



Beat the bugs Late Primary Lesson Plan

Lesson Plan: Vaccination & Antibiotic Resistance

Grade Level: 4th – 7th grade

Duration: 45–60 minutes

Subject: Science / Health Education

Summary of Curriculum Fit – (see *Beat the bugs* Australian Curriculum resource sheet)

- **Science (Biological Sciences)** → Covers how the immune system, vaccines, and bacteria work.
 - **Health & Physical Education (HPE)** → Focuses on making informed decisions about health, vaccines, and medicine use.
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Lesson Objectives

By the end of the lesson, students will be able to:

1. Explain what vaccines are and how they work.
 2. Understand why vaccinations are important for individual and community health.
 3. Define antibiotic resistance and explain why it's a growing concern.
 4. Identify ways to prevent the spread of antibiotic-resistant bacteria.
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Materials Needed

- *Beat the Bugs* by Sarah Brazier (if available)
 - Whiteboard & markers (or digital presentation slides)
 - Printed worksheets or an interactive quiz
 - Video clips (such as "**How Vaccines Work**" by the WHO or "**Antibiotic Resistance Explained**" by Kurzgesagt)
 - Chart paper & markers for group activities
 - A balloon (optional for a hands-on immune system demonstration)
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Lesson Structure

1. Introduction (10 minutes) – *Hook & Discussion*

Discussion Starter: Ask students:

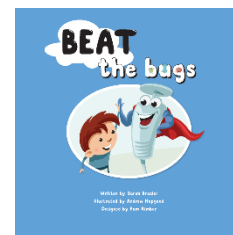
- *Have you ever had a vaccine? What do you remember about it?*
- *Why do you think doctors recommend vaccines?*
- *What happens if we get sick and take antibiotics too often?*

Demonstration (Optional):

Blow up a balloon and ask students to imagine it as a germ.

- If our immune system is weak (poke it lightly), the germ can enter.
- If we are vaccinated (hold the balloon tighter), we are stronger against the germs.

Key Message: Vaccines prepare our immune system to fight infections!



2. What Are Vaccines? (15 minutes) – *Presentation & Storytime*

- Explain that vaccines train our bodies to recognize and fight specific diseases.
- Show a simple diagram of how a vaccine works.
- **Read aloud or summarize *Beat the Bugs*** (if available).
- Discuss how vaccines protect not only individuals but also communities (herd immunity).

Activity:

- **"Vaccine Tag" Game** – One student starts as the "virus" and tries to tag others. Students who are "vaccinated" (by a teacher's choice) are immune. Discuss how herd immunity works afterward.

3. What Is Antibiotic Resistance? (15 minutes) – *Video & Discussion*

- **Show a short video** (such as Kurzgesagt's *Antibiotic Resistance Explained*).
- Explain that antibiotics are medicines that kill bacteria, but overuse leads to resistant "superbugs."
- Discuss real-world examples (e.g., why doctors don't give antibiotics for colds).

Activity:

- **"Superbug Survivor" Simulation** – Write bacteria names on index cards. Give students some "antibiotic" cards to cure infections. But over time, some bacteria "mutate" (turn their card over) and cannot be treated. Discuss what happened.

4. Wrap-Up & Reflection (10 minutes) – *Discussion & Assessment*

- Review key points:
 1. Vaccines help prevent diseases before we get sick.
 2. Antibiotic resistance happens when bacteria learn to fight medicines.
 3. We should only take antibiotics when needed to keep them working.

Exit Ticket: Ask students to answer one question before leaving:

- *One fact I learned today is...*
- *One question I still have is...*

Assessment & Homework Options

✓ **In-class Quiz** (Multiple choice or short answer on vaccines & resistance)

✓ **Creative Poster** (Design a public health poster about why vaccines are important)

✓ **Home Connection** (Interview a family member about their experience with vaccines)

Extension Activities

- **Debate:** "Should everyone get vaccinated?" (Guided with facts)
- **Guest Speaker:** Invite a doctor or nurse to talk about vaccines & antibiotics.
- **Research Project:** Students investigate a historical disease eradicated by vaccines (e.g., smallpox, polio) or encourage students to create a public health awareness materials on vaccines.

Final Thoughts

This lesson combines **storytelling, hands-on activities, and discussion** to make vaccinations and antibiotic resistance engaging for students.