

The System Challenge: Mapping the Process Pathway

(Year 6 - Ages 11-12):

Lesson 3 of 9

Name: _____ Class: _____

Student Worksheet

Activity 1: PATHWAY A: The Organ ("Machine") Transplant

(This pathway is a high-speed "Relay Race" against time)

Task: Use your Process Pathway Cards to sequence the steps for an organ (machine) transplant in the correct order in the flowchart below. Use drawings and keywords to show the journey!

Step	Action and Focus (Write the sequence)
Step 1	
Step 2	
Step 3	
Step 4	



Student Worksheet

Activity 2: PATHWAY B: The Tissue ("Material") Transplant
(This pathway is a careful, planned process)

Task: Now, sequence the steps for a tissue (material) transplant. Notice how this path is different from the organ pathway.

Step	Action and Focus (Write the sequence)
Step 1	
Step 2	
Step 3	
Step 4	



Student Worksheet

Activity 3: Process Engineer's Final Debrief

Task: Look at your two completed pathways. Answer the question below, using your best systems thinking.

The Biggest Difference: Explain in your own words why the Organ Pathway (A) is a high-speed "race against time" but the Tissue Pathway (B) is a patient, planned process.

Teamwork: Why is the role of the Donation Coordinator (the person who manages the process) so important in both of these complex systems?



Activity 1: PATHWAY A: The Organ ("Machine") Transplant

Step	Action and Focus (Write the sequence)
Step 1	The Heroic Family Decision: The donor family says YES to the gift (The starting line of the race!)
Step 2	The Urgent Match: The Coordinator Team finds the perfect match for the organ, checking blood type and size (The "Race Clock" is ticking!).
Step 3	The Super-Mechanic Team: Specialist surgeons quickly and respectfully collect the organ, knowing it must be transplanted fast.
Step 4	The Life-Saving Repair: The organ is delivered to the waiting recipient, and the transplant "repair" is performed, saving a life (The finish line!).

Activity 2: PATHWAY B: The Tissue ("Material") Transplant

Step	Action and Focus (Write the sequence)
Step 1	The Heroic Family Decision: The donor family says YES to the gift of tissue.
Step 2	The Material Collection: The tissues (like corneas, skin, or bone) are respectfully collected (This can happen up to 24 hours later, not in a rush!).
Step 3	The Tissue Bank Magic: The tissues are sent to a special, safe lab called a Tissue Bank where they are processed, cleaned, and stored (The "Library of Gifts").
Step 4	The Future Repair: Weeks or months later, a doctor requests the needed "material" from the Tissue Bank to help a person see, walk, or heal.

