

## Mary Idema Pew Green Building (LEED) Scavenger Hunt 150-Minute Period Version Comparison

- The versions below are designed for 170-minute class period blocks and assume a 20-minute break.
- **100-200 Level Courses**
  - Versions A includes the Scavenger Hunt Competition. Versions B removes the Scavenger Hunt Competition.
- **300-400 Level Courses**
  - Versions A includes the Scavenger Hunt Competition. Versions B removes the Scavenger Hunt Competition.
  - **Versions 2 & 3** include basic response-questions at each scavenger hunt location. At the end of the route students answer one of two possible essay-style question that require additional research and critical thinking skills.
  - **Version 4** reduces the number of basic response-questions at each scavenger hunt location. At the end of the route students answer two essay-style questions that require additional research and critical thinking skills.
- Email Dr. Becky Williams at [williarj@gvsu.edu](mailto:williarj@gvsu.edu) for the answer keys. Only verifiable GVSU faculty, staff, and guests will be provided with the answer keys.

Topic	Question	150-minute period 100-200 level courses	150-minute period 300-400 level courses		
		Version 1	Version 2	Version 3	Version 4
<b>Attribute 01: Introduction</b>	What is LEED certification, and how many levels of LEED certification are there?	X	X	X	
	How did GVSU determine which energy efficiency measures to include in construction of the library?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at the Scavenger Hunt starting point	Version A	Version A	Version A	Version A
<b>Attribute 02: Green Spaces</b>	What are three functions of green spaces in terms of sustainability?	X	X	X	X
	What are the physical and mental health benefits of green spaces?	X			
	To meet LEED certification, how much green space was included in the design of the library?	X	X	X	
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at one of the green spaces outside of the library	Version A	Version A	Version A	Version A
<b>Attribute 03: Access to Public Transportation</b>	What is the total contribution of transportation to global greenhouse gas emissions?	X			
	What is the relationship between public transportation and LEED certification?	X	X	X	X
	What are the co-benefits of public transportation beyond LEED certification?	X	X	X	
	<i>Scavenger Hunt Competition:</i> Take a selfie of your group at the Kirkhoff/Pew Library bus stop	Version A	Version A	Version A	Version A
<b>Attribute 04: Double Door Airlock</b>	What are the sustainability features of a double door airlock?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a selfie of your group inside one of the library's airlocks	Version A	Version A	Version A	Version A
<b>Attribute 05: Mechanical Systems</b>	Name three library mechanical systems that are regulated by sensors and automated systems.	X			
	What are the sustainability functions provided by the library's automated mechanical systems?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at the plexiglass mechanical system display	Version A	Version A	Version A	Version A
<b>Attribute 06: Open Layout and Furniture Selection</b>	Throughout the library there are 29 different types of indoor seating. What is the purpose of this diversity in furniture?	X			
	What are the sustainability functions of the library's open layout and diverse furniture selection?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at a minimum of three different pieces of furniture	Version A	Version A	Version A	Version A
<b>Attribute 07: Book Retrieval Systems</b>	Why do the atrium and first floor levels of the library hold so few books?	X			
	What is the total capacity of Mary Idema Pew library's ASRS?	X			
	How many books does the ASRS currently hold?	X			
	How many books are held within the library stacks?	X			
	What are the sustainability functions of the ASRS?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a photo of a library computer displaying a book located in the ASRS	Version A	Version A	Version A	Version A

<b>Attribute 08: Daylight Harvesting and Occupancy Sensor Lighting</b>	What is daylight harvesting?	X			
	What is a lightwell?	X			
	What are the sustainability functions of a lightwell?	X	X	X	X
	What is solar shading?	X			
	What are the sustainability functions of solar shading?	X	X	X	X
	How much of the library is lit by natural light during daylight hours?	X	X	X	
	How much more energy efficient is the Mary Idema Pew library in comparison to a conventional building?	X	X	X	
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group in any library location that demonstrates daylight harvesting	Version A	Version A	Version A	Version A
<b>Attribute 09: Energy Recovery - Water Stream</b>	How much of the US's water resources go to commercial buildings?	X			
	What is water used for in a typical commercial building?	X			
	What percentage of greenhouse gas emissions can be contributed to energy use related to water?	X			
	How does the design of the library's stormwater system contribute to the library's sustainability?	X	X	X	X
	How does the library's water use compare to a conventional building?	X	X	X	
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at any library water fountain	X	Version A	Version A	Version A
<b>Attribute 10: Green Roof and Cool Roof</b>	What is the heat island effect?	X	X	X	
	Describe three major issues caused by the heat island effect.	X	X	X	X
	What are the primary differences between a green roof, a cool roof, and a conventional roof?	X			
	What are the sustainability features of the library's green roof?	X	X	X	X
	What are the sustainability features of the library's cool roof?	X	X	X	X
	How much cooler is the library's roof in comparison to a conventional building?	X			
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group on/at the green roof	Version A	Version A	Version A	Version A
<b>Attribute 11: Energy Recovery - Air Stream</b>	What are the current and anticipated relationships between air cooling systems and global climate change?	X	X	X	
	What are the sustainability features of the library's HVAC (heating, ventilation, and air conditioning) system?	X	X	X	X
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group at any library air vent	Version A	Version A	Version A	Version A
<b>Attribute 12: Building Materials</b>	How do the library's building materials meet and exceed the LEED requirements?	X	X	X	X
	How did the library's builder address sustainability during the construction process?	X	X	X	X
	How do the library's building materials address noise and air pollution?	X			
	<i>Scavenger Hunt Competition:</i> Take a selfie with your group in front of any wooden wall feature	Version A	Version A	Version A	Version A
<b>Attribute 13: Art in Green Buildings</b>	What is the relationship between art and green building?	X	X	X	X
	What are three benefits of art in buildings beyond sustainability?	X	X	X	
	<i>Scavenger Hunt Competition:</i> Take a selfie with a piece of art	Version A	Version A	Version A	Version A
<b>Attribute 14: Critiques of LEED, LEED 5.0, and Closing</b>	How has GVSU's energy footprint changed over the last 20-years?	X			
	What are three major critiques of LEED green building certification?	X	X	X	X
	How do changes to the LEED certification process occur?	X			
	What are three ways in which LEED 5.0 will change to address critiques?	X	X	X	
	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 the Version 2.2 LEED requirements.		X		X
	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?				

	<p>Visit the LEED website and find the newest LEED specifications. Conduct an internet search to find another US-based green building certification process. Compare the specifications.</p> <ul style="list-style-type: none"><li>a. Which of the specifications more thoroughly addresses building issues related to the built environment's contribution to global climate change, and how/why?</li><li>b. Which of the specifications more thoroughly addresses building issues related to environmental and/or climate justice, and how/why?</li></ul>			X	X
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