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Final Report

We are Team Arcturus, a five-person sub-team within the Outreach Team of Illuminate. In this paper, we will outline our cumulative experiences of the course. This includes detailing our interaction with the issue of light pollution, our goals and purposes and progress towards them, our reflection on the course's outcomes, and analyzing what comes next for us and further Illuminate students.

Coming away from this course, we have all come to understand the importance of the issue of light pollution (LP). For example, we have learned to explain, in technical terms, the phenomena we experience when light keeps us awake at night, why we do not see the stars at night, and negative impacts of lighting beyond just electricity use. We have a collective understanding of the negative externalities of using too much light and the impacts it has on our lives, the lives of others, and our ecosystem. This knowledge has changed our habits to be more light-friendly. Beyond that, we will continue advocating for smart lighting policies and habits in institutions about us. Whether we ask our parents to use orange lights on our front porches or ask our employer to consider shielding lights in the parking lot, we will continue to be cognizant of how artificial lights impact the world we live in.

The Outreach Team's overall goal, per the course syllabus, was to "design/adapt activities to engage the public." However, the dictionary definition of the word 'outreach' superseded any previously intended purpose of the Outreach Team. In the first weeks, we were divided into sub-teams. Each sub-team's goal was to contact a different organization about the issue of light pollution and how their organization might be able to play a role in achieving the IDA's IDSC and/or IDSP requirements. While a worthy goal, it is not what we initially expected to do.

In the following weeks, our sub-team met on Zoom and Blackboard Discussion Boards to discuss which organizations could impact lighting policy. Team Arcturus drafted a generic email to be addressed to someone either at Kirksville City Hall or the Kirksville Chamber of Commerce, as we felt both groups would play a large role in the implementation and support of the IDSC requirements. In the midst of this project, we executed a survey of the campus lighting. We surveyed area 4, a south-central area of campus. The map of lights we surveyed and the data we collected are at the end of this report. The sheer amount of light fixtures displayed in our maps below show just how prevalent of an issue light pollution is within Truman's community. The vast majority of the light fixtures in our assigned portion of Truman's campus were unshielded, dome lights, which are perhaps the worst fixtures available for combatting light pollution. To effectively combat light pollution, Truman's physical plant with the full support of the Truman administration needs to adopt a radically different approach to establishing light fixtures on campus.

After we drafted an email, two weeks passed before we received further instruction on whether we should send out our email, as we instead directed to focus on meeting with the Physical Plant. At this moment in time, we haven't received an email back from our email's recipient, Glen Balliew, the Director of Kirksville's Public Works. This email task was the only goal established by our team.

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As such, we made little or no progress toward our goals. A more direct purpose should have been established for each Team in order for our goals to be accomplished. The work examples provided on the syllabus were inaccurate for the Outreach Team, and caused confusion between our sub-teams and our preceptor. Along with this, the large number of small groups made actionable goals difficult to accomplish. Ideas started in Team Outreach were directed to sub-teams. The sub-teams' work had to be agreed upon and accomplished by sub-team members, and then run by the rest of the Outreach Team, our preceptor, and the instructor. This long approval process is part of why the only thing we, Team Arcturus, were able to accomplish was sending an email which never received a reply.

As this project moves forward, there are many things which need to be accomplished, for the Outreach Team and overall. First, all Outreach Team emails should be followed up with meetings to discuss specific actions groups across Kirksville can take. If organizations are unwilling to change their policies, either more persuasive arguments should be made or other groups identified to reach out to. The most important target is City Hall. The IDSC requirements state certain restrictions, which must be created and enforced by local government, must be in place.

Second, the structure of the Teams and sub-teams should be re-evaluated. Breaking students into small groups to explore solutions to a broad problem like light pollution is wonderful in concept. But with nearly 90 students in a one-credit hour class, it is idealistic to think all students will be able to pursue their action plans. This is what happened after the Outreach Team's email drafting process. The Outreach Team had four sub-teams and thus four email drafts, but three were put aside in favor of the one to the Physical Plant.

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Instead of multiple teams, we believe future Outreach Teams should identify a very specific goal for all members of the Team to accomplish. As mentioned above, it appeared the Physical Plant was the organization the Outreach Team prioritized, without much input from the student designing the work. If the stated goal of the Outreach Team had been to work with the Physical Plant to address lighting needs on-campus, there would have been no need for sub-teams as the goal would be well-established. Having larger group discussions would also allow ideas to be quickly critiqued instead of passing through excessive levels of approval, which in our case might have allowed an email to be sent sooner and more specific policy details hammered out with the Physical Plant.

The Illuminate class was created with a very interesting premise: to improve the lives of all those on Truman's campus and in the Kirksville community by addressing LP. After this semester, that premise remains interesting, but not acted upon. Inefficiencies and the COVID-19 pandemic prevented potential light-pollution progress from being made. We hope the structure of this course and the Symposiums as a whole will be addressed to improve the class for future students.



