

LEED Building Design and Construction

Activity #2 – Integrative Process (IP)

Before completing this Activity Read: Reference Guide for Building Design and Construction v4 – Pages 36-53

Note the following abbreviations are used in this activity:

NC	LEED BD+C: New Construction and Major Renovation
CS	LEED BD+C: Core and Shell Development
S	LEED BD+C: Schools
R	LEED BD+C: Retail
DC	LEED BD+C: Data Centers
WDC	LEED BD+C: Warehouses and Distribution Centers
HOS	LEED BD+C: Hospitality
HC	LEED BD+C: Healthcare

Although the LEED BD+C reference guide does not number the LEED prerequisites and credits, for this exercise they have been numbered in the order presented in each credit category.

Integrative Process (IP)

Fill-In, Multiple Choice, Matching

- Test your knowledge of how well you know the names of the prerequisites and credits for the Integrative Process credit category:

P / C	Name	Applies to:
P1		<input type="checkbox"/> NC <input type="checkbox"/> CS <input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> DC <input type="checkbox"/> WDC <input type="checkbox"/> HOS <input type="checkbox"/> HC
C1		<input type="checkbox"/> NC <input type="checkbox"/> CS <input type="checkbox"/> S <input type="checkbox"/> R <input type="checkbox"/> DC <input type="checkbox"/> WDC <input type="checkbox"/> HOS <input type="checkbox"/> HC

- Match the intent to the prerequisite or credit:

Prerequisite/Credit	ANS
IP – P1	
IP – C1	

	INTENT
A	To support high-performance, cost-effective project outcomes through an early analysis of the interrelationships among systems.
B	Maximize opportunities for integrated, cost-effective adoption of green design and construction strategies, emphasizing human health as a fundamental evaluative criterion for building design, construction and operational strategies. Utilize innovative approaches and techniques for green design and construction.

- The Integrative Project Planning and Design prerequisite requires that all _____ projects use a cross-discipline design and decision making, beginning in the _____ and _____ phase.
- List the process that at a minimum the project team must ensure that they follow:
 -
 -
 -
 -

5. What must be incorporated into the health mission statement?

6. What must the health mission statement address?

7. List what the LEED action plan should include, at a minimum:
 - 1.
 - 2.
 - 3.

8. The integrative project team should include a minimum of _____ professionals in addition to the _____ or _____.

9. As early as practical and preferably before _____ design, conduct a minimum _____ hour, integrated design _____ with the project team.

10. What is the goal of the design charrette?

11. List examples of the information that should be collected before the integrative design charrette:
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.

12. List the outcomes from the integrative design charrette:
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.

13. List the documentation that is required for IP Prerequisite Integrative Project Planning and Design:

- 1.
- 2.

14. What is the referenced standard for the IP Prerequisite Integrative Project Planning and Design?

15. List the systems that projects must perform an analyses for the IP Credit Integrative Process:

- 1.
- 2.

16. Complete the following:

Abbreviation	Name
OPR	_____
BOD	_____

17. List examples of process water demand volumes:

- 1.
- 2.
- 3.
- 4.

18. List examples of nonpotable water supply volumes:

- 1.
- 2.
- 3.
- 4.

19. In an integrative process the team members _____ to enhance the efficiency and effectiveness of every system.

20. List the three phases of an integrative process:

- 1.
- 2.
- 3.

21. _____ is critical to determining success in achieving performance targets, informing building operations, and taking corrective action when targets are missed.

22. What EPA tool can projects use to benchmark energy performance for the project's type, scope, occupancy, and location?

23. List the main areas projects can assess for expected water demand:

- 1.
- 2.
- 3.

24. List aspects that should be included when conducting a preliminary energy model:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

25. List the end uses projects should include when performing a “simple box” energy model to identify initial annual energy consumption percentages of total energy use:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

26. List the information that is included in the Basis of Design (BOD):

- 1.
- 2.
- 3.
- 4.

27. List what the Owner’s Project Requirements (OPR) details:

- 1.
- 2.
- 3.

28. List design aspects that the project team could consider for analyzing building envelope performance:

- 1.
- 2.
- 3.
- 4.

29. Before _____ of the building form begins, a building massing (“_____”) energy analysis can be used to evaluate potential energy and load reduction strategies, such as _____ levels and _____ levels.
30. Small commercial and most residential projects energy use is likely to be dominated by which of these?
- A. External loads
 - B. HVAC Equipment
 - C. Domestic Hot Water Systems
 - D. Computers
 - E. Internal Loads
31. List examples of programmatic and operational parameters:
- 1.
 - 2.
 - 3.
32. List examples of what the typical energy consumption by end use for a project depends on:
- 1.
 - 2.
 - 3.
 - 4.
33. What systems are the two largest energy end uses for a hospital?
- 1.
 - 2.
34. List the internal heating and cooling loads that large commercial buildings tend to be dominated by, depending on climatic conditions:
- 1.
 - 2.
 - 3.
35. List the benefits that reducing the number of lighting fixtures in a building could have on the energy consumption of the building:
- 1.
 - 2.