

CHL: Dearth of Darkness

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Short Game Description: *Cyberhero League (CHL)* is an Internet-based “scout-like” gaming adventure that enables players to learn about and take action on global challenges via collaborative partnerships with nonprofit organizations. Players seek to earn the badges of partnering nonprofit organizations by completing a series of educational games in the form of Apprenticeships. Achieving the badges results in aid to partnering nonprofits. The first Apprenticeship, *Dearth of Darkness*, introduces players to the negative impact of light pollution while introducing the history of light, multicultural astronomy, the importance of circadian rhythms, and more. Players earn the badge of the *International Dark Sky Association*.

Overall Description

[Cyberhero League](#) (CHL) is an online gaming adventure that brings “scouting” into the 21st century through enabling youth to tackle global challenges using digital technologies as the means. Systemically designed to advance principles of connected learning especially in the core learning area of interest learning and the core design area of shared purpose. *Participation is voluntary and individuals are united in their quest to improve conditions in the world.* Gamers earn the badges of partnering nonprofit organizations (NPOs) through participatory, educational, and civic accomplishments (Figure 1). To earn a badge, gamers complete an Apprenticeship—a series of digital tasks that teach them about the issues being confronted by a specific NPO. Bonus points are earned through visits to museums, World Heritage Sites, National Parks, and through participating in community events.



Figure 1: CHL badges.

Cyberhero League addresses STEM learning as well as social-emotional literacy through providing an antithesis to the negative use of the Internet. Through introducing gamers to the Cyberhero archetype youth are presented with a counterbalance to the Cyberbully, encouraging e-civility (Klisanin, 2013). *Cyberhero League* is a voluntary learning platform and as such it breaks down one of the most overlooked barriers to participation in learning environments: mental barriers. Unfortunately, many young people do not associate “school” with fun. They’d rather be playing games or hanging out in online environments. *Cyberhero League* provides an online environment where learning takes place in the pursuit of higher goals such as helping others and saving the environment. Education content arises organically as the gamer addresses the concerns of the nonprofit organizations, thus it has more meaning to the individual. In addition to STEM content, players earn bonus points through visits to museums, World Heritage Sites, National Parks, and through participating in community events.

Dearth of Darkness—Game Play

The first game, or “Apprenticeship,” created in partnership with the International Dark Sky Association, enables players to learn about the effects of light pollution on human beings and the natural world while simultaneously taking action to prevent it. Gamers learn about the history of light, multicultural astronomy, and circadian rhythms, among other things.

Using the *Dearth of Darkness Apprenticeship Manual* as their guide, Players make their way through a series of learning adventures. The first is a Twine Game, *The Multicultural History of the Stars* that takes players into a Cave. Upon entering the Cave, players begin the Twine where they view the constellations through the eyes of ancient peoples around the world including the Babylonians, Egyptians, Chinese, Celts, Incans, Hawaiians, Native Americans, and so forth (Figure 2). After successfully navigating the Twine, players return to the *Apprenticeship Manual* where they have the opportunity to enter the Museum of Illumination. In the Museum players can go into the Library where they can study the “History of Light” or decide to go onto the Gallery to view celebrated artworks from around the world. Inside the Gallery, players download and use the *Aurasma* App to find and view an augmented reality rebus that provides them with clues to solve a larger puzzle. Players gain additional points toward their badge as well as in-game powers by taking action through downloading *Stellarium*, an online planetarium; signing the “Light’s Out” Pledge; and using the Dark Sky Meter to monitor light pollution. Bonus points can be earned by visiting planetariums, observatories, art museums, dark sky reserves (parks), and through participating in the “Great Star Count” the “Lights Out” community initiatives, or hosting a Star Party to introduce their friends to the problems caused by light pollution.



Figure 2: Cave Entrance into Twine.

After earning the badge of the International Dark Sky Association, players will chose a second Apprenticeship and set off on another learning and activism adventure. *Cyberhero League* currently has more than a dozen nonprofit partners addressing a wide array of global challenges.

Future Directions

We are currently designing a mobile app that will give players the ability to use their mobile phones to geotag themselves at Museums, Planetariums, and other physical locations.

Links to More Information and Game Demo

Dearth of Darkness is still in development. A beta version can be accessed by signing up at the *Cyberhero League* website and requesting the passcode via the Contact form.

Cyberhero League's Website: <http://cyberheroleague.com>

Cyberhero League's Facebook page: https://www.facebook.com/ProjectMilkyWay.CyberheroLeague?ref=aymt_homepage_panel

Cyberhero League's Indiegogo Campaign: <https://www.indiegogo.com/projects/cyberhero-league>

References

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