

# The Legacy Code: The Opportunity Cost

(Year 9 - Ages 14-15)

## Lesson 4 of 9

### Lesson Summary

In Lesson 3, students looked at the ethics of allocation. In Lesson 4, they analyze the Value of the result. This 60-minute lesson applies economic principles to human health. Students will explore the concept of "Opportunity Cost"—the idea that time spent on illness (e.g., dialysis, hospital stays) is time stolen from education, careers, and relationships.

Acting as "Health Economists," students will investigate the metric of QALYs (Quality Adjusted Life Years) to understand how medical professionals measure the impact of a transplant. They will calculate the "Bandwidth" consumed by chronic illness and discover how donation acts as a "System Upgrade" that restores a young person's capacity to build their own legacy.

### Learning Intentions

Students will .....

- Define "Opportunity Cost" and apply it to the context of chronic illness and organ failure.
- Investigate the concept of QALYs (Quality Adjusted Life Years) as a measure of health outcomes.
- Analyze the "Bandwidth Cost" of illness on a teenager's education, independence, and mental health.
- Evaluate donation not just as a medical procedure, but as an economic and social enabler.

### Success Criteria

Students can .....

- Explain the difference between Survival (Quantity of life) and Thriving (Quality of life) using the QALY scale (0 to 1).
- Calculate the "Opportunity Cost" of a specific condition (e.g., hours lost to treatment per year).
- Create a visual "Bandwidth Graph" comparing a patient Pre-Transplant vs. Post-Transplant.
- Articulate how restoring health allows a person to contribute to the "Social Code" (society).

### Lesson Details

Time:	60 minutes
Year Level:	Year 9 (Ages 14-15)
Unit:	This is Lesson 4 of 9 in the series.
Educational Partner:	This lesson is adapted from resources provided by DonateLife

### General Capabilities

Numeracy (Statistical Analysis); Critical and Creative Thinking; Ethical Understanding; Personal and Social Capability.



# Curriculum Mapping and Links

## Australian Curriculum (v9.0)

Subject	Strand	Content Descriptor
Economics and Business	Knowledge and Understanding	<u>AC9HE9K01</u> : Generate and solve problems using... cost-benefit analysis and opportunity cost. (Focus on the economics of health)
Mathematics	Statistics	<u>AC9M9S02</u> : Compare data displays... and analyze distributions. (Focus on health data)
Health and Physical Education	Personal, Social and Community Health	<u>AC9HP10P03</u> : Evaluate factors that shape identities and analyze how individuals impact the health of communities. (Focus on chronic illness impact)

## Queensland Curriculum (QCAA)

Subject	Syllabus	Content Description
Economics and Business	Year 9	The role of participants in the economy and the concept of opportunity cost.
Mathematics	Year 9	Data interpretation and statistical analysis.
Health and Physical Education	Year 9	Evaluate the impact of social and cultural factors on health.



## Resources Required

- Whiteboard/Smartboard.
- Resource: "The QALY Scale" (A graph explaining the 0.0 to 1.0 health rating system).
- Student Worksheet: "The Economist's Ledger: Measuring Life."
- Video Hook: A video explaining "Opportunity Cost" or a patient story focusing on lost career/school opportunities.
- Prop: A battery/phone with "Low Power Mode" enabled to demonstrate restricted bandwidth.

## Skills

- Economic Reasoning (Cost-Benefit Analysis).
- Data Literacy (Understanding health metrics).
- Empathy (Translating stats into human experience).
- Systems Thinking (Health as a resource).

## Teacher Preparation

- The Metaphor: "Bandwidth." Explain that humans have a limited CPU (brain/energy). Chronic illness takes up 80% of the bandwidth just to stay alive (Survival Mode). A transplant frees up that bandwidth for living (Legacy Mode).
- Key Concept: QALY. A year of perfect health = 1 QALY. A year of severe illness might only be 0.5 QALYs. Donation increases the QALY score, not just the years lived.
- Sensitivity: Focus on the loss of potential (missed school, unable to work/travel) which resonates with 15-year-olds thinking about their future..

## Additional Information

This lesson appeals to the Year 9 intellect. It validates that health is a crucial asset for achieving their goals. By using economic terms ("Cost," "Asset," "Investment"), we frame donation as a rational, high-value decision for society, reinforcing the "Smart/Logic" theme of the Year 9 unit.

