PokeBoiler Up: Gamifying Learning about Purdue

ABSTRACT- The relationship between art, science, and play is intricate and dynamic, reflecting the fundamental human desire to explore and understand the world. While these three areas may seem distinct at first glance, they are interconnected, influencing and inspiring each other. Here we integrate these core expressions of humanity to bring a fun experience to our incoming boilermakers where they learn about Purdue and what makes us unique while exploring the campus.

This project originated from the work performed by undergraduate students in a course taught at the John Martinson Honors College in the Spring 2023. This course, 'PokéBio: Exploring Biology through Pocket Monsters', used Pokémon to teach students about ecology, evolution, and conservation biology. In this student-led project, inspiration from endangered species in the Midwest fueled the creation of unique, artistic, and playful pocket monsters. With this foundation, we launched a pilot version of the game at the beginning of Fall 2023 in a cross campus event attracting over 250 participants. More about this event and the promo trailer is here: https://pokebiopurdue.wixsite.com/pokebio

For BGR, we propose to scale up this project while further interweaving it with the fabric of our campus. The goal of this game is to collect all badges to earn points for their residence hall team. We proposed to set up 12 stations, each with a 3D-printed and painted pocket monster and its trading card. Each station provides information linking the Pokemon to interesting facts about campus and gives tips for students to enjoy their time at Purdue. For example, 'Salarugae', the Pokemon inspired by the hellbender, has information about the nationally-recognized conservation program for this species and talks about the research opportunities for students. Other Pokemon highlight the entomological collection, the herbarium, the Rec Center, and the cultural centers. Each of these stations will be located at BGR events. Each station will have a QR-code so students can scan it using their phone, receiving a badge and earning points. Once all stations are collected, additional completion points are awarded. Teams in which most students complete the game (>80%) are also awarded "Bonus Team" points.

During our pilot event, we created a simple, badge allocation system and game scoreboard. However, for BGR we would need to extend and refine that system to handle larger amounts of participants and include additional game features. Among those, we would like to include a system showing in real time the top scores of players and keeping track of points earned by different residence halls. All the Pokemon, trading cards, and associated short videos describing them have been created and were successfully used in our preliminary event. However, we will be further developing the stations to better include the information about campus in engaging ways that go along with the philosophy of the game of getting to know new places and building community.

This entertaining challenge will provide a unique experience for our students, showcasing our campus's creativity and the ingenuity that characterizes Boilermakers. Our pilot event attracted considerable attention across campus receiving glowing feedback. We would love to welcome new students by gamifying learning about Purdue and what it means to be a Boilermaker.

BUDGET - The funds requested here ($3,000) will be used for: (i) improving and creating dsplay cases, and (ii) developing a robust member point tracking system. The Honors College, Purdue Libraries, and Department of Biological Science have kindly agree to let us use the display cabinets we previously borrowed from them. However, additional display cases are needed. Finally, the core of the game is in the member tracking system that would not only track how many points each player has but attribute these points to their team and residence hall, dynamically updating the live scoreboard.

FACULTY INVOLVED - Dr. Ximena E. Bernal, Professor, Department of Biological Sciences, Purdue University. West Lafayette, IN.