

### The Hidden Item - Activity Card

Workshop Title / Content Title	Exploring Geometry and Cultural Heritage with Himmelis and 4Dframe / Platonic Solids and Finnish Himmelis: A STEAM Approach
Level	All
Duration	3 hours
Goals	<ul style="list-style-type: none"> <li>• Understand the geometric principles of Platonic solids.</li> <li>• Learn about the cultural significance of Finnish himmelis.</li> <li>• Develop hands-on skills in constructing geometric shapes using the <a href="#">4Dframe toolkit</a>.</li> <li>• Appreciate the interplay of mathematics and art in cultural expressions.</li> </ul>
Workshop Outputs	<p>Individual or group-constructed himmelis.</p> <p>A brief presentation or reflection on the cultural and mathematical insights gained.</p> <p>-</p>
Required Materials	<p>4Dframe toolkit (plastic straws and connectors). Available at: <a href="#">4Dframe toolkit</a>.</p> <p>Reference images and diagrams of Platonic solids and traditional himmelis.</p> <p>Instructional guides for basic himmeli construction.</p> <p>A brief history of himmelis and their cultural significance in Finland.</p>
Description of Activity	Participants will engage in constructing Platonic solids using the 4Dframe toolkit, progressing to create more complex structures inspired by traditional Finnish himmelis. The activity encourages exploration, creativity, and discussion about the intersection of mathematics, art, and culture.
Additional Documents	<ul style="list-style-type: none"> <li>• A detailed guide to Platonic solids and their properties.</li> <li>• Historical and cultural background of Finnish himmelis.</li> <li>• STEAM education resources and references.</li> </ul>
Useful Resources	<ul style="list-style-type: none"> <li>• Erna Piila's paper: "Paying Homage to Folk Art Using Platonic Solids." <a href="#">Access the paper</a></li> <li>• <a href="#">Learning by Doing - 4Dframe</a></li> </ul>

Additional Notes

- Ensure the workshop is interactive, with facilitators encouraging dialogue and sharing of ideas.
- Adjust the content to suit varying levels of familiarity with mathematical concepts among adult learners.
- Emphasize the cultural transfer and international relevance of traditional Finnish himmelis, highlighting the universal language of mathematics and art.
- This activity card provides a concise summary of the workshop, guiding facilitators and participants through an enriching STEAM experience that merges mathematics with Finnish cultural art.