

The Ripple Effect: Modeling Impact

(Year 8 - Ages 13-14)

Lesson 2 of 9

Name: _____ Class: _____

Mission Briefing: Network Theory studies how things connect. From the internet to viruses to gossip, everything travels through nodes and links. Your mission is to map the "Donation Network." You will act as an Architect to visualize how one single decision can stabilize an entire community web.

Part I: The Hub and Spoke (Basic Map)

Task: Draw a network map below.

1. Draw a central circle labeled "The Donor."
2. Draw 7 lines radiating out to 7 new circles labeled "Recipients" (Heart, Lung, Liver, etc.).
3. For each Recipient circle, draw 3 more lines connecting them to "Family/Friends."

Calculation:

- Nodes (People) directly saved: 7
- Nodes (Family/Friends) directly helped (7 x 3): 21
- Total "First Wave" Impact (7 + 21): _____



Part 2: The Ripple Effect (Secondary Impact)

Scenario: Recipient #4 received a kidney transplant. Before the transplant, they spent 3 days a week in hospital on a machine. Now, they are healthy.

Analyze the Ripple: How does this change affect the other nodes in their network?

The Node	Before Transplant	After Transplant
Recipient #4	Stuck in hospital, tired.	eg: Can go to school/work, has energy..
Recipient's Parent	Had to take time off work to drive to hospital.	
Recipient's Sibling	Worried, missed playing with them.	
The Hospital	Busy treating one patient constantly.	eg: Bed is free for someone else.

Conclusion: Did the donor only help Recipient #4? Explain.

Part 3: Troubleshooting the Network

The Problem: Sometimes the "Signal" (the wish to donate) gets blocked.

The Barrier: The family says "No" because they didn't know the Donor's wishes.

Visualizing the Break: Imagine the link between the Donor and the Donor's Family is broken.

- What happens to the rest of the map you drew in Part 1?
 - [] The web stays strong.
 - [] The entire web disappears/collapses.

The Fix: What is the "Connector" tool that fixes this broken link? (Hint: It involves talking).

[illegible]

Part 4: The Architect's Statement

Reflection: "Society is often called a 'Social Fabric' (like a woven cloth). Based on your map, how does organ donation strengthen the fabric of society?"

My thoughts:

[illegible]

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