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## Winter Activities

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### **Recommendation for Action**

During the winter months, the SAP should install an ice skating rink. With the suggestion of the farm manager, the rink will be located on the level driveway of the Wesley house. The ice skating rink will be built of sustainable materials, such as old hoop house coverings for the tarp and old baseboards for the sides of the rink. The materials used will be displayed on a sign, outside of the rink, to provide educational value (Figure 2.). In addition to these sustainable materials, we will be including solar powered lights. Due to the cloud coverage during the winter months, these lights will also be able to pull off of the grid once the solar energy has been used up. In addition to providing a renewable source of energy, these lights will reduce liability issues during evening skating.

Further, there should be a kiosk built on the side of the driveway to provide storage for the ice skates, and a location for students to obtain them. The kiosk will also provide information about hours of operation, Thursday to Sunday 1:00 pm-9:00 pm, and a sign indicating “skate at your own risk” (Figure 1). This kiosk serves as dual purpose, because during the summer months it will act as a small information area, containing brochures with knowledge on the SAP. In addition to these services provided by the kiosk, someone will have to work it. The members of the SAP have informed us that during the winter months intern hours are lacking. Therefore, by incorporating in the rink they will have something to do. Also, to make the most use of their time, a small doorbell-like system will be used to announce when visitors arrive at the kiosk.

### **Promotional Description**

Tired of being stuck inside during the winter? Need a break from all the homework and studying? Do you love ice skating or wish you had more opportunities to go? Well come on down to the Sustainable Agriculture Project or SAP! Our all new ice skating rink is fun, close, and best

of all cheap. This rink is great for experienced skaters or anyone who has never skated a day in their life. Made out of sustainable materials, the rink features a quick check-in kiosk where you can rent skates for only \$2 or bring your own to skate for free. We also utilize solar powered lights around the rink to make sure it is well lit. Plus we are located only two miles from campus at 4539 Luce St. Make sure you check the SAP's website or Facebook page to see the rinks hours of operation. An example of our website and promotional description can be seen in Figure 3.

### **Timeline**

If this idea is utilized by the SAP, the first winter after the idea is accepted should be used to cover the logistical and financial hurdles involved in owning an ice rink. Funding is obviously going to be needed for some of the equipment necessary for this operation. Although the rink will be made of as much recycled material as possible, some funding may still be needed for additional purchases like ice skates. This time will be great for reaching out to financial backers such as campus recreation and others because the SAP is in its slowest time of year. Also, at this time the rink's hours of operation, and who will be working the rink must be decided. We will have suggestions for these decisions posted in the recommendation for action section.

After this first winter, the project should be placed on the backburner until school begins in the fall. Obviously, the bulk of the work that takes place at the SAP begins in early spring and continues until the fall harvest before school starts. It would not be sensible to allocate any effort to this project until the SAP's primary goals are accomplished. However, as soon as the school year begins, specifically in late August or early September, purchases required for assembling and running the rink should be made. Such purchases will be indicated in the budget/complete funding plan section.

By the end of the first semester, activity at the SAP has virtually come to a standstill. The final few weeks typically see a trickle of procrastinating students, who have placed their last hope in fulfilling their respective classes' service hours at the SAP. This becomes tricky for the farm manager, and the farm crew because there is no longer an abundance of low-skill, laborious tasks for students to do. The SAP shifts gear this time of year into specific projects that are meant to restructure or reorganize the site and it becomes tricky to find ways to properly utilize volunteers. Due to this, we suggest that the SAP begin construction of the ice rink within the last few weeks of the first semester, possibly even the last week before finals.

Construction should not take more than one week. By the end of the first semester the ice rink would be constructed. In completing construction by the end of the first semester, the rink will be ready for the seasonal temperature drop over winter break. Once second semester has begun, the air temperature should be cold enough for the rink to freeze over and operations can begin.

Typically, the weather will stabilize above freezing during spring break. With the utilization of different insulation techniques, such as hay, the ice rink should be able to maintain its integrity up until students depart for their week of vacation. Upon their return from break, the SAP should begin deconstruction of the ice rink. The SAP already begins to open up more opportunities for volunteer hours by this time of year, so it would be a fitting time to put the larger labor force to work. Similar to the process of constructing the rink, deconstruction should take no more than one week the process can begin again in the fall.

Finally, we are also recommending a kiosk be built in the second fall. Since we know that the SAP functions best when it focuses on one project at a time, we're recommending that the new structures are built one at a time. This can obviously be subject to change, but in the interest

of avoiding a project overlap, we're recommending that the kiosk be built a week before the rink in the second fall of this project. The kiosk will not need any teardown in the spring since it will become a permanent fixture of the SAP.

### **Organizational Values**

In the SAP's mission statement there are four main parts discussed: nurturing place, growing community, cultivating leadership and learning, and seeding sustainable food practices. Our recommendation for action influences all four components of the SAP's mission statement. For one, our ice skating rink will give GVSU students a new sense of place never before felt at the SAP. Students with interests different than typically seen at the SAP will feel more of a connection with a place that offers something they can enjoy. In addition to place, our rink also covers the growing community portion of the mission statement. As stated, different disciplines will be brought to the SAP, this will be a great way to open the dialog between these disciplines as each student who visits the SAP to skate will be connected by a more common interest. Not only will the GVSU student community grow, but also the surrounding Allendale community by offering a place where anyone can come enjoy skating, or watching others ice skate. Hopefully by adding in this sense of community lasting friendships can be made.

Our proposed rink will also cultivate learning and leadership, and seeding sustainable food practices. Students who normally would not attend the SAP will have an opportunity to attend and learn about other activities that regularly go on at the SAP. Also, because we will be implementing sustainable practices in the building, our rink students can learn how sustainable practices can be used in real life situations. As more people will be attending the SAP, it will gain more interest, which in-turn will lead to higher participation at the SAP. These students will be able to bring new perspectives to the SAP from varying disciplines that may lead to innovation on

current and future practices. Overall, our activity will allow more of an open communication between the SAP and new students. That new communication will lead to new ideas and higher interest.

### **Background**

Dursun, O., Erhan , S., Ibis, E., Esin, I., Keles, S., Sirinkan, A., Beyhun, N. (2015). The Effect if Ice Skating on Psychological well-being and Sleep Quality of Children with Visual or Hearing Impairment. *Department of Child and Adolescent Psychiatry, Faculty of Medicine.*

In this article, the researchers purpose was to convey that physical exercise, specifically ice skating, had a key role in preventing obesity, and improves longevity of life. Children with disabilities often experience difficulty participating in physical activity due to a lack of suitable opportunities. Ice skating gives these individuals the opportunity to improve their well-being. The focus of the study was on forty students (20 visually impaired and 20 hearing impaired) aged 8-16 were included in a regular ice skating programs. The researchers examined the well-being of each student and recorded the results. The results of this study revealed that regular ice skating programs may have positive effects on the psychological well-being of children with hearing impairment. Ice skating is one of the popular sport alternatives that gives children the opportunity to exercise and create memories.

This article is important to our project because it highlights the importance of ice skating as a form of fitness and as a social gathering. Ice skating also improves the mental and physical health of the ice skater. The individual will receive adequate cardio and a demanding leg workout. Typically, the setting of an ice skating rink is calm and peaceful. Many skate goers will use this time to not only prove their leg muscles but they will improve mental clarity as well.



Carter, Ann. "Aerobic exercise." *RelayClinical Education*, vol. 2012, RelayHealth, 2012. *Health & Wellness Resource Center*, Accessed 18 Apr. 2018

This study focuses on the benefits of aerobic exercise. The article described aerobic exercise as any form of repetitive, rhythmic exercise that uses your large muscles, makes you breathe faster, and gets your heart going is aerobic exercise. Aerobic exercise increases endurance, and improves your body use of oxygen more effectively. Regular physical activity, like ice skating, can help combat the effects of stress. Through gliding and synchronized movement of the legs, the joints and muscles will get a great workout to improve their overall physical health. While you are doing aerobic exercise, you should keep your heart rate up. To make sure you are benefiting from your exercise, you may find it helpful to check your heart rate (pulse) during your workout. You need to set a target heart rate for yourself, so that you can make sure you are exercising hard enough to help your heart. Yet, easy enough for you to complete the exercise safely. The goal is to maintain your target heart rate during your exercise for at least 30 minutes.

### **Best Practices**

Through our research we were able to identify three different ice skating rinks that implement different aspects of our plan. While researching the sustainable building of rinks, using plastic ice was seen as a common method. However, plastic ice would be difficult to move yearly, and the amount of friction makes it more difficult for first time skaters. We believe the most sustainable and practical method to create ice would be to use the extra water collected from the SAP's rain barrels. A good example of an ice skating rink that uses recycled water is The Ice at Discovery Green in Houston, TX. Discovery green uses recycled water from a nearby lake for

their ice. Not only do they use recycled water, but they also use renewable energy to run their equipment.

Closer to home, the University of Michigan-Flint has an ice skating rink under the University Pavilion every season. Similar to our proposal, this rink offers a low ice skate rental option of three dollars per rental and is open to the community. A similar rink is one located at Harvard University. This rink is supported by the universities open community space program. This program was created to provide spaces where a range of educational, and cultural backgrounds could come together. This falls in line with what we want to achieve for the SAP, corresponding to part of their mission statement on growing community.

Furthermore, in our proposal, we suggest reusing materials such as old hoop house coverings and baseboards. When researching, no public ice rink was found to use the same materials. However, similar building materials have been seen in backyard rinks. We found several sites that walk people through building smaller ice rinks, such as [howtohockey.com](http://howtohockey.com) and CBC news “How to build the perfect backyard ice skating rink”. We believe we can adapt these methods on a larger scale for our rink. After profiling these different examples that resemble our rink, it illustrates that our goal of a sustainable, community-centered ice rink can be achieved.

### **Serving the Community**

In order to create a more inclusive atmosphere we propose offering a winter clothing donation bin. Students, or community members, will be able to donate gently used winter clothing such as gloves, hats, coats, and snow pants. This will allow students, or community members, who do not have hearty enough winter clothes, an opportunity to borrow some during their ice skating experience. In order to borrow the winter clothing, an item for collateral, such as an I.D., will be kept until the student or community member is done skating. This will ensure that there

will be enough clothes for the next skaters. During the spring, summer, and autumn seasons the clothing would be stored in the proposed kiosk.

In addition to the option of winter apparel, the proximity of the proposed rink to Grand Valley's main campus would mean easy access for GVSU students. This would reduce the stress on those who lack transportation, or the money for gas. Further, the low cost of the two dollar skate rental, and the lack of fee for those who bring their own skates would alleviate some pressure on those who are struggling with money. Furthermore, local community members who are not part of the GV community would also be allowed to use the ice rink. This will foster a stronger connection between the GV community and the surrounding local community.

### **Educational Plan**

To provide an educational aspect into our recommendation for action, we plan to add an educational sign. On this sign, materials used in building the rink will be incorporated. This will teach students, or community members, how to be environmentally responsible and resource efficient. Also, it will teach students that renewable energy can be used in many different ways. Not only will the sign include the materials used, but it will also incorporate a call to action. A call to action is a statement that evokes a response from the person reading it. This will encourage students to be more sustainable. See figure 2 for an example of this sign.

### **Food Production**

The ice skating rink will draw attention towards the SAP, bringing in a variety of backgrounds. By doing so we expect to see an increase of participants from different disciplines at the SAP. With this newfound attention the SAP will increase food production due to an increase in helping hands. Further, with an increase of disciplines, the SAP will have new ideas

flowing in that could potentially benefit farming practice. Who knows what a film major or a philosophy major could provide, the possibilities are endless.

### **Budget/Complete Funding Plan**

Most of the materials used for the rink will be free due to it being recycled. However, these are the expenses found:

- Ice Skates: \$29.99-31.99
- Brackets: \$25.00 per bracket
- Kiosk: \$500.00
  - The kiosk could be made from a shed, building frames from Walmart cost about fifty dollars, and then the rest of the material would have to be bought/built. Dutch doors should be included to allow interaction with customer. Sheds can run up to about 500 dollars plus, but we doubt it will even come close to this. We put 500 dollars in to account for anything we may have missed.
- Storage bins: \$50.00 per bin
- Lights: \$50.00-130.00

**Total:** ~\$1,344.80 \*This includes 20 ice skates, but not extra brackets or bins since they are buy as needed items.

To cover these expenses, we propose to collaborate with campus recreation. As of right now they seem to be interested in their own affairs. However, it seems like they could be open to the idea of an ice skating rink, if provided with solid reasoning. Another option for funding would be the sustainable reinvestment fund. This fund usually grants up to three thousand dollars, which would fit nicely with our budget even with any unexpected expenses. To make sure that the rink fit into the fund requirements Yumiko Jakobcic, campus sustainability coordinator, was contacted. Jakobcic stated that our rink could be justified as a reinvestment, and that the major obstacle it would face would be liability issues. However, these issues have been covered by posting skate at your own risk signs, and if needed waivers could be made available. If approved, the rink will be completely covered. Our last idea for funding would be to display local businesses on our baseboards. Ideas for businesses that may be willing to do so can be located on the sides of

the baseball/football stadium. All in all, the small fee will eventually accumulate and reimburse the money spent, or even help provide some income for the workers.

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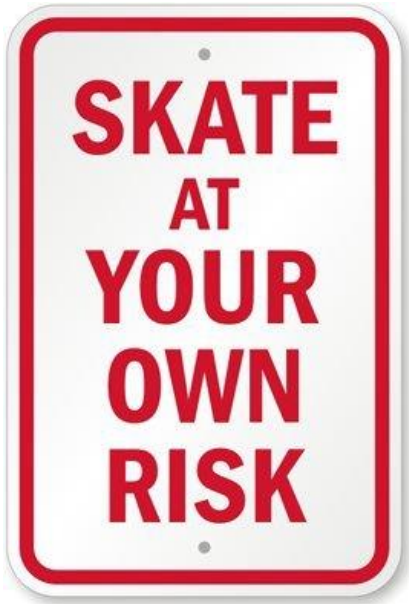
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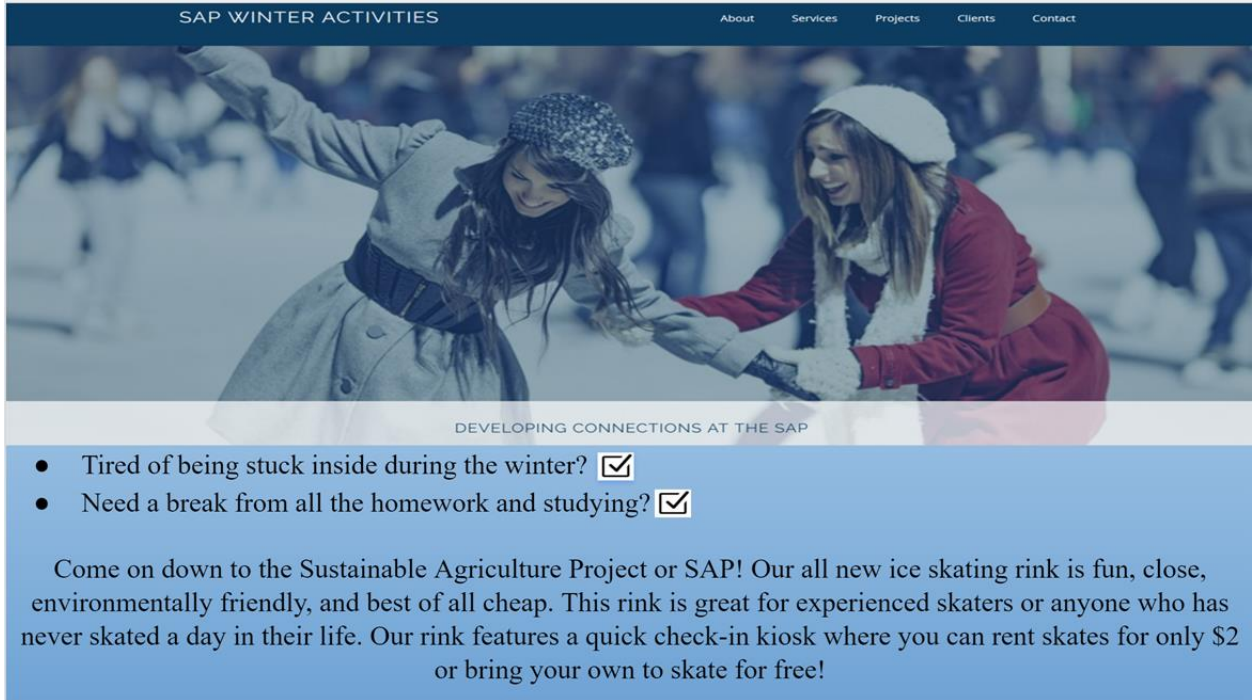
## Figures



**Figure 1.** Skate at your own risk signs will be displayed to reduce any liability issues.



**Figure 2.** A materials used sign will be used as a way to educate students on how to be environmentally responsible and resource efficient. It will be used also as a way to call to action students.



**Figure 3.** This mockup website provides insight into how the ice skating rink will be promoted.



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