

Mary Idema Pew Green Building (LEED) Scavenger Hunt

Instructions: Welcome to the Mary Idema Pew Green Building (LEED) Scavenger Hunt. Throughout the library you will find Scavenger Hunt QR codes. Scan a QR code to watch the video, then answer the question below. You are expected to stay in your assigned groups for this activity rather than splitting up.

Green Building (LEED) Attribute 01: Introduction

1st floor, Main entrance, Mary Idema painting

1. What is (are) your name(s)? _____
2. What is LEED certification, and how many levels of LEED certification are there?

3. How did GVSU determine which energy efficiency measures to include in construction of the library?

Scavenger Hunt Competition: Take a selfie with your group at the Scavenger Hunt starting point (+2 points)

Green Building (LEED) Attribute 02: Green Spaces

1st floor, Main entrance, outside tables

4. What are three functions of green spaces in terms of sustainability? _____

5. What are the physical and mental health benefits of green spaces? _____

6. To meet LEED certification, how much green space was included in the design of the library? _____

Scavenger Hunt Competition: Take a selfie with your group at one of the green spaces outside of the library (+5 points).

Green Building (LEED) Attribute 03: Access to Public Transportation

1st floor, Main entrance, outside tables

7. What is the total contribution of transportation to global greenhouse gas emissions? _____
8. What is the relationship between public transportation and LEED certification? _____

9. What are the co-benefits of public transportation beyond LEED certification? _____

Scavenger Hunt Competition: Take a selfie of your group at the Kirkhoff/Pew Library bus stop (+5 points)

Green Building (LEED) Attribute 04: Double Door Airlock
1st floor, Main entrance, airlock

10. What are the sustainability features of a double door airlock? _____

Scavenger Hunt Competition: Take a selfie of your group inside one of the library airlocks (+2 points)

Green Building (LEED) Attribute 05: Mechanical Systems
1st floor, Plexiglass display

11. Name three library mechanical systems that are regulated by sensors and automated systems.

12. What are the sustainability functions provided by the library's automated mechanical systems?

Scavenger Hunt Competition: Take a selfie with your group at the plexiglass mechanical system display (+3 points)

Green Building (LEED) Attribute 06: Open Layout and Furniture Selection
1st floor, Room 131

13. Throughout the library there are 29 different types of indoor seating. What is the purpose of this diversity in furniture?

14. What are the sustainability functions of the library's open layout and diverse furniture selection?

Scavenger Hunt Competition: Take a selfie with your group at a minimum of three different pieces of furniture (+1 point each, total of 5 possible points)

Green Building (LEED) Attribute 07: Book Retrieval Systems

1st floor, Checkout computer station by main exit

15. Why do the atrium and first floor levels of the library hold so few books? _____

16. What is the total capacity of Mary Idema Pew library's ASRS? _____

17. How many books does the ASRS currently hold? _____

18. How many books are held within the library stacks? _____

19. What are the sustainability functions of the ASRS? _____

Scavenger Hunt Competition: Take a photo of a library computer displaying a book located in the ASRS (+3 points)

Green Building (LEED) Attribute 08: Daylight Harvesting and Occupancy Sensor Lighting

3rd floor, Lightwell (reading garden)

20. What is daylight harvesting? _____

21. What is a lightwell? _____

22. What are the sustainability functions of a lightwell? _____

23. What is solar shading? _____

24. What are the sustainability functions of solar shading? _____

25. How much of the library is lit by natural light during daylight hours? _____

26. How much more energy efficient is the Mary Idema Pew library in comparison to a conventional building?

Scavenger Hunt Competition: Take a selfie with your group in any library location that demonstrates daylight harvesting (+2 points each location, total of 6 possible points)

Green Building (LEED) Attribute 09: Energy Recovery - Water Stream

4th floor, Computer zone bathrooms

27. How much of the US's water resources go to commercial buildings? _____

28. What is water used for in a typical commercial building? _____

29. What percentage of greenhouse gas emissions can be contributed to energy use related to water? _____

30. How does the design of the library's stormwater system contribute to the library's sustainability? _____

31. How does the library's water use compare to a conventional building? _____

Scavenger Hunt Competition: Take a selfie with your group at any library water fountain (+2 points)

Green Building (LEED) Attribute 10: Green Roof and Cool Roof

4th floor, Green roof

32. What is the heat island effect? _____

33. Describe three major issues caused by the heat island effect. _____

34. What are the primary differences between a green roof, a cool roof, and a conventional roof? _____

35. What are the sustainability features of the library's green roof? _____

36. What are the sustainability features of the library's cool roof? _____

37. How much cooler is the library's roof in comparison to a conventional building? _____

Scavenger Hunt Competition: Take a selfie with your group on the green roof (or at the door during the winter months) (+3 points)

Green Building (LEED) Attribute 11: Energy Recovery - Air Stream

Atrium floor, DeWitt Exhibition Space

38. What are the current and anticipated relationships between air cooling systems and global climate change?

39. What are the sustainability features of the library's HVAC (heating, ventilation, and air conditioning) system?

Scavenger Hunt Competition: Take a selfie with your group at any library air vent (+2 points)

Green Building (LEED) Attribute 12: Building Materials

Atrium floor, Room 030

40. How do the library's building materials meet and exceed the LEED requirements? _____

41. How did the library's builder address sustainability during the construction process? _____

42. How do the library's building materials address noise and air pollution? _____

Scavenger Hunt Competition: Take a selfie with your group in front of any wooden wall feature (+2 points)

Green Building (LEED) Attribute 13: Art in Green Buildings

Atrium floor, Roman Corinthian Capital art piece

43. What is the relationship between art and green building? _____

44. What are three benefits of art in buildings beyond sustainability? _____

Scavenger Hunt Competition: Take a selfie with a piece of art (+1 point each, total of 10 possible points)

**Green Building (LEED) Attribute 14: Critiques of LEED, LEED 5.0, and Closing
Exit airlock between the Atrium and 1st floors**

45. How has GVSU's energy footprint changed over the last 20 years? _____

46. What are three major critiques of LEED green building certification? _____

47. How do changes to the LEED certification process occur? _____

48. What are three ways in which LEED 5.0 will change to address critiques? _____

Scavenger Hunt Competition: Compile your photos into a zip folder, Google Drive folder, or similar and submit via Blackboard. Please be sure that the names of your groupmates are included in your submission.

49. Visit the LEED website and find the Version 2.2 LEED specifications that the library was built under, and the current LEED specifications. Compare the two versions and what you learned during the scavenger hunt, keeping in mind that in several instances the construction of the library went beyond Version 2.2 LEED requirements.

- a. What are the major differences between the two LEED specifications?
- b. In what ways does the library continue to meet the newest LEED specifications?
- c. In what ways does the library not meet the newest LEED specifications?
- d. What changes could the library make today to become more sustainable per the newest LEED specifications?

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.