AOHT Sustainable Tourism

Lesson 10

Sustainable Business Management

Teacher Resources

| Resource | Description |
| --- | --- |
| Teacher Resource 10.1 | Presentation: Infrastructure and Superstructure (separate PowerPoint file) |
| Teacher Resource 10.2 | Guide: Infrastructure and Superstructure Discussion |
| Teacher Resource 10.3 | Assessment Criteria: Sustainable Choices for our Project Business |
| Teacher Resource 10.4 | Quiz: Sustainable Business Management |
| Teacher Resource 10.5 | Answer Key: Sustainable Business Management Quiz |
| Teacher Resource 10.6 | Assessment Criteria: Sustainability Management Job Description |
| Teacher Resource 10.7 | Key Vocabulary: Sustainable Business Management |
| Teacher Resource 10.8 | Bibliography: Sustainable Business Management |

Teacher Resource 10.2

Guide: Infrastructure and Superstructure Discussion

Directions: Use this guide during the discussion in Class Period 1.

Remind students about the concepts of *carrying capacity* and *limits of acceptable change*, which they studied earlier in the course. Tell students that you are going to show them photographs of two different tourist destinations in the United States. Ask them to look at each photograph and take notes on the following question:

* What changes would be necessary for this destination to manage a large number of tourists?

Project Teacher Resource 10.1, Presentation: Infrastructure and Superstructure. Show students Slide 2 (Honolulu) and Slide 3 (Monument Valley).

Allow a few moments for students to take notes; then invite them to share their thoughts. Students should be able to easily identify that Slide 2 (Honolulu) has everything in place to handle a large number of tourists, while Monument Valley (Slide 3) has almost nothing (just a road).

Remind students that part of the Limits of Acceptable Change model is evaluating what the site already has and what would be needed if more tourists were to visit. In a very simplified way, that is what students were doing with these photographs. Explain that students are actually evaluating the infrastructure and superstructure of these two locations. Developing sustainable infrastructure and superstructures can increase the overall sustainability of a tourist destination. How much infrastructure and superstructure already exist will play a role in determining the limits of acceptable change in a particular destination.

Display Slide 4 (Examples of Infrastructure). Ask students to guess what types of things make up a location’s infrastructure. Once students have guessed, share the following definition:

* Infrastructure is the support system a community needs to function and to provide services to tourists. Infrastructure includes roads, water and sewage systems, ports, airports, power grids, and communication grids (e.g., Internet, phone lines, broadcasting).

Repeat the process with Slide 5 (Examples of Superstructure). Once students have guessed, share the following definition:

* Superstructures are the facilities directly associated with serving visitors’ needs, such as welcome centers, hotels, restaurants, car rental facilities, stores, and tour operators.

Go back to Slides 2 and 3 (Honolulu and Monument Valley). Ask students:

* Do you think it would be easier to make a sustainable destination out of Honolulu or Monument Valley?

There are various possible answers. Key points to include in the discussion:

* Honolulu is already well established, but it may be beyond the limits of acceptable change at this point. To overhaul the city to make it sustainable would be a major undertaking, though the city and state governments are making strides in improving the sustainability of Honolulu.
* Monument Valley is a tribal park that belongs to the Navajo people. It has very little infrastructure or superstructure, and it would be possible to build sustainably. However, there would be a lot of changes necessary and the changes might be beyond the limits of acceptable change.
* Honolulu was largely built at a time when developers did not worry about sustainability or blending a city into the surrounding landscape. Explain that nowadays developers incorporate principles that help guide architecture, landscape, planning, and construction toward sustainability. In addition to more harmonious designs, some other ways to minimize impact of infrastructure/superstructure include:
* Underground utility lines
* Car/RV/bus restrictions on roads and in parking lots
* More waste/recycling containers

Teacher Resource 10.3

Assessment Criteria: Sustainable Choices for our Project Business

Student Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Using the following criteria, assess whether students met each one.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Met | Partially Met | Didn’t Meet |
| The assignment lists a wide range of sustainable choices in at least three different categories. |  | □ | □ | □ |
| The choices are plausible and realistic steps for a business to take. |  | □ | □ | □ |
| The choices are well explained. |  | □ | □ | □ |
| The choices focus on the categories that will have the greatest impact on the business. |  | □ | □ | □ |
| The completed assignment is neat and easy to read. |  | □ | □ | □ |

Additional Comments:

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Teacher Resource 10.4

Quiz: Sustainable Business Management

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_

Directions: Respond to the questions below with complete answers.

1. Describe the principle of *zero to landfill*.

2. What are two reasons hospitality businesses generate so much food waste, and what can be done about it?

1)

2)

3. What are two things lodging facilities do to reduce the amount of solid waste that goes to landfills?

1)

2)

4. How can hospitality and tourism businesses help prevent water waste?

5. What are three examples of technology that will help reduce the amount of natural resources we use?

1)

2)

3)

6. Explain what it means for a building to be LEED certified.

Teacher Resource 10.5

Answer Key: Sustainable Business Management Quiz

While student answers will vary, the following answer key contains the basic knowledge and concepts to be stated in their responses. Use your preferred scoring or point system to assess the quizzes.

1. Describe the principle of *zero to landfill*.

Zero to landfill is the principle that every product, every component, and every material should be reused, remanufactured, or recycled after it reaches the end of its useful life. Nothing should end up in a landfill.

2. What are two reasons hospitality businesses generate so much food waste, and what can be done about it?

From the hospitality side, waste comes from over-preparation, table scraps, cooking losses, and packaging failures; on the consumer side, waste usually results from the common practice of ordering too much. Composting food waste is one way to prevent it from going to a landfill.

3. What are two things lodging facilities do to reduce the amount of solid waste that goes to landfills?

Student answers will vary, but possible responses include recycling, reducing the amount of disposable items available, purchasing recycled content products, donating to local food banks, and composting, among others.

4. How can hospitality and tourism businesses help prevent water waste?

Student answers will vary, but could include: repairing leaks and shutting off the water supply in areas where it is not needed; switching to low-maintenance landscaping; not running water to thaw frozen foods in the kitchen; not running sprinklers to “water” the pavement or sidewalks; using gray water from the kitchen instead of freshwater for landscaping is another green maintenance practice.

5. What are three examples of technology that will help reduce the amount of natural resources we use?

Student answers will vary, but could include: low-flow toilets, low-flow showerheads, faucet aerators, Energy Star appliances, solar panels, and so forth.

6. Explain what it means for a building to be LEED certified.

Student answers will vary, but should address that LEED is a rating system for green construction and building standards. LEED certification ranges from “Certified” to “Platinum” on a point system and covers categories such as site sustainability, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation in design.

Teacher Resource 10.6

Assessment Criteria: Sustainability Management Job Description

Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Using the following criteria, assess whether students met each one.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Met | Partially Met | Didn’t Meet |
| The description outlines a plausible set of duties and responsibilities for a sustainability management professional. |  | □ | □ | □ |
| The description is appropriate for a specific type of hospitality business. |  | □ | □ | □ |
| The description utilizes professional language and jargon as necessary. All professional language and jargon is used correctly. |  | □ | □ | □ |
| The completed assignment is neat and easy to read. |  | □ | □ | □ |

Additional Comments:

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Teacher Resource 10.7

Key Vocabulary: Sustainable Business Management

| Term | Definition |
| --- | --- |
| broad-based | Involving a wide range of people, things, or ideas. |
| cap and trade | A market-based approach to controlling pollution. The government would set a limit or cap on how much pollution can be released by businesses. Businesses would buy permits to allow them to release a certain amount of pollution. Businesses that didn’t make much pollution could then sell or trade their permits to other businesses. |
| compost | A mixture of decaying organic matter, such as food scraps and leaves, used as a way to improve soil structure and provide nutrients. As concern about landfill space increases, worldwide interest in recycling by means of composting is growing. In the HT context, many commercial businesses are turning to composting to recycle kitchen and table scraps, landscape trimmings, and some paper products. |
| core processes | The most important operational processes of a business; for example, the core processes of a restaurant would involve cooking and serving food. |
| domestic | Of or pertaining to one’s home or home country. |
| energy efficiency | Percentage of total energy input to a machine or equipment that is consumed in useful work and not wasted as useless heat. |
| Energy Star | A joint program from the US Environmental Protection Agency and the US Department of Energy to certify (through the Energy Star eco-label) energy-efficient products and practices. |
| geothermal energy | Energy derived from the heat under the surface of the Earth. It can be extracted using a pump system and used as a clean source of energy and/or heat for buildings. |
| gray water | Term used for nonindustrial wastewater generated from processes such as dishwashing, laundry, and bathing. |
| herbicide | A substance used to kill unwanted plants. |
| high-level | A broad outline of a strategy or plan; the term comes from the military (e.g. high-level bombing); a high-level plan does not include specific details but offers a general overview of how something might be accomplished or implemented. |
| infrastructure | The support system a community needs to function and to provide services to tourists; it includes roads, water and sewage systems, ports, airports, power grids, and communication grids (e.g., Internet, phone lines, broadcasting). |
| interface | Communication or interaction. |
| internal | Within the company or organization. |
| jargon | Special words or terms used by a specific industry or group of people; these terms may be hard for people outside that group to understand. |
| landfill | A site of disposal for solid waste materials; also known as a dump. According to the EPA, 55% of our trash goes to landfills. |
| LEED | Also known as the Leadership in Energy and Environmental Design Green Building Rating System, developed by the U.S. Green Building Council (USGBC) to provide a suite of standards for environmentally sustainable construction. |
| legislation | The making of laws. |
| measurement systems | A method of tracking progress towards a specific goal. |
| monitor | To oversee, supervise, or keep track of. |
| operating principles | Statements that guide how an organization functions. |
| pest control | Refers to the regulation or management of a species perceived to be detrimental to human health, the ecology, or the economy. In this context, the elimination of insects and rodents from HT facilities. |
| pesticide | A substance used to kill species that destroy property or cause a nuisance. |
| proactive | Anticipating and being prepared for an occurrence, rather than waiting for something to happen. |
| R & D | Abbreviation for research and development. Investigative activities that a business chooses to conduct with the intention of making a discovery that can either lead to the development of new products or procedures, or to improvement of existing products or procedures. |
| recycling | The processing of used materials into new products in order to prevent waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, and reduce air and water pollution (from landfilling), by reducing the need for conventional waste disposal. |
| retrofit | The addition of new technology or features to older systems. In this context, the renovation of superstructures in order to make them more energy efficient or environmentally friendly. |
| scope | Extent or range of view, outlook, application, operation, or effectiveness. |
| senior-level | People in important management positions within a business. |
| solar panels/photovoltaics (PVs) | Modules that use light energy (photons) from the sun to generate electricity. |
| solid waste | All discarded solid, semi-solid, liquid, and gaseous substances, including trash, garbage, yard waste, ashes, industrial waste, construction waste, and household discards such as appliances, furniture, and equipment. |
| stakeholder | Someone with an interest or concern in something; in this context, those who have an interest in or are affected in some way by a tourist attraction, such as business owners, the government, local community, tourists, and so forth. |
| steering committee | An advisory group made up of stakeholders, people who have some knowledge on the issue, and/or people who are invested in the outcome; the group provides guidance on key decisions. |
| superstructure | The facilities directly associated with serving visitors’ needs, such as welcome centers, hotels, restaurants, car rental facilities, stores, and tour operators. |
| wastewater | Any liquid waste discharged by domestic residences, commercial properties, industry, and/or agriculture. Gray water is one form of wastewater; sewage is wastewater contaminated by urine and/or feces. |
| zero to landfill | The principle that every product, every component, and every material should be reused, remanufactured, or recycled after it reaches the end of its useful life. |

Teacher Resource 10.8

Bibliography: Sustainable Business Management

The following sources were used in the preparation of this lesson and may be useful for your reference or as classroom resources. We check and update the URLs annually to ensure that they continue to be useful.

Print

Hawken, Paul, Amory Lovins, and L. Hunter Lovins. *Natural Capitalism: Creating the Next Industrial Revolution*. New York: Little, Brown, 1999.

Tueth, Matthew. *Fundamentals of Sustainable Business: A Guide for the Next 100 Years*. London: World Scientific, 2009.

Weaver, David. *Sustainable Tourism*. Oxford: Elsevier, 2006.

Online

“About Energy Star.” Energy Star, <http://www.energystar.gov/index.cfm?c=about.ab_index> (accessed August 31, 2015).

Burton, Paul J. “Zero-to-Landfill: Preserving Planet and Profit.” *Impo*, <http://www.impomag.com/scripts/ShowPR.asp?RID=8218&CommonCount=0> (accessed August 31, 2015).

“Business Process.” Wikipedia, <http://en.wikipedia.org/wiki/Business_process> (accessed August 31, 2015).

“Compost.” Wikipedia, <http://en.wikipedia.org/wiki/Compost> (accessed August 31, 2015).

“Efficient Commercial Kitchen Equipment.” Sustainable Foodservice.com, <http://www.sustainablefoodservice.com/cat/equipment.htm> (accessed August 31, 2015).

“Emissions Trading.” Wikipedia, <http://en.wikipedia.org/wiki/Emissions_trading> (accessed August 31, 2015).

“Energy Conservation.” Sustainable Foodservice.com, <http://www.sustainablefoodservice.com/cat/energy-efficiency.htm> (accessed August 31, 2015).

“Energy & Waste—Landfilling.” EIA Energy Kids, <http://www.eia.doe.gov/kids/energyfacts/saving/recycling/solidwaste/landfiller.html> (accessed August 31, 2015).

“Energy Efficient Lighting.” Sustainable Foodservice.com, <http://www.sustainablefoodservice.com/cat/lighting.htm> (accessed August 31, 2015).

“Director, Sustainability.” Institute for Supply Management, <http://www.ism.ws/files/CareerCenter/SSR_DirSustainability.pdf> (accessed August 31, 2015).

Fairley, Andrew. “Frequent Flier: Does Hospitality Have to Be So Wasteful?” *New York Times*, December 12, 2006, <http://query.nytimes.com/gst/fullpage.html?res=9C01E3D71431F931A25751C1A9609C8B63> (accessed August 31, 2015).

Fox, Zoe. “5 Eco-friendly Apps that Could Change City Living.” Mashable, <http://mashable.com/2012/07/02/nyc-green-hackathon-apps/> (accessed August 31, 2015).

“Geothermal Basics.” Geothermal Energy Association, <http://geo-energy.org/basics.aspx> (accessed August 31, 2015).

“Grasscycling.” Wikipedia, <http://en.wikipedia.org/wiki/Grasscycling> (accessed August 31, 2015).

“Greywater.” Wikipedia, <http://en.wikipedia.org/wiki/Greywater> (accessed August 31, 2015).

“Hotels: An Overview of Energy Use and Energy Efficiency Opportunities.” Energy Star.gov, <http://www.energystar.gov/ia/business/challenge/learn_more/Hotel.pdf> (accessed April 11, 2014).

“Leadership in Energy and Environmental Design.” Wikipedia, <http://en.wikipedia.org/wiki/Leadership_in_Energy_and_Environmental_Design> (accessed August 31, 2015).

O’Halloran, Robert M., PhD. “Sustainability in the Hospitality Industry.” Center for Sustainable Tourism at East Carolina University, <http://www.ecu.edu/cs-acad/sustainabletourism/upload/hotel-sustain-presentation-new-bern-Bob-O-Halloran.pdf> (accessed August 31, 2015).

“Recycling.” Wikipedia, <http://en.wikipedia.org/wiki/Recycling> (accessed August 31, 2015).

“Research and Development.” Investopedia, <http://www.investopedia.com/terms/r/randd.asp> (accessed August 31, 2015).

Shahan, Zachary. “19 Smartphone Apps for an Eco-friendly Home and Lifestyle.” CleanTechnica, <http://cleantechnica.com/2012/10/05/10-smartphone-apps-for-an-eco-friendly-home-lifestyle/#gsc.tab=0> (accessed August 31, 2015).

“Travelers Say Economy, More Than Environment, Is Making Them Waste-Conscious.” Hotel Resource, May 27, 2009, <http://www.hotelresource.com/trends-detail-sid-39016.html> (accessed August 31, 2015).

“Triple Bottom Line.” *Economist,* <http://www.economist.com/node/14301663> (accessed August 31, 2015).

Williams, Laura. “United States Recycling Statistics.” Green Living, <http://greenliving.lovetoknow.com/United_States_Recycling_Statistics> (accessed August 31, 2015).