The System Challenge: Mapping the Process Pathway

(Year 6 - Ages 11-12):

Lesson 3 of 9

Lesson Summary

This 60-minute lesson introduces the complex systems and teamwork required for organ and tissue donation to successfully achieve the "Domino Effect" (L1). Students transition from discussing empathy (L2) to systems thinkingand sequencing. As "Process Engineers," students will investigate the simplified stages of the transplant pathway, learning about the crucial difference in logistics for an organ (must be fast) versus a tissue (can be stored in a Tissue Bank). Through a collaborative flowchart challenge, students will map the two distinct pathways, demonstrating that science, logistics, and human altruism must work perfectly together to save lives.

Learning Intentions

Students will .....

- Understand that organ and tissue donation is a highly organized, safe, and collaborative system involving medical and non-medical professionals.
- Investigate and sequence the basic steps of the simplified Organ Transplant Pathway and the Tissue Transplant Pathway.
- Identify the critical difference between the two pathways (i.e., the urgency required for organs versus the storage capability for tissues).
- Recognise the need for precise teamwork and decision-making in a high-stakes, life-saving system.

Success Criteria

Students can .....

- Correctly sequence the simplified steps for both an organ and a tissue transplant using a flowchart.
- Explain the key logistical difference between the two processes (e.g., "Organs need a specific time window; tissues can wait").
- Identify at least two different teams or roles essential to making the process work (e.g., The Coordinator, The Surgeon).
- Use systems language (e.g., sequence, process, logistics, coordination, pathway) when describing the act of donation.

Lesson Details

Time:	60 minutes
Year Level:	Year 6 (Ages 11-12)
Unit:	This is Lesson 3 of 9 in the series.
Educational Partner:	This lesson is adapted from resources provided by DonateLife

General Capabilities

Systems Thinking, Sequencing, Logistics, Teamwork, and Scientific Process.

Curriculum Mapping and Links

Australian Curriculum (v9.0)

Subject	Strand	Content Descriptor
Design and Technologies (D&T)	Processes and Production Skills	AC9TDE6P01: Apply principles of systems thinking to investigate, design, plan and manage projects, including sequencing and documenting steps in a process.
Health and Physical Education (HPE)	Personal, Social and Community Health	AC9HP6P09: Investigate different sources and types of health information and how these apply to their own and others' health choices (linked to understanding health systems).
HASS (Civics & Citizenship)	Knowledge and Understanding	AC9HS6K07: Explain the key roles and responsibilities of key institutions and processes in Australia's democracy and legal system (linked to understanding complex social systems).

Queensland Curriculum (QCAA)

Subject	Syllabus	Content Description
Design and Technologies (D&T)	Year 6	Document and communicate the design processes and production skills, including sequencing steps and using systems thinking to create solutions.
Health and Physical Education (HPE)	Year 6	Analyse how emotional responses influence interactions, and describe strategies for seeking, giving or denying consent effectively and respectfully (linked to complex interactions within the health system).
HASS (Civics & Citizenship)	Year 6	How individuals and groups contribute to the communities to which they belong (linked to the diverse professional roles contributing to the health system).

Resources Required

- Whiteboard or smartboard.
- Resource: "The Process Pathway Cards" (Two sets of scrambled, colour-coded cards for groups: one set for the "Organ Pathway" and one for the "Tissue Pathway").
- Student Worksheet: "The Process Pathway Challenge" (A two-part worksheet with two blank flowcharts).
- Markers, highlighters, and pencils.
- Teacher Resource: Simple visual guide showing a flow of communication (like a road map).

Skills

- Systems Thinking (Understanding interconnections and processes)
- Sequencing & Logic (Ordering steps in a complex process)
- Critical Thinking (Identifying urgency and storage needs)
- Collaboration
- Scientific Literacy

Teacher Preparation

- Prepare Resources: Create the two sets of simple "Process Pathway Cards" (4-5 steps each) for the group activity. Ensure the core difference is clearly marked (Organ = Urgent, Tissue = Store/Bank).
- Core Metaphor: Frame the lesson around being "Process Engineers" or "Scientific Mappers." The mission is to take a confusing event (donation) and map it into a clear, logical, and safe process.
- Key Language: Model the use of systems language (sequence, coordination, logistics, pathway, Tissue Bank) throughout the lesson.
- Safety Note: This lesson is purely focused on how the system works; explicitly avoid graphic or medical details. The language should focus on coordination and science, not the hospital environment.

Additional Information

This lesson directly addresses the Design and Technologies curriculum focus on systems thinking and provides a necessary analytical step before moving on to future innovation. By simplifying the complex donation journey into a logical process, students reinforce that the Gift of Life is only possible because of incredible teamwork and organization. This systems view demystifies the process, making the final act of altruism appear even more heroic and coordinated.