Body Investigators: Organs vs. Tissues

(Year 5 - Ages 10-11):

Lesson 1 of 9

Lesson Overview

Lesson Title:	Body Investigators: Organs vs. Tissues
Year Level:	Year 5 (Ages 10-11)
Lesson Duration:	60 minutes
Key Focus Areas:	Altruism, scientific literacy, human biology (organs and tissues), critical thinking.
Curriculum Links:	Australian Curriculum - Health and Physical Education (Foundation)

- AC9S5U01: Examine how the structure of living things relates to their function... and how components of systems work together.
- AC9HP6P01: Describe how body systems work together to support health and wellbeing.
- AC9HP6P02: Describe and apply strategies that demonstrate consideration for others' feelings, needs and rights.
- AC9HS5K07: How people contribute to communities.

Learning Intentions

- Understand altruism (the motivation to give) as a key human behaviour.
- Investigate and identify the scientific difference between organs and tissues.
- Describe the basic function of key organs (e.g., heart, lungs, kidneys) and key tissues (e.g., corneas, skin, bone, heart valves).
- Recognise that organ donation and tissue donation are two different, powerful ways to help others.

Success Criteria

- Explain altruism in their own words (e.g., "helping for the sake of helping").
- Correctly sort examples of organs and tissues into two groups.
- Explain the key difference between an organ (a complex "machine") and a tissue (a "material" for the body).
- Complete a "Body Investigator's Report" worksheet, labelling both organs and tissues.

Teaching Sequence

Work through this lesson in the following sequence:

Duration	Part	Focus
10 minutes	Part A. The Investigator's Mission	Introduction, Defining Altruism, "Why do we help?"
20 minutes	Part B. Case File: Organs vs. Tissues	Scientific Investigation & Sorting Activity
20 minutes	Part C. The Investigator's Report	Worksheet Activity & Labeling
10 minutes	Part D. The Investigator's Debrief	Connecting to the Big Idea & Reflection

Part A. The Investigator's Mission (10 minutes)

Step 1. The "Body Investigator" Hook

- Gather students. (Optional: Put on a prop "lab coat" or "investigator's badge").
- Say: "For the last two years, we've learned about 'Helping Heroes' and their kind 'pledges.' This year, we level up. We become 'Body Investigators.' Our mission is to investigate the science of helping. We'll explore what makes our bodies so amazing and how the 'Hero's Pledge' actually works."

Step 2. Defining Altruism (The "Motivation to Give")

- Say: "Our first investigation is: Why do humans help? There's a scientific word for this: Altruism. Altruism is the unselfish desire to help others, just because it's the right thing to do, with no expectation of getting a reward."
- Class Discussion: "As 'Investigators,' what evidence do we see of altruism? Where do you see people helping just to help?" (e.g., "Volunteering," "Donating to charity," "Helping a stranger who drops their shopping.")

Part B. Case File: Organs vs. Tissues (20 minutes)

Step 1. Introducing the "Case File"

- Say: "Okay, Investigators. If altruism is the 'why' we help, we now need to investigate the 'what.' When a hero donates, what are they giving? For this, we need to understand the difference between two key parts of our body: Organs and Tissues."
- On the board, draw a T-chart: ORGANS vs. TISSUES.

Step 2. The Key Metaphor

- Say: "Here's the key: Organs are the body's 'machines.' They are complex parts that perform a big, specific job. Your heart is a machine—its job is to pump. Your lungs are machines—their job is to breathe."
- Say: "If organs are the 'machines,' then Tissues are the body's 'materials.' They are the amazing materials the body is built from. Your skin is a material that shields you. Your bones are the strong material for your frame. Your corneas are the clear, window-like material in your eyes."

Step 3. The Sorting Activity

- Use the "Organ vs. Tissue Fact Cards" (from Teacher Resources). Read one card at a time.
- Example: "The Kidney. Its job is to filter all the blood in your body. Is that a 'machine' (Organ) or a 'material' (Tissue)?" (Machine -> Organ).
- Example: "The Cornea. This is the clear, tough 'window' at the very front of your eye that lets light in. 'Machine' or 'Material'?" (Material -> Tissue).
- Sort all the cards (Heart, Lungs, Kidneys, Liver = Organs. Corneas, Skin, Bone, Heart Valves = Tissues) on the T-chart.

Part C. The Investigator's Report (20 minutes)

Step 1. Introducing the Worksheet

- Distribute the "Body Investigator's Report" worksheet.
- Instruct: "It's time to file your report. This worksheet has two parts.
  - Part 1: Fill in the T-chart with the 'Organs (Machines)' and 'Tissues (Materials)' we just sorted.
  - Part 2: This is a more advanced body map. Your job is to label as many parts as you can. For the first time, you must label both organs and tissues."

Step 2. Independent Investigation

- Allow students 15-20 minutes to complete their reports. They can use the Fact Cards, classroom posters, or simple, teacher-approved research tools (like a children's encyclopedia) to help.
- Circulate and help. Prompt: "Where do the corneas go? That's right, they are the 'windows' of the eyes. Where does the skin go? Everywhere!"

Part D. The Investigator's Debrief (10 minutes)

Step 1. Connecting to the Big Idea

- Gather the class.
- Say: "Investigators, you've made a huge discovery. Organs and Tissues are different. Why is this important for 'Helping Heroes'?"
- Say: "Organ donation is giving a 'machine'—like a heart or a kidney—to save someone's life. This is a very complex gift, and only a very small number of people can be organ donors."

- Say: "Tissue donation is giving the 'materials'—like skin, bone, or corneas. This is also a life-changing gift! A skin graft can save a firefighter with burns. A cornea transplant can make someone who is blind see again. Many more people can be tissue donors."

Step 2. Reflection and Sharing

- Ask: "What was the most surprising thing you learned in your investigation today?"
- Say: "You've all done an amazing job. You've learned that altruism is our 'motivation to give,' and that there are two amazing scientific ways to give: the gift of organs, and the gift of tissues. Both are equally heroic."

Differentiated Learning

- Extension:
  - Challenge students to research one more organ (e.g., Liver, Pancreas) and one more tissue (e.g., Tendons, Blood) and add them to their report with a description of their "job" or "material."
- Learning Support:
  - Provide a "Word Bank" on the worksheet with the names of all the organs and tissues for correct spelling.
  - For the body map, pre-draw lines pointing to the key areas (e.g., a line to the eye for "cornea," a line to the chest for "heart").

Teacher Reflection

- Did the "Body Investigator" metaphor successfully transition the students to a more scientific (but still engaging) mindset?
- Did the "Organs = Machines" and "Tissues = Materials" metaphors work to explain the key scientific difference?
- Were students able to complete the sorting activity and the worksheet, demonstrating they understood this new, crucial distinction?
- Did this lesson provide a strong, fact-based foundation for the rest of the Year 5/6 unit as requested?

Assessment

- Class Discussion: Observe students' ability to sort the "Fact Cards" into the correct "Organ" or "Tissue" category.
- Worksheet (Part 1): Assess the T-chart for correct categorisation of organs vs. tissues.
- Worksheet (Part 2): Assess the body map. Did students correctly label at least two organs and two tissues?
- Exit Ticket: Ask students to write one sentence explaining the difference between an organ and a tissue.

Additional Notes:

This lesson is a critical "level up" from Year 4. The Safety and Sensitivity guidelines in the "Teacher Content" document are paramount. The language must be respectful, scientific, and positive. This lesson demystifies the "what" of donation by splitting it into two clear, logical categories. This scientific foundation is essential for successfully teaching the more advanced concepts of the Year 5/6 unit, such as the "basic transplant process" and "real-life hero stories" (e.g., a story about restoring sight, which is a tissue donation).