



Drifting North Polar Planetarium Experience

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EXPERIENCE MOSAIC ALL AROUND YOU!



The 2019-2020 MOSAIC (Multidisciplinary Drifting Observatory for the Study of Arctic Climate) research expedition, one of the most

extensive multinational Arctic expeditions ever conducted, is a testament to what can be achieved and overcome through teamwork and collaboration, creative problem solving, grit and perseverance, and curiosity.

The Drifting North Polar Planetarium Experience (DNPPE) brings together the stunning visuals collected during the MOSAIC

expedition and the ensuing education and outreach efforts in a field trip program featuring the Drifting North films and paired activities that immerse the participants in polar science. The program is accessible to people of all ages and has supporting curricula for middle school and high school teachers who want to incorporate MOSAIC into their classrooms.

THE FIELD TRIP

The Field Trip features the full-dome Drifting North films by Amy Lauren and Lianna Nixon and hands-on activities.



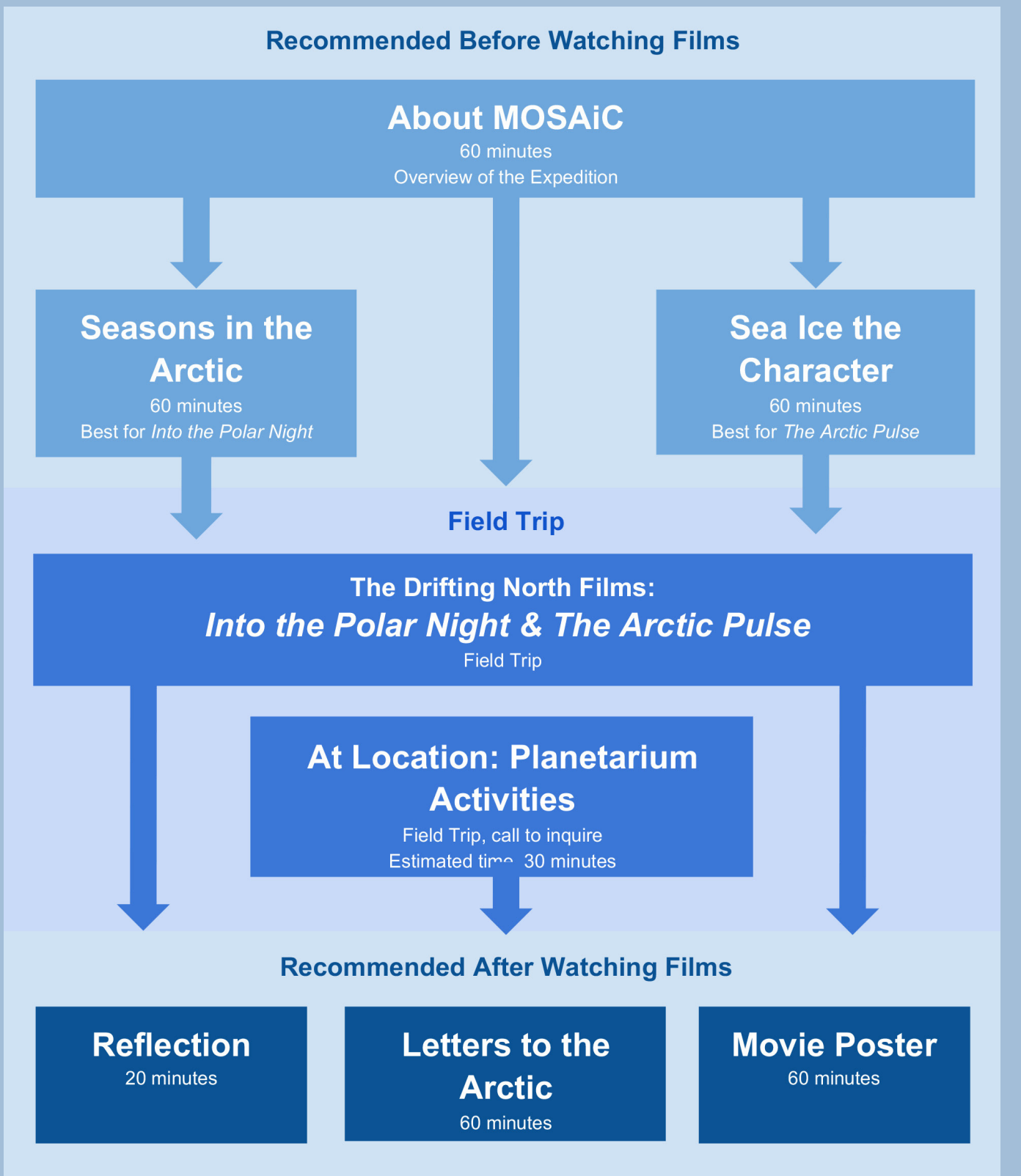
ACTIVITIES


Participants choose from three hands-on activities to do at the planetarium. **The Ice water challenge:** a polar safety activity that teaches you how challenging it is to use your hands in frigid temperatures; **Polargram:** try on Arctic gear and pose with a polar bear using a green screen; **Ice Floe Community Mural:** build a map of the research site.



K-12 THE CURRICULA

The field trip includes pre- and post-activities that can be used as one-off lessons in the k-12 classroom. Additionally, teachers have access virtual reality tours, Data Puzzles, units, and teacher workshops about all about MOSAIC.





About MOSAIC - Teacher Guide

Setting the Stage
The Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAIC) was an epic year long expedition that took place from September 2019 to October 2020. Motivated by the increased temperatures and rapid changes in the Arctic, a team of international scientists wanted to understand the Arctic climate and its future. Experts and crew from over twenty different countries navigated the German icebreaker R/V Polarstern into the Arctic Sea ice pack to find a floe, a large sheet of ice that they would study as it drifts across the Arctic. They looked at the atmosphere-sea ice-ocean system and how life and gases move throughout it.

In this lesson students will explore the many resources and content that talks about the MOSAIC Expedition, why it happened, and why it is an important expedition in polar and climate research. There is a scavenger hunt worksheet that utilizes some of the resources to help students explore the MOSAIC mission.

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Instructional Overview	
Grade Level	Middle/High School
Instructional Time	60 minutes (total time needed)
Lesson Driving Question	• What is the MOSAIC Expedition?
What Students Will Do	• Explore resources through a scavenger hunt and explore the MOSAIC expedition and some of the science that was conducted.




A Changing Arctic Ecosystem

Middle School, High School
Polar Science



Data Puzzle: To Reflect or Not to Reflect

Middle School, High School
Polar Science



Data Puzzle: It's All Connected

Middle School, High School
Polar Science



VR Expedition: Explore the Arctic Aboard The Fram

Elementary School, Middle School, High School, College, Informal Audience, University
Polar Science

WHAT'S NEXT?

Removing barriers for schools unable to travel to Fiske. We received an OOE grant to support 21-hours of in-school programming. Fiske will take the inflatable dome to schools to who the films and facilitate the activities removing the time and cost of traveling to Fiske.



What Students Will Do!

- Watch one of the Drifting North films
- Engage with the MOSAIC community, planetarium educators, and each other.
- Participate in up to five polar-themed activities with the option to hear from polar scientists.
- Learn about earth science topics holistically, diving into Social and Emotional Learning (SEL) concepts as they relate to polar science.