

The Alchemist's Code: Decoding Altruism

(Year 7 - Ages 12-13)

Lesson 1 of 9

Lesson Overview

Lesson Title:	The Alchemist's Code: Decoding Altruism
Year Level:	Year 7 (Ages 12-13)
Lesson Duration:	60 minutes
Key Focus Areas:	Altruism (Intrinsic vs. Extrinsic), Biological Transformation, Civic Responsibility
Curriculum Links:	<p>Australian Curriculum – Health and Physical Education (Foundation)</p> <ul style="list-style-type: none">• <u>AC9HS7K04</u>: Investigate how citizens can participate in Australia's democracy, including through... volunteering and contributing to the community. (Focus on donation as a silent form of volunteering/contribution)• <u>AC9HP8P09</u>: Investigate different sources and types of health information and how these apply to their own and others' health choices. (Focus on informed decision making)• <u>AC9S7U01</u>: Investigate the role of classification in ordering and organising the diversity of life... (Extension: Classifying body parts into 'Organs' vs 'Tissues' for donation)

Learning Intentions

- Define Altruism and distinguish between "Intrinsic" (internal) and "Extrinsic" (external) motivations for helping.
- Explore the concept of "Biological Alchemy"—understanding how one donor can transform the lives of up to 7 organ recipients and many more tissue recipients.
- Investigate the scientific and social value of donation as a form of active citizenship.
- Connect the abstract idea of empathy to real-world medical outcomes (e.g., sight, mobility, life).

Success Criteria

- Formulate a definition of Altruism in their own words (e.g., "Doing good when no one is watching").
- Classify different acts of kindness as either Intrinsic (inner feeling) or Extrinsic (reward-based).
- Identify the "Magic Numbers" of donation: 1 donor = 7 lives saved (organs) and many restored (tissues).
- Complete the "Alchemist's Equation" worksheet, mapping how a single decision leads to multiple positive outcomes.



Teaching Sequence

Work through this lesson in the following sequence:

Duration	Part	Focus
10 minutes	Part A: The Initiation	Hook, Defining the "Alchemist" metaphor & Altruism.
15 minutes	Part B: The Motivation Lab	Classifying motivations (Intrinsic vs. Extrinsic).
20 minutes	Part C: Biological Alchemy	The Science of Transformation & The Multiplier Effect.
15 minutes	Part D: The Code Breaker	The Family Conversation & Future Planning.

Part A: The Initiation (10 minutes)

Step 1. The Alchemist Hook

- Say: "In ancient times, Alchemists were obsessed with one thing: turning dull lead into glittering gold. They never succeeded. But in modern medicine, we have achieved something even more magical. We can turn a tragedy (the end of a life) into a new beginning for someone else. This is the 'Alchemy' of Organ and Tissue Donation."
- Visual: Play the Video Hook (a short clip of a recipient seeing for the first time or running). Ask: "What was the 'lead' (the problem) and what is the 'gold' (the result) in this video?"

Step 2. Defining the Code (Altruism)

- Distribute: The Alchemist's Journal (Student Worksheet).
- Say: "The fuel for this alchemy isn't fire—it's Altruism. Altruism means helping others just because it is the right thing to do, without expecting a reward."
- Task: Students write their own definition of Altruism in their Journal (Part 1).

Part B: The Motivation Lab (15 minutes)

Step 1. Intrinsic vs. Extrinsic

- Explain: "Not all helping is the same."
 - Extrinsic Motivation (Fool's Gold): You help to get money, likes on TikTok, or praise.
 - Intrinsic Motivation (Real Gold): You help because it aligns with your values. You would do it even if no one was watching."

Step 2. The Sorting Experiment

- Activity: Use the "Motive Cards" (or read scenarios aloud). Students must vote with their hands: Left hand for "Fool's Gold" (Extrinsic), Right hand for "Real Gold" (Intrinsic).



- Scenario 1: donating \$5 to charity but posting it on Instagram so people think you are cool. (Extrinsic)
- Scenario 2: An anonymous kidney donor giving a kidney to a stranger. (Intrinsic)
- Worksheet: Students complete the "Motivation Lab" table in their Journal.

Part C: Biological Alchemy (20 minutes)

Step 1. The Multiplier Effect

- Say: "An Alchemist multiplies value. One donor doesn't just save one life. The magic number is 7."
 - * *Organs*: Heart, Lungs (2), Liver, Kidneys (2), Pancreas = Up to 7 lives.
 - Tissues: Eyes, Bone, Skin, Heart Valves = Many more lives improved.
- Maths Challenge: Students complete "The Alchemist's Equation" in their Journal (Part 2), calculating the impact of a group of donors.

Step 2. Scientific Powers

- Discuss: Use the Teacher Content facts to share the "Superpowers" of specific parts.
 - The Liver: The Regenerator (Regrows itself!).
 - The Cornea: The Bloodless Window (Gets oxygen from air!).
- Worksheet: Students identify the organs based on these clues in Part 3 of their Journal.

Part D: The Code Breaker (15 mins)

Step 1. The Hardest Step

- Say: "We have the science and the motivation. But the alchemy fails if one thing is missing: The Conversation. In Australia, doctors will always ask the family for consent. If the family doesn't know the 'Code' (your wishes), they often say no out of fear/stress."

Step 2. Drafting the Script

- Task: Students draft their "Conversation Code" in Part 4 of the Journal.
 - Prompt: "You don't need to register today (you can't until you are 16). But you can tell your family your thoughts. Write a script for how you would bring this up at the dinner table tonight."

Step 3. Reflection

- Exit Ticket: Ask students to share one word that describes how they feel about the concept of "Biological Alchemy" (e.g., "Amazed," "Curious," "Inspired").



Differentiated Learning

- Extension:
 - Challenge students to investigate why the Cornea doesn't need blood matching like a Kidney does (Science Extension).
- Learning Support:
 - Provide a pre-written list of "Conversation Starters" for students to choose from instead of writing their own script from scratch.

Teacher Reflection

- Did the "Alchemy" metaphor help students engage with the science without finding it "gross"?
- Were students able to clearly distinguish between Intrinsic and Extrinsic motivation?
- Did the maths activity help visualise the scale of the impact?

Assessment

- Class Discussion (Formative): Observe students' reasoning during the "Motive Cards" activity. Are they able to clearly articulate why a scenario represents Intrinsic vs. Extrinsic motivation?
- Worksheet (Part 2): Assess the accuracy of the "Alchemist's Equation" calculation to ensure they grasp the scale/multiplier effect of donation.
- Worksheet (Part 4): Assess the "Conversation Code" script. Look for:
 - Clarity: Does the student clearly state their hypothetical wish?
 - Tone: Is the language respectful and appropriate for a family discussion?

Additional Notes:

This lesson is designed to scaffold the transition from primary school "hero" narratives to high school "civic responsibility." By using the "Alchemy" metaphor, we allow Year 7 students to explore the biological mechanism of transplantation (turning loss into life) without becoming overwhelmed by the medical reality or the tragedy of death.

It is important to monitor the "Motive Cards" activity closely; at this age, students often default to cynicism. Ensure you validate that doing good feels good (which is fine!), but emphasize that the primary driver for organ donation must be the desire to help, as there is no financial reward in Australia. This establishes the ethical baseline for the rest of the 9-lesson unit.

