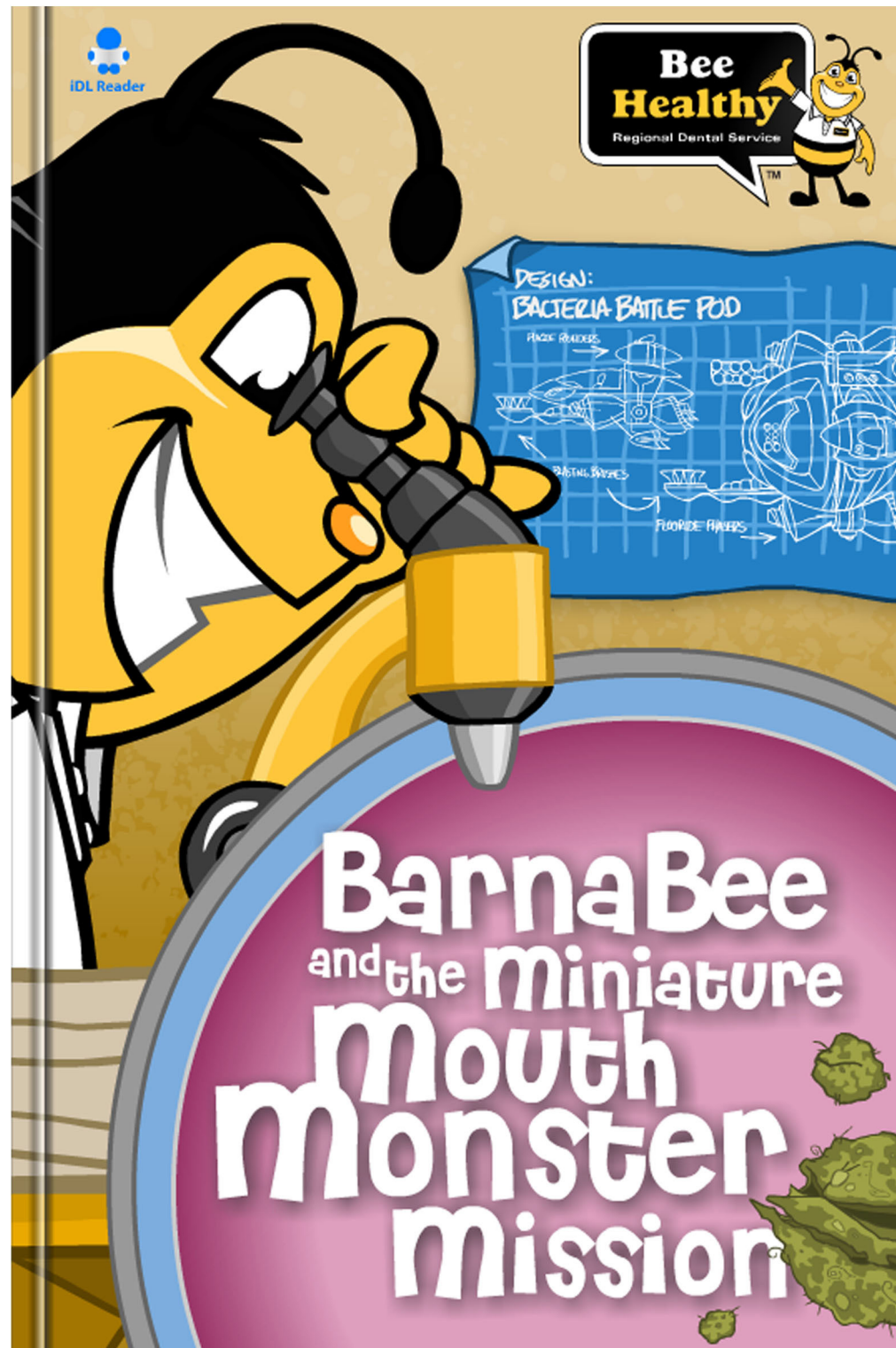




IDL Reader

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# Contents

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Written by

**Frederic Stone**





Hi there. I'm BarnaBee and I love teeth. That might sound a little weird but it's true. And I want everyone I care about to love them too. So instead of being outside in the apple orchard on one particularly beautiful spring day, I sat at my lab bench thinking about how to make **oral health** more interesting.

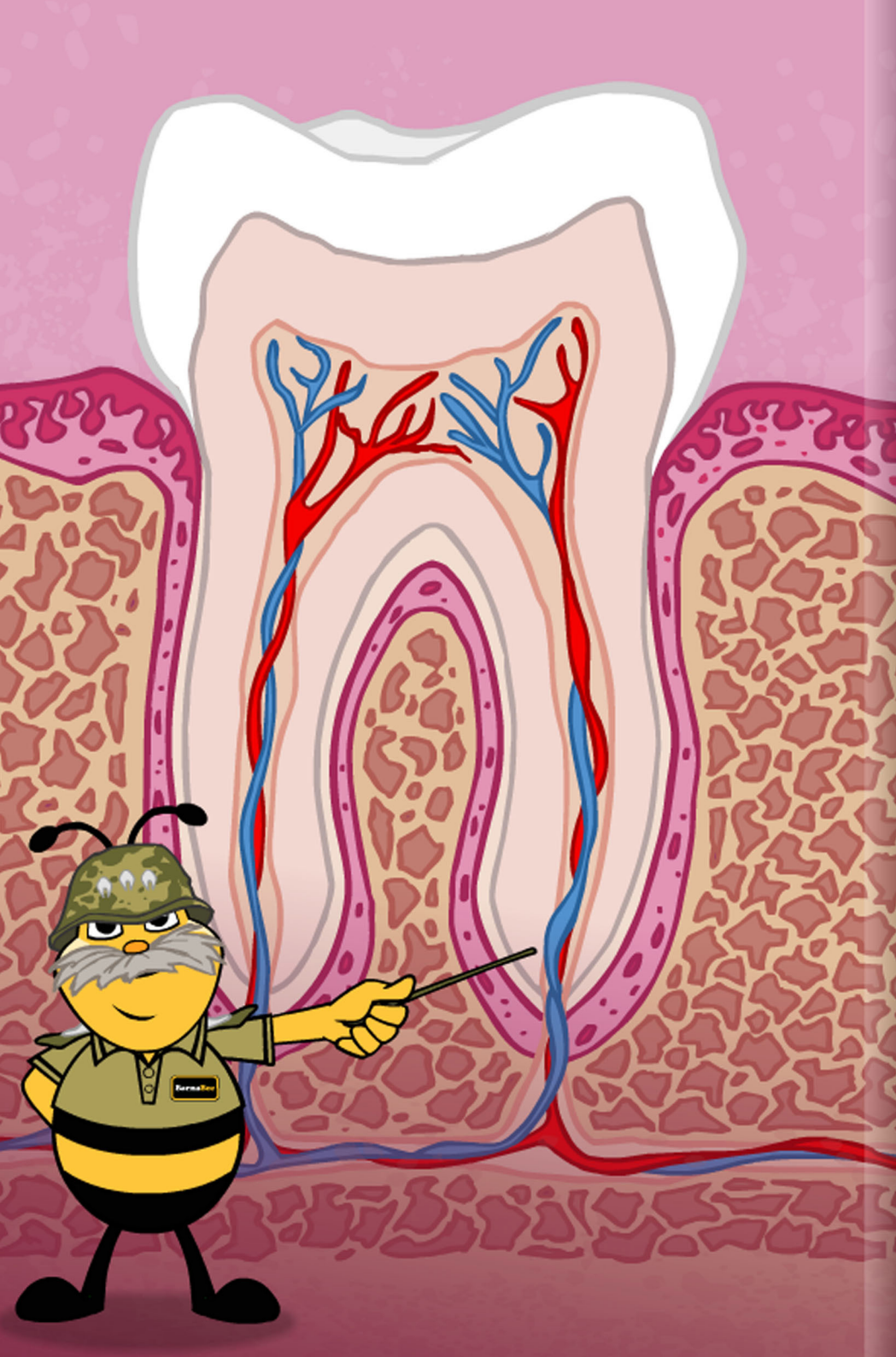
I thought and I thought until my brain started to hurt when suddenly a glint from my microscope sparked an idea...



I wondered what the war against **plaque** would look like through the microscope. That certainly sounded exciting. I let my imagination wander...

What if I built a high tech battle pod that could be shrunk down to microscopic size? As the pilot I'd have the latest state-of-the-art weaponry at my fingertips. **Bacteria** blasting brushes, **Fluoride** phasers and Plaque pounders. I could even command an entire squadron of battle pods!



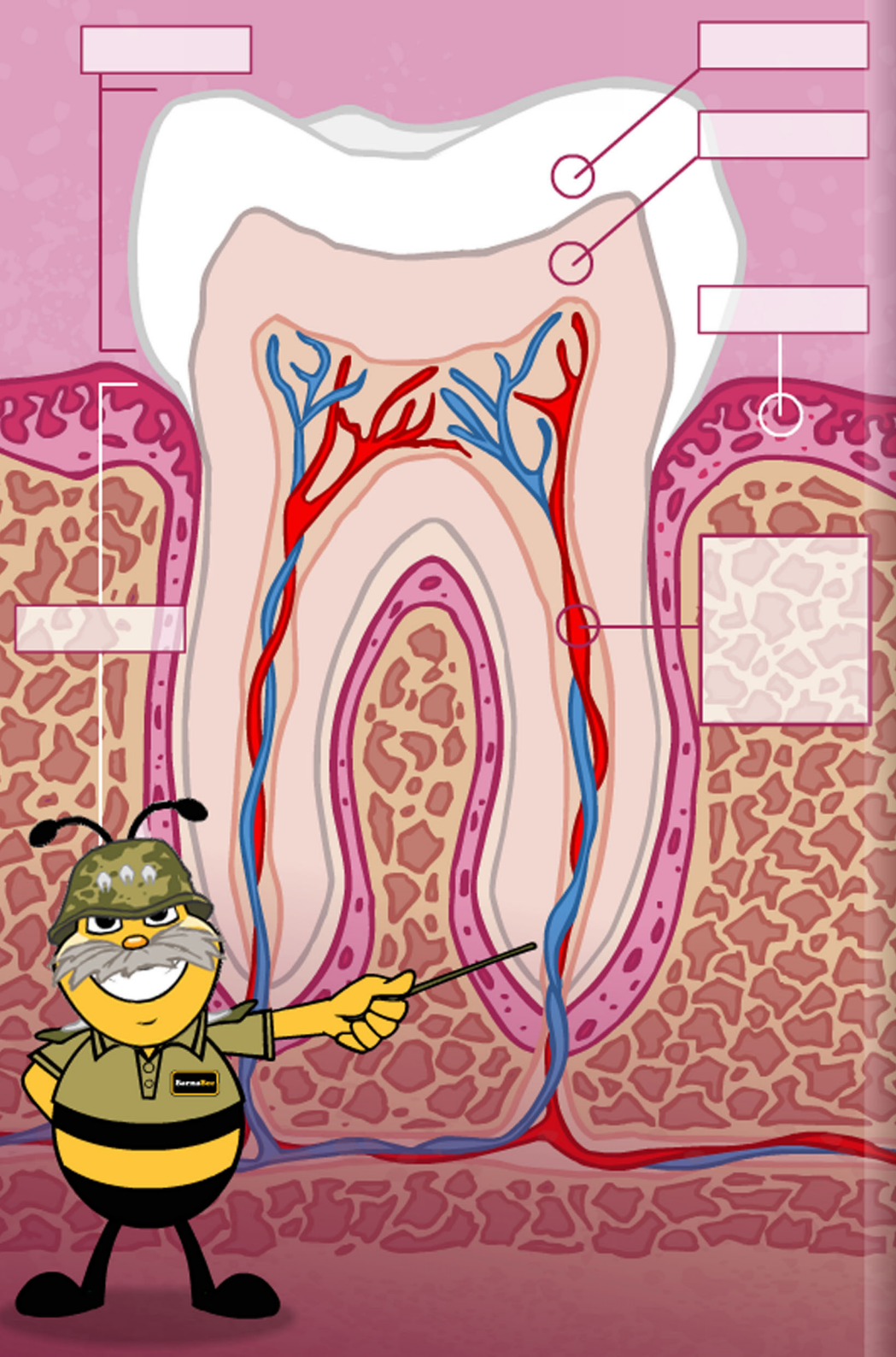


As Squadron Commander BarnaBee I'd address my troops...

"We, the valiant bees of squadron **2B** have been entrusted with a very important mission. This is a tooth. As we'll be defending it with our lives, it's worth knowing a little about it.

A tooth can be divided into two parts; the **crown** – above the **gum** - and the **root** – below the gum. Sensitive **nerves** and **blood vessels** run up through the roots and are protected by a hard but **porous** wall of **dentin**. Dentin is harder than bone. This is capped by a hard white armour called **enamel**.

Study it well."



"So let's see how clever you soldiers really are. Label the tooth correctly. *Good luck...*"

*Write your answers in the boxes provided.*





I was really onto something here. **Oral health** was looking more exciting by the second. Now that we'd had a good look at teeth, I figured it was time to begin studying **bacteria**. It's always important to understand your enemy before going into battle.



"A profile of the enemy has been uploaded to your on board computers. Our intelligence suggests that there are over one hundred million **microbes** of at least six hundred different species living in every millilitre of saliva (that's spit) inside every human mouth.

Fortunately for us, most of them are **friendlies**.

Today we are concerned with this nasty piece of work: **Streptococcus mutans**, or **S.Mutans** for short.

It is an **acid** spitting, **enamel** dissolving monster that has the ability to **self-replicate** at an astounding rate."



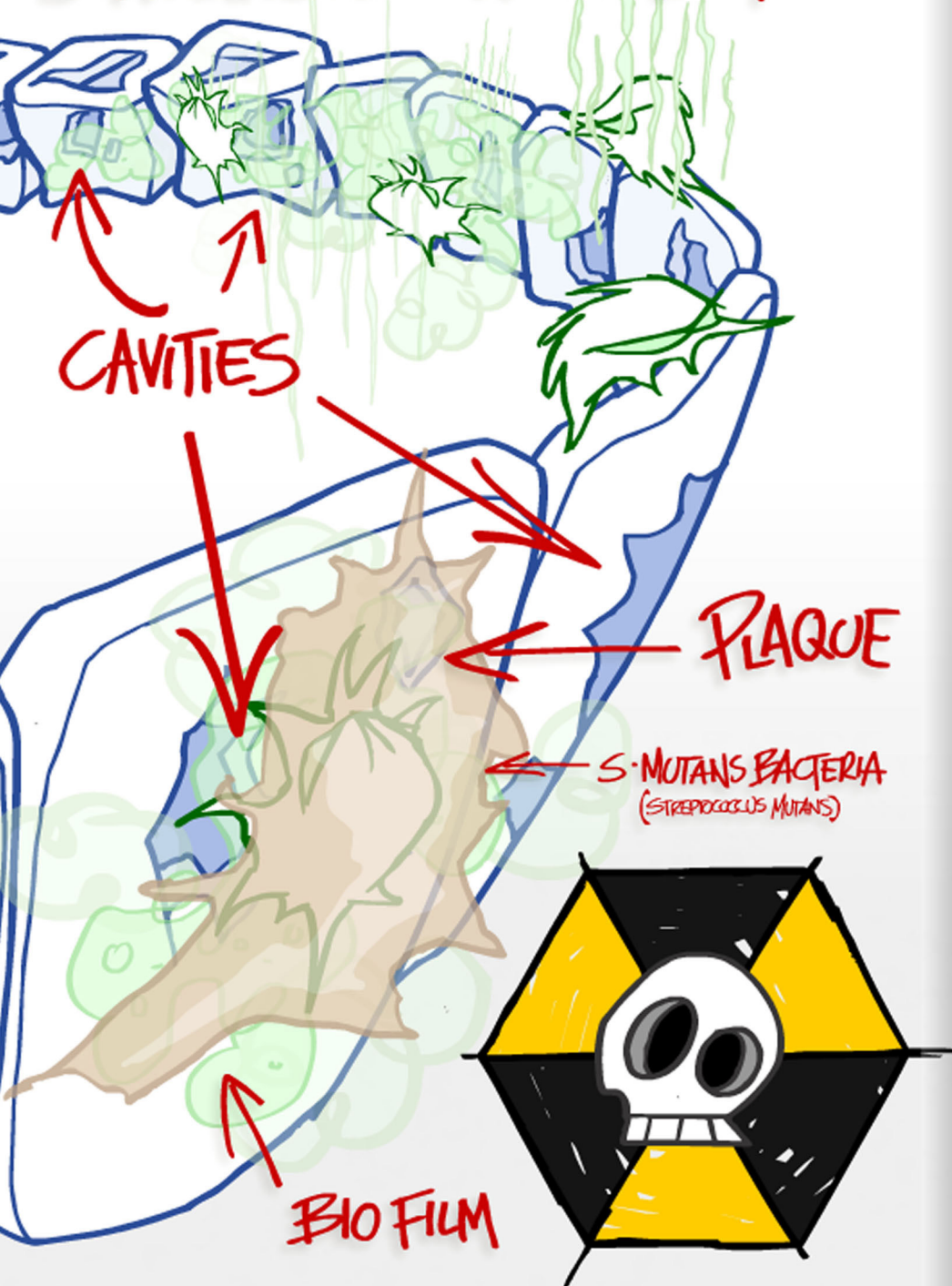


"**S.Mutans** feed on the things people love to eat, namely **sugars**.

All kinds of **treats**, **fizzy drinks** and **sports drinks** are like a super food to the enemy, fuelling their numbers and **attack strength**.

If we are to protect our precious teeth, we must reduce the enemy's access to this fuel source."

## S. MUTANS ATTACK STRATEGY



"Fortunately for us, the **S. Mutans** have plan of attack we understand.

They attach themselves to the **bio film** that forms on the tooth's surface.

As they feed off **sugars** they ooze a powerful **acid** that can eat through the outer layers of **enamel** and **dentin** and into the **nerve** centre of the tooth.

If they are not forcibly removed within a **twelve hour period**, the damage they cause is **irreversible**. Left long enough they will form their own shield.

We know this as **plaque** and it is very strong. We must not let the **S. Mutans** establish a base on our teeth. Is that clear?"

"Sir, yes sir!"

"I can't hear you!"

"SIR, YES SIR!!!"

"That's better."





This was all starting to seem impossible.  
How could we ever win a battle against  
such a powerful enemy?  
It was just then that I remembered our  
number one weapon against **bacteria**;  
**Fluoride!**

# PLAN of ATTACK:

Against plaque forming bacteria

1. Restrict the enemy's fuel (sugar) supply.

2. Drink fluoridated water to make the environment difficult for the enemy to operate in.

3. Brush at least every 12 hours with full strength fluoride tooth paste (after breakfast and before bed) to keep the enemy from establishing a base on teeth.

4. Brush for 2 minutes each time to ensure all excess fuel cells (sugar) and enemies hiding between teeth and under the gum line are removed.

5. Have routine checkups at dental headquarters to make sure everything is in order.



"Listen here. I know the enemy we're about to face is cunning and ruthless, but take heart.

We are equipped with the greatest weapon against **tooth decay** known to man.

We know who this enemy is.

We know what fuels it and we know its plan of attack.

Well, we have a little plan of our own..."





"Ok troops, take up your positions and ready yourselves for the most intense **two minute** battle of your lives. Let's hope there's no excess **sugar** floating around.

Here they come!

Ready weapons. Attack!

Engage **bacteria** blasting **brushes**!

Go **fluoride** phasers!

Power up **plaque** pounders!"



A Victory! Yes!

And from that day on everyone in the orchard came to love their teeth a little more and made looking after them an important part of their day. And they couldn't wait for my next **toothilating** adventure...