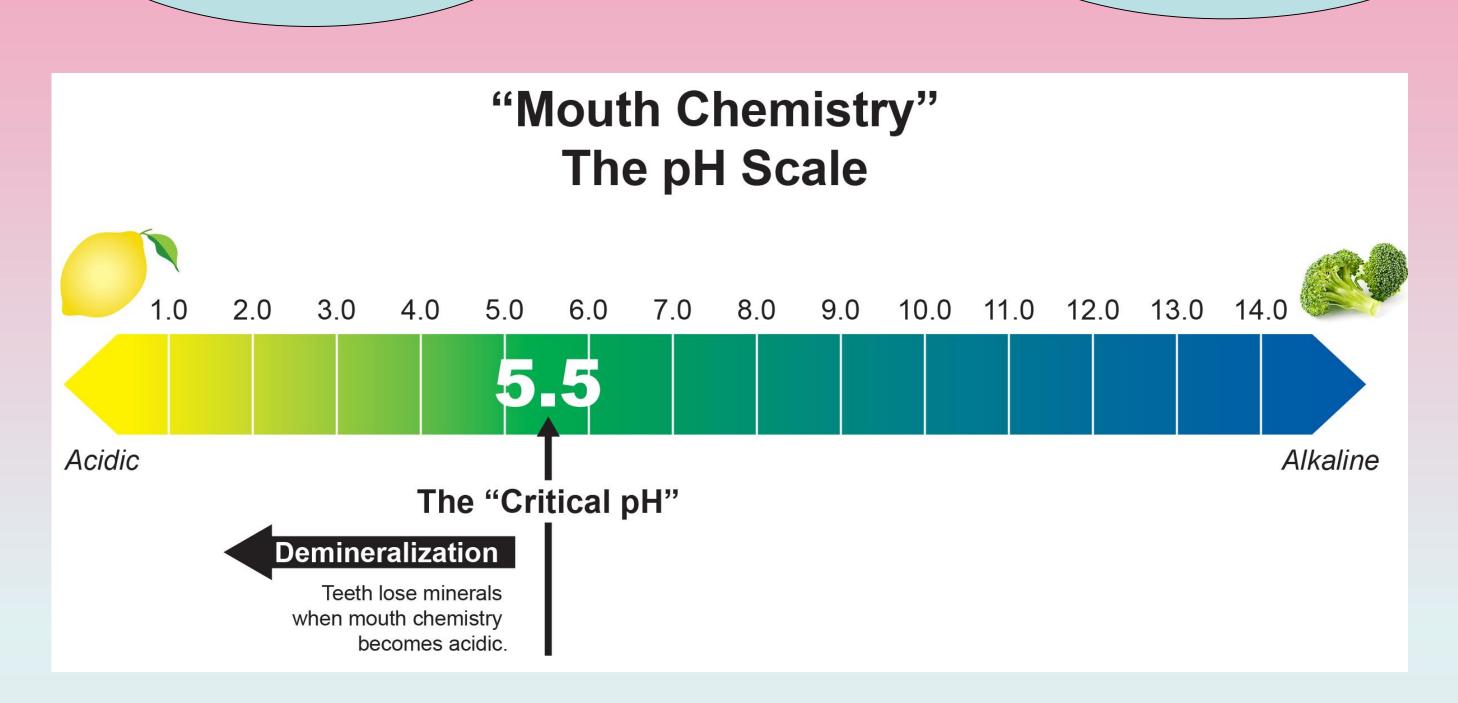
Sponsored by: Sameer Sonkusale

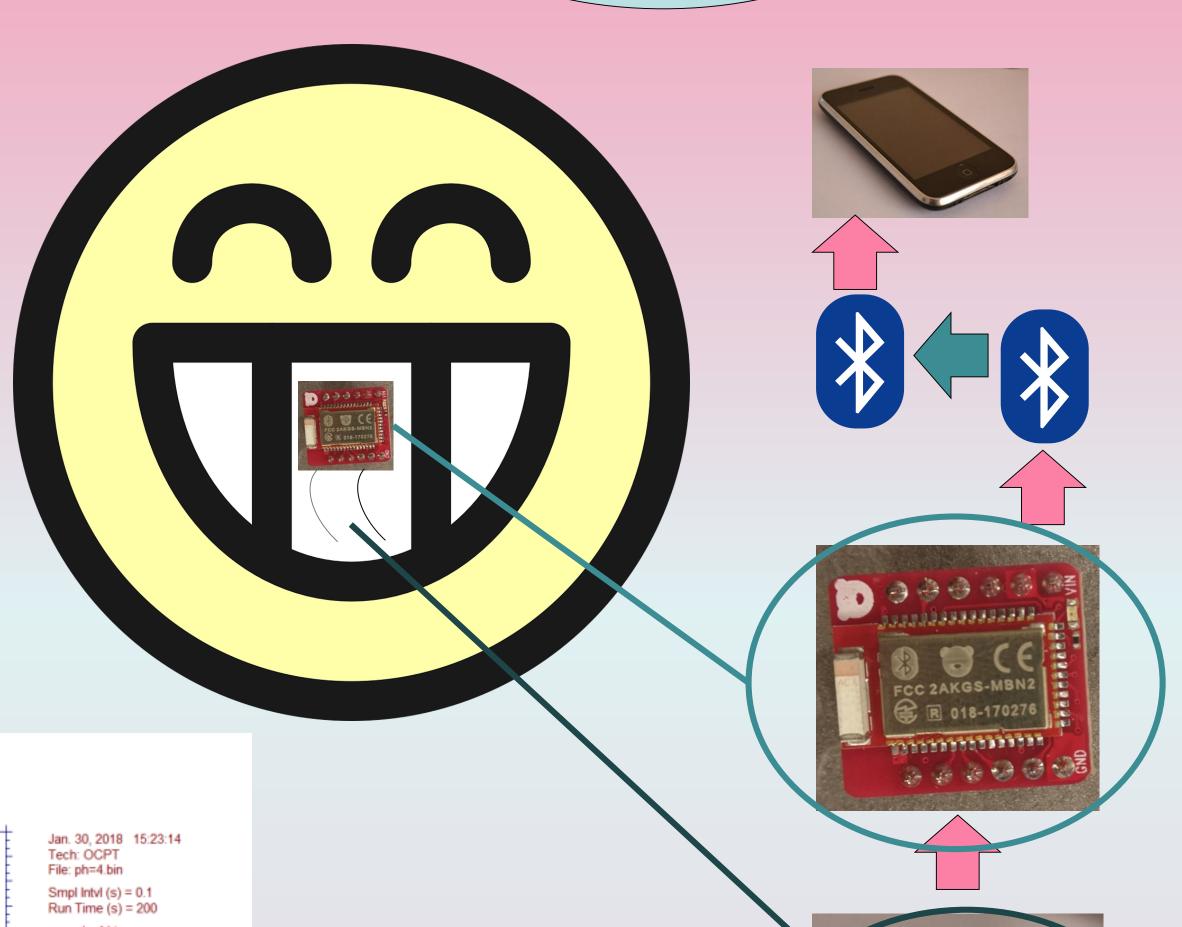
Problem

Purpose

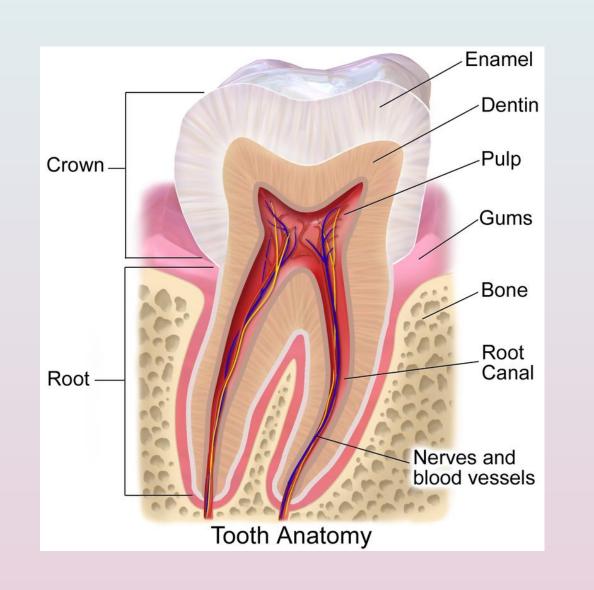
Technology

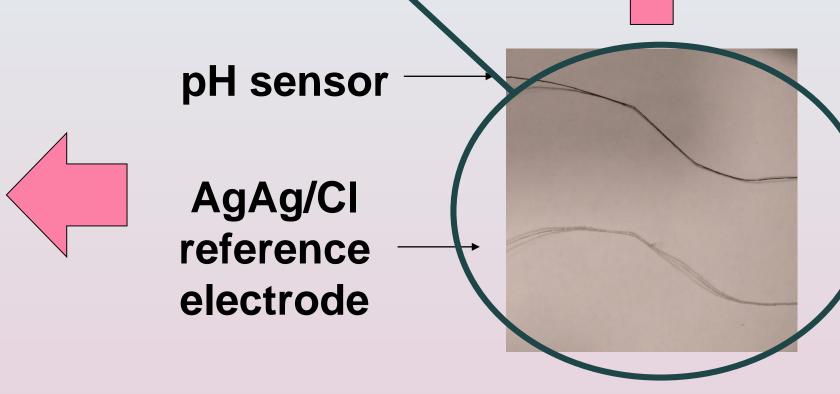
Challenges













27% of Americans over 65 have no teeth.

Enamel deteriorates when mouth pH drops below 5.5.

To actively measure and monitor pH levels in the mouth, sending the information to a smartphone.

Bluetooth LE
Low Power Data Transmission

RedBear Nano
Small-scale Microcontroller

pH Sensing Thread
Polyaniline/Carbon Coated

## **Battery Life**

Battery Capacity: 220 mAh
RedBear Current Draw: .02mA
Hours: 220 mAh / .02mA = 11000 hours

Small Scale Enclosure
Waterproof Silicone Encyy

Waterproof Silicone Epoxy

Team Members:

**Stamatios Aleiferis** 

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**Anthony Nguyen** 

**John Patrick** 

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