

Sustainability Literacy Assessment- Fall 2018

Start of Block: Default Question Block

Introduction and Overview You are invited to participate in a voluntary survey being conducted by the Office of Sustainability. The purpose of this survey is to understand more about what the UMass Lowell community knows about sustainability. Your responses will be confidential and the survey will take approximately 5 - 10 minutes to complete. You are free to skip any question you do not want to answer and can withdraw your participation at any time. There is little to no risk to you from participating and there is no benefit to your participation. If you would like to be entered into a raffle for a chance to win an iPad you will be asked to do so at the end of the survey. If you have any questions or would like further information on this survey, please contact us at sustainability@uml.edu Thank you for your participation!

Page Break

Literacy Assessment

For each of the following questions, please select your response.

1. According to UMass Lowell's Climate Change Initiative (CCI) and other leading researchers across the globe, the effects of climate change include:

- Rising sea levels
 - Increased drought
 - Loss of biodiversity
 - All of the above
-

2. How much of the Earth's available water is fit for human consumption?

- 60%
 - 40%
 - 10%
 - 1%
-

3. Sustainability is often defined as responsible action in which of the following sectors:

- Economic
 - Environmental
 - Social
 - All of the above
-

4. Which of the following is an example of environmental justice?

- The government dams a river that floods Native American tribal lands in order to create hydropower for large neighboring cities.
 - Indigenous communities are involved in setting a quota for wood taken from protected forests next to their village.
 - Corporations build factories in developing countries where environmental laws are less strict.
 - Urban citizens winning a bill to have toxic wastes taken to rural communities.
 - I do not know.
-

5. Current increasing use of fossil fuels by humans results in an annual _____ of greenhouse gas emissions.

- net increase
 - net decrease
 - equalization
 - surplus
 - deficiency
-

6. Which of the following are considered to be renewable energy resources? (Select all that apply)

- Natural Gas
 - Petroleum
 - Water
 - Wood
 - Oil
 - Biomass
 - Coal
-

7. Which of the concepts listed below is described by the following scenario?

Warmer temperatures on Earth reduce the surface area of the Earth covered by snow. Then these exposed darker lands and water areas absorb more heat which, in turn, further increases rising temperatures and melts more snow and ice.

- Negative, or Balancing, Feedback Loop
 - Positive, or Reinforcing, Feedback Loop
 - Net Feedback Loop
 - Homeostasis
-

8. Which of the following university activities, if any, have no impact on UMass Lowell's total emissions? (Select all that apply)

- Athletics
 - Conference and Event Services
 - Dining Services
 - Information Technology Services
 - Facilities Maintenance Services
 - Residential Services
 - Transportation Services
 - All of the Above
 - None of the above
-

9. The concentration of atmospheric carbon dioxide (CO₂) is measured in parts per million (ppm). As of March 2018, atmospheric CO₂ was measured at approximately what level?

- 200 ppm
 - 300 ppm
 - 400 ppm
 - 500 ppm
 - 600 ppm
 - 700 ppm
-

10. Select the response below that best completes the following statement:

Leading scientists consider a global temperature change of 2°C to be _____.

- The maximum temperature rise possible, where the earth will not be able to warm further.
 - A tipping point where the earth will begin to see its temperature lower back to normal.
 - The minimum temperature drop possible, where the earth cannot get any cooler.
 - A tipping point where the Earth will go through irreversible and catalytic changes.
 - A minor temperature change with limited significance.
-

11. Which of the following are considered to be greenhouse gases? (Select all that apply)

- Hydrochlorofluorocarbons (HCFCs)
 - Carbon Dioxide (CO₂)
 - Methane (CH₄)
 - Oxygen (O₂)
 - Hydrofluorocarbons (HFCs)
 - Nitrogen (N₂)
 - Nitrous Oxide (N₂O)
 - Chlorofluorocarbons (CFCs)
 - All of the Above
 - None of the Above
-

12. The United Nations has developed a broad set of goals which aim to ensure an equitable, just, and environmentally friendly world. These goals are colloquially referred to as the 17 _____.

- Developing Sustainable Goals Globally (DSGs)
 - Sustainable Development Goals (SDGs)
 - Sustainable Aggregate Development Goals (SADGs)
 - Greater Aggregate Sustainability Ideologies (GASIs)
 - Greenhouse Gas Reduction Goals (GHGRGs)
-

13. In many modern, post-industrial cities like Lowell, numerous properties remain polluted by prior industrial activity. These properties are known as:

- Brownfields
 - Commercial Wastelands
 - Environmentally Sensitive
 - Environmentally Significant
 - Greenfields
-

14. What is the most common cause of pollution of waterways (e.g., streams, rivers)?

- Dumping of garbage by cities
 - Surface water running off yards, city streets, paved lots, and farm fields
 - Litter near streams and rivers
 - Waste dumped by factories
-

15. Ozone forms a protective layer in the earth's upper atmosphere. What does the ozone protect us from?

- Acid rain
 - Climate change
 - Solar UV radiation
 - Sudden changes in temperature
-

16. In the US, what do we currently do with the nuclear waste generated by nuclear power plants?

- Use it as a nuclear fuel
 - Sell it to other countries
 - Dump it in landfills
 - Store and monitor the waste
-

17. Which of the following would be considered the most environmentally sustainable?

- Recycling all recyclable packaging
 - Reducing consumption
 - Buying products labeled "eco" or "green"
 - Buying the newest products available
 - I do not know
-

18. If you were to arrange the following list of activities from largest environmental impact to smallest, which sequence listed below best represents the order you would choose:

- A. Keeping a cell phone charger plugged into an electrical outlet for 12 hours
- B. Producing one McDonald's quarter-pound hamburger
- C. Producing one McDonald's chicken sandwich
- D. Flying in a commercial airplane from Washington, DC to China

- A, C, B, D
 - D, A, B, C
 - D, C, B, A
 - D, B, C, A
 - I do not know
-

19. Which of the following is a technique used to assess the environmental impacts associated with all of the stages of a product's life from inception to obsolescence?

- An annual review
 - A life cycle assessment
 - An energy audit
 - A thermal system analysis
-

20. What is meant by the term "carbon footprint"?

- It refers to the size of the carbon chain in a given quantity of gasoline.
- The carbon left on the ground each time you take a step.
- It refers to the greenhouse gases released by a given activity in terms of carbon dioxide equivalents.
- All of the above
- I do not know

End of Block: Block 1

Start of Block: Block 2

For each of the following questions, please select your response.

21. How would you rate your level of concern about the environment?

- Not at all concerned
 - Not very concerned
 - Neutral
 - Somewhat concerned
 - Very concerned
-

22. To what extent do you agree with the following statement: "I am interested in sustainability."

- Strongly disagree
 - Disagree
 - Neither disagree nor agree
 - Agree
 - Strongly agree
-

23. What is your primary status at UMass Lowell?

- Staff
 - Faculty
 - Freshman
 - Sophomore
 - Junior
 - Senior
 - Master's Student
 - Doctoral Student
-

24. How many years have you been at UMass Lowell?

- 0 - 2
 - 3 - 4
 - 5 - 6
 - 7 - 8
 - 9 - 10
 - More than 10
-

25. Which age group are you in?

- 18 - 24
 - 25 - 29
 - 30 - 39
 - 40 - 49
 - 50 - 59
 - 60+
-

26. What is the highest level of education you have completed?

- Some High school
 - High school diploma/GED
 - Some college
 - Associate's Degree
 - Bachelor's Degree
 - Master's Degree
 - Doctorate
-

27. What is your gender?

- Male
 - Female
 - Transgender
 - Non-binary
 - I do not identify as any of the above.
-

28. What is your race?

- Asian
 - Black or African American
 - Native American or Alaskan Native
 - White
 - Other
-

29. Are you Hispanic/Latino?

- Yes
 - No
-

30. What is your survey code? (This code will only be used to match your pre- and post-surveys)

Your code is: the number of siblings you have the first letter of the city you went to high school in the last two digits of the number on your UCard first letter of high school you graduated from

Example: 5S21W you have 5 siblings, went to high school in Stamford, UCard number ends in 21, and your high school was Westhill High.

If you are interested in being entered for a chance to win an iPad, please provide your email below:

End of Block: Block 2
