



Growing Plants for Growing Students: How Experiential Learning in Conservatories can Support Student Learning



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Background:

- New science education standards like the Next Generation Science Standards (NGSS) are requiring new ways of teaching which is expanding more into non-traditional methods
- Plant Conservatories and similar experiential learning centers (places where people learn by experiencing through observation and hands-on activities) can assist in teaching and fulfilling these new standards
- But there are factors that impact the effectiveness and feasibility of integrating these types of learning experiences

Research Question:

What are the key factors that can be addressed to effectively integrate experiential learning centers into science education?



Figure 1: Children Engaging with Horticulture Specimen

Internship:

- My project focused on developing a curriculum for the Friends of the Conservatory to be used in a field trip with Seattle Public Schools

Methods:

Step 1: Conducted research on plant conservatories and similar experiential learning centers

Step 2: Examined case studies/scholarly articles of relevance

Step 3: Sent survey to educators in the Seattle and greater area (Figure 2)

Step 4: Used steps above to help with curriculum development

Methods (continued):

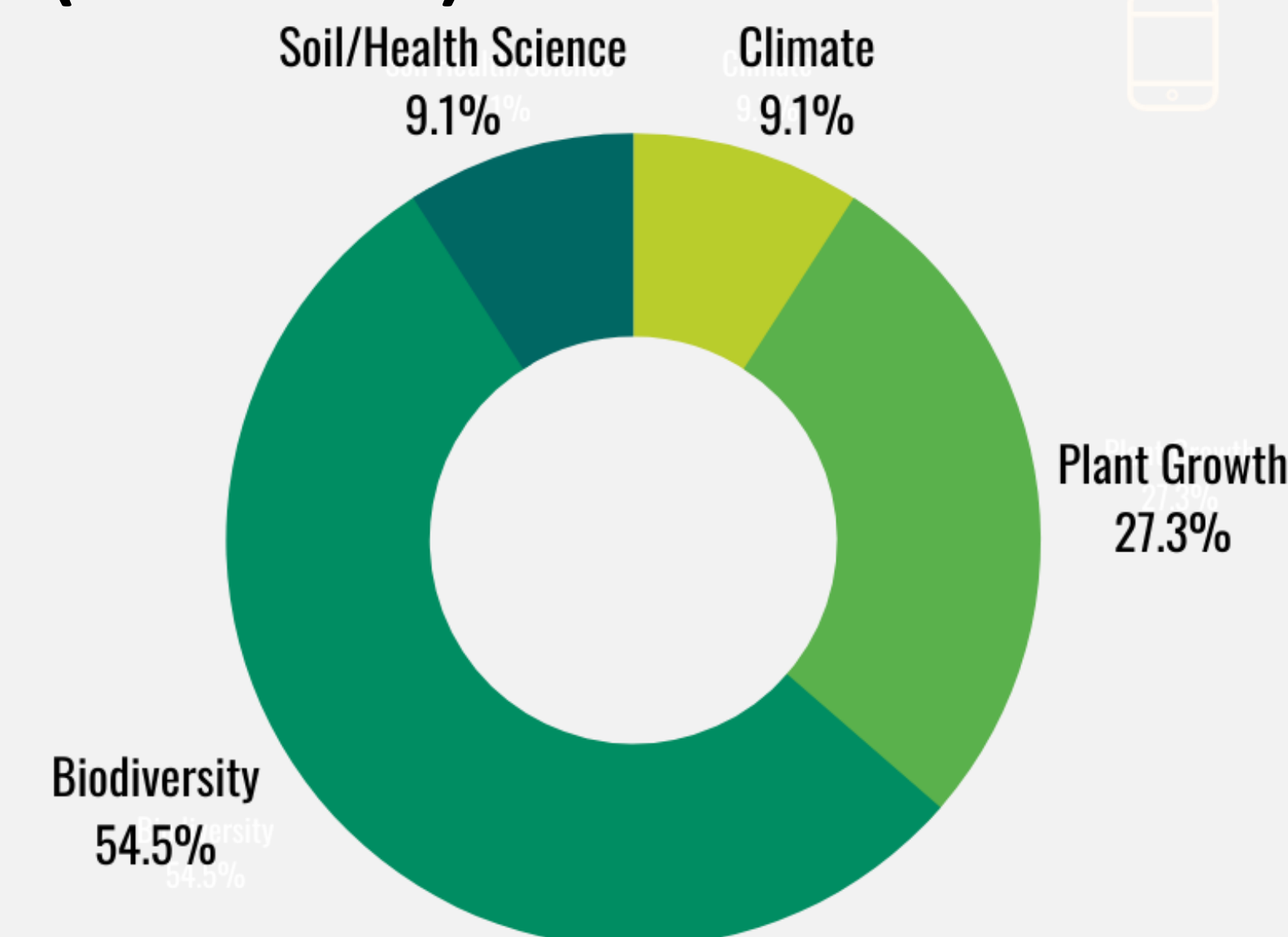


Figure 2: survey responses from teachers who were asked to choose from the topics of focus that they would like their students to learn about during their trip to the Volunteer Park Conservatory.

Results:

Key Factors that impact the effectiveness and integration of experiential learning centers into science education

Integration:

- School Approval of Field Trip to an experiential learning center
- Many public schools have limited funding/resources
- Transportation and Covid-19 limitations/barriers (figure 4)

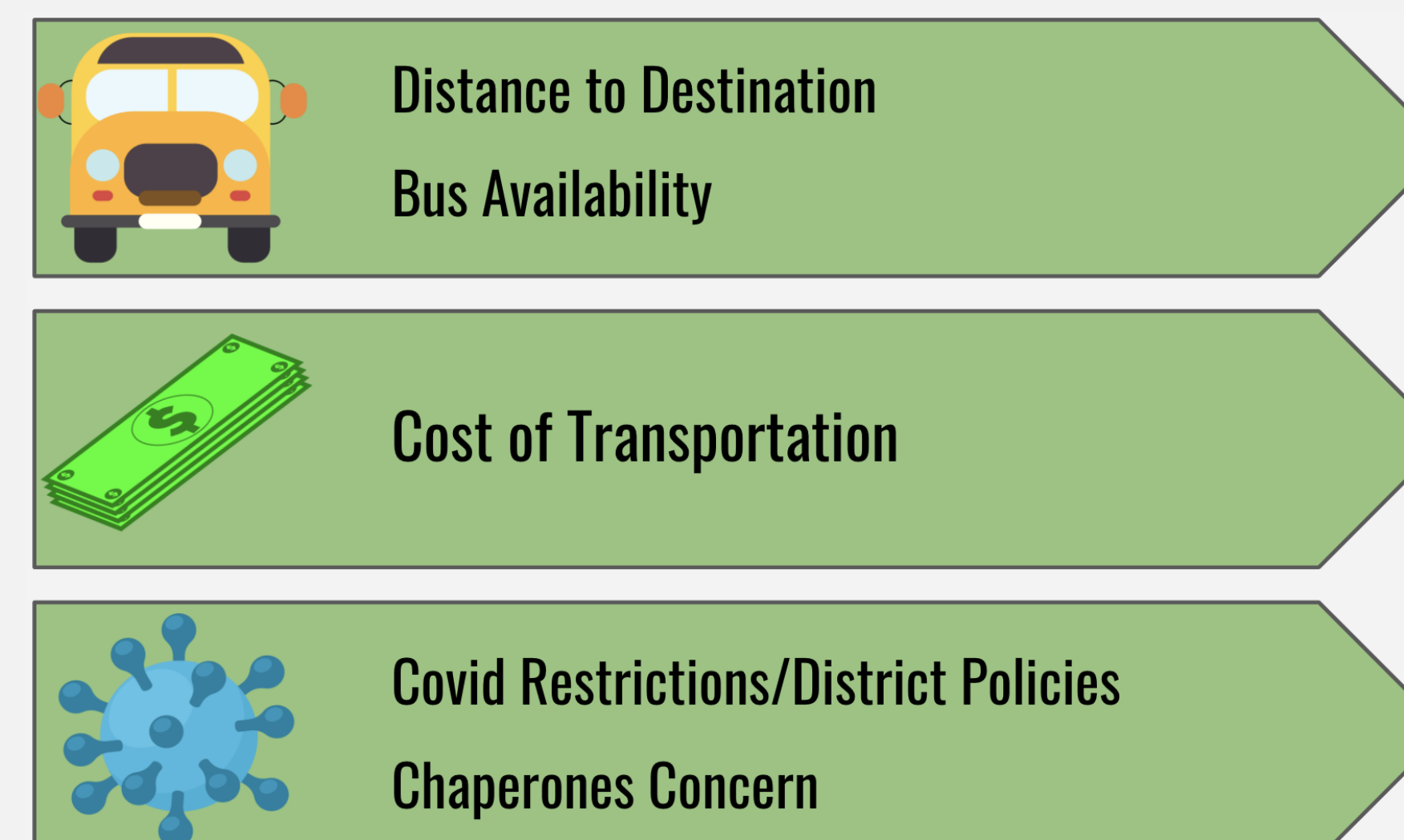


Figure 3: Survey responses on barriers that would limit their classroom/schools' ability to go on a field trip to the Volunteer Park Conservatory.

Results (continued):

Effectiveness:

- Field trip planning framework (figure 4)
- Teachers play an essential role in student engagement
- Teachers understanding of NGSS language

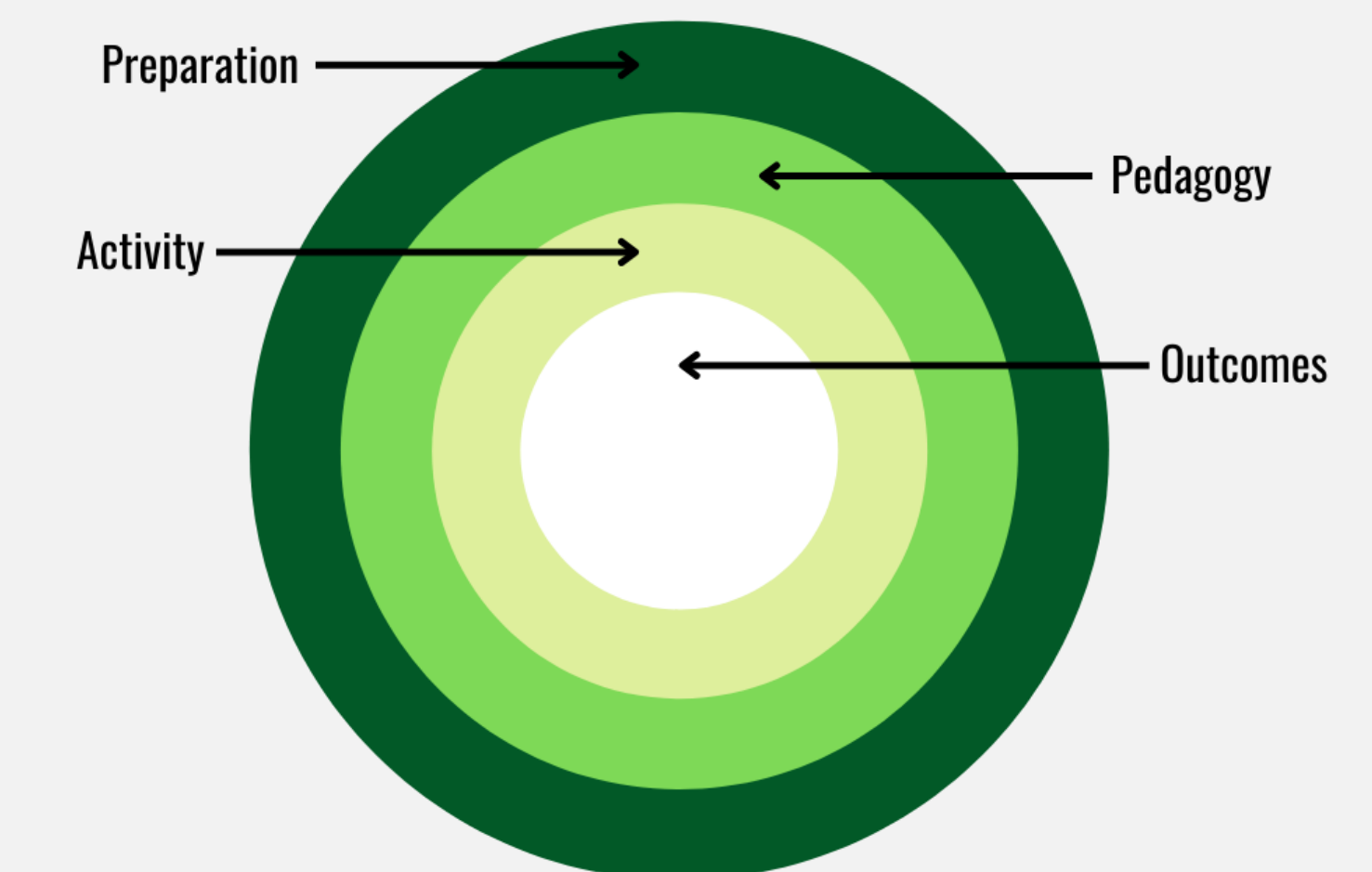


Figure 3: This model represents the framework for planning an effective Field Trip in a natural environment.

Implications:

- Experiential learning centers like the VP Conservatory can help schools that are struggling to engage students with learning and meeting NGSS outcomes
- We should understand our surroundings as potential resources to learn from and use it to our advantage
- Education needs more support from local, state, and federal governments
- Further research should be conducted to identify strategies that allow for more universal approach to effectively integrate experiential learning centers

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