

Milestone 1 (Team) – Cover Page

Team Number:

26

Please list full names and MacID's of all *present* Team Members.

Full Name:	MacID:
Hassan Bokhari	Bokharh
Sohail Persaud	persas29
Eloise Nguyen	Nguyt126
Rory Sucharov-Gluck	sucharor

Any student that is **not** present for Design Studio will not be given credit for completion of the worksheet and may be subject to a 10% deduction to their DP-2 grade.

MILESTONE 1 – PATIENT DIAGNOSIS

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1. Document all pertinent information related to your assigned patient in order to create a **PATIENT PROFILE**.

SYMPTOMS:	<ul style="list-style-type: none">- Persistent left hip pain and occasional waves of surging right hip pain starting at age 10- Limp that became more pronounced over time
IMAGING INDICATORS:	<ul style="list-style-type: none">- Figure 1: indicates an asymmetry in the femur bones, with the left proximal femur being more compressed and pushed up.- Figure 2: lesion in the femur joint, potential damage to the femur bone- Figure 3: Lack of cartilage space compared to normal- Figure 4: The femur bone has direct contact with the hip sockets
PREVIOUS MEDICATIONS / DOCTOR VISITS:	<ul style="list-style-type: none">- Physio regimen from childhood until early teenage years- Tramadol, 100mg per day (ineffective)- Oxycodone, 2.5mg per day
MISCELLANEOUS NOTES:	<ul style="list-style-type: none">- Negative family situation made physio less prioritized and impacted his wellbeing as well as the attention put towards helping his pain

2. Record your final diagnosis in the space below.

FINAL DIAGNOSIS:	<ul style="list-style-type: none">- Legg–Calvé–Perthes Disease (LCPD)
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** You must verify that your diagnosis is correct before you leave

MILESTONE 1 – OBJECTIVES AND CONSTRAINTS

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As a team, identify a list of objectives, constraints, and functions for a proposed design solution. Your list should:

- Focus on your assigned design challenge
- Be comprehensive enough to fully define the given problem

OBJECTIVES	<ul style="list-style-type: none">• Should reduce constant hip pain• Should allow him to walk without need for rest• Should extend his range of motion without a cane
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CONSTRAINTS	<ul style="list-style-type: none">• Must replace both the hip socket and the femoral head (due to the deformity of both components)• Must be composed of bio-safe material and be non-toxic• Must be sterile• Must be able to be implanted safely• Must allow hip motion and mobility
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MILESTONE 1 – NEED STATEMENT

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Need Statement

Write your Need Statement in the space below. Recall that your need statement should:

- Have a clearly defined problem (*what* is the need?)
- Indicate your end-user (*who* has the need?)
- Have a clearly defined outcome (*what* do you hope to solve and *why* is it important?)

NEED STATEMENT:	Design a hip replacement for Mr. Chiles, an individual with LCPD, which will reduce hip pain and improve his ability to walk without resting.
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