

Project Deliverable G: Prototype II and Customer Feedback GNG 1103 – Engineering Design  
Faculty of Engineering – University of Ottawa Objective: Develop your second prototype and  
devise a detailed test plan for your third. Get customer/user feedback to improve your prototype.  
Instructions:

**1. Clearly describe the feedback received from your client on the first prototype. Specify how the feedback will be used to inform future design choices and improve the solution.**

After our presentation for prototype one, the client professed his concerns for the data that is being used for our environment. He argued that it would be very difficult to find accurate data for the pre-industrial era Arctic. Taking this into account, we will have to change our first scenario to a more modern timeframe that still shows the same effects of climate change.

**2. Develop a prototype that will be used to achieve the objectives your team has set out in the plan created in the last deliverable (i.e. you need to answer the “why”, “what” and “when” of prototyping).**

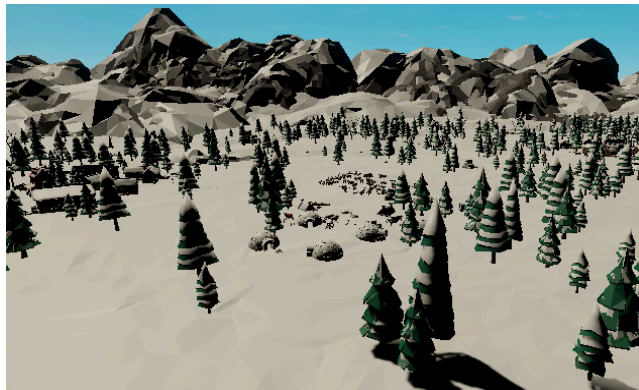
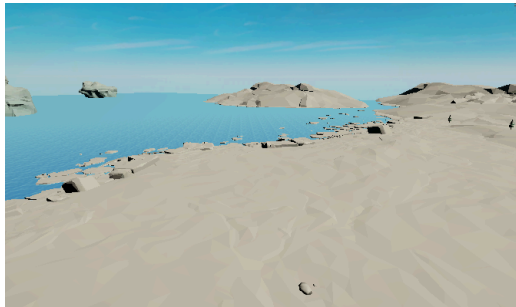
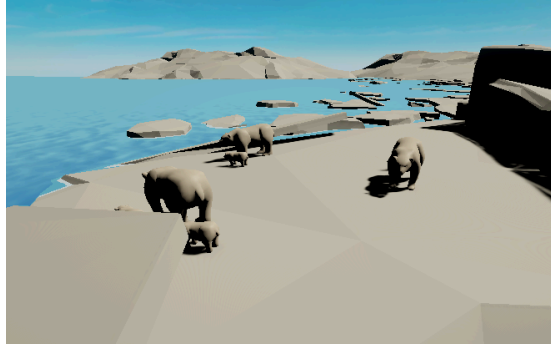
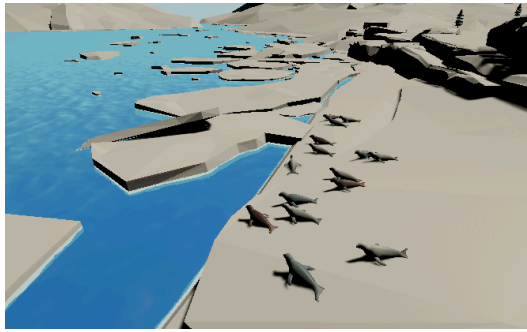
Our next prototype will implement walking, swimming, attacking, and seal movement. Along with the seals moving away from the polar bear once it gets close enough. We will also create the second half of the simulation where the effects of climate change have been shown where there is less ice and other animals where the polar bear can hunt.

3. An analytical, numerical or experimental model should also be included.

The experimental model for our simulation is testing how accurate our environment is and how easy it is to look at. It will take into account factors such as melting ice, deforestation and decreased animal population the testing phase for this model involves running the simulation and analysing visually whether the environment is accurate to real world data and is easy to look at (not too bright, water texture is proper, lighting is not too bright etc). This model will help us see what we can do to make our simulation more realistic and engaging.

4. Carefully document your prototyping test plan, analysis and your results (including detailed images of your prototype).

So far, we have made the first part of the map. We have added some text to help guide the player through the start of the simulation. We made it so that the water can be seen when putting on the VR goggles. We have added movement for the polar bear, but hopefully, this week, we can add movement for the seals and other animals that we will use for the polar bear's source of food.



5. You must gather feedback and comments on your ideas and prototype from potential clients/users that you have sought out and identified on your own.

- Where are you going to find this information?
- How are you going to change the scenes between the past and future?

6. If applicable, update your target specifications, detailed design and BOM after tests are completed and analyzed.

Object	Price	Link
Arctic - Low Poly	69	<a href="https://assetstore.unity.com/packages/3d/environments/arctic-low-poly-3d-models-pack-">https://assetstore.unity.com/packages/3d/environments/arctic-low-poly-3d-models-pack-</a>

3D Models Pack		<a href="#">226358</a>
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7. Finally, teams will outline a detailed prototyping test plan based on the template provided in the lecture ("Prototyping Test Plan") to prepare to build the third prototype in the next deliverable.

Evaluation Criteria	Test Description	Analysis Method	Why is this the best way to show climate change?	Expected Results	Stopping Criterion
A simulation that shows the effects of climate change through a polar bear's perspective.	The polar bear can successfully hunt the animals and gain hunger while the animals run away. After switching scenes the polar bear starves due to losing its main ability of hunting through ice.	This is from player interactions, tracking polar movement such as hunting the animals, and showing the environmental changes	It allows the player to see the effects of climate change through an animal. Making it more emotional for the player after the simulation.	A well-rounded simulation that shows the effects of climate change.	After tests done weekly throughout the month till were satisfied with what we have to present on design day.