Module Integration Example

There are many ways to integrate this game-based learning curriculum on ocean acidification into a module within a Biology, Chemistry or Environmental Science course. One example, aimed at middle school teachers, is provided below.

Topic: Life Science

Grade level: Middle School (6^{th} - 8^{th} grade)

Example: This example of module integration uses a course model from the NGSS High School Phenomenon Model Course III – Bundle 3: Life Affects Earth.

NGSS Model Course 3 (Bundle 3): How can People Influence Earth?
MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.
MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Game-based learning program on ocean acidification can be integrated into a course sequence here, for more specific details see section on NGSS Alignment.

Game-based learning program on ocean acidification
Integrate part of the module into a sequence of lessons on ecology & biodiversity. Example phenomenon: * Different changes to ocean pH causing varying effects on marine life and the people that rely on those ecosystems.