**Lesson Plan Template**

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Lesson Title: *Killing the Arctic* – Human Impact on the Arctic

Grade Level: 7th

Compelling Question: Why should we care about human impact on the Arctic?

**Lesson Foundations**

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| Content Standards | 7.LS.2 In any particular biome, the number, growth and survival of organisms and populations depend on biotic and abiotic factors. | | |
| Learning Objective(s) | LO1: SWBAT compare how hunting and climate change has impacted the arctic  LO2: SWBAT explain the consequences of ‘killing the artic’ | Assessment(s)  Include LO being addressed | A1: Guided Notes  A2: Public Service Announcement  A3: Exit Ticket |
| Materials & Resources | * Origins Article [*Killing the Arctic*](https://origins.osu.edu/article/pollution-climate-change-killing-arctic) * Guided Notes * PowerPoint * YouTube Video “[Alaskan Native Elders Tell Their Climate Change Story | After the Ice](https://www.youtube.com/watch?v=OzMkyeYP7NM)” * NASA’s “[Artic Sea Ice Extent](https://climate.nasa.gov/vital-signs/arctic-sea-ice/)” * NASA’s “[Images of Change - East Arm of Alaska’s Glacier Bay Down to One Calving Glacier](https://climate.nasa.gov/images-of-change/?id=775#775-east-arm-of-alaskas-glacier-bay-down-to-one-calving-glacier)” | | |

**Instructional Procedures/Steps**

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| Opening  \_\_\_\_5\_\_\_ Minutes | Project NASA’s “[Images of Change - East Arm of Alaska’s Glacier Bay Down to One Calving Glacier](https://climate.nasa.gov/images-of-change/?id=775#775-east-arm-of-alaskas-glacier-bay-down-to-one-calving-glacier)” on the board. The image is interactive, so you can slide the bar back and forth to show the glacier in 1986 and 2019. Have the bar placed in the middle of the photo so you can see half of the ‘before’ in 1986 and half of the ‘after’ in 2019.  Think-pair-share.   1. Have students write down a notice and wonder 2. Have students share with partner their notice and wonder 3. Give students a chance to share to the whole class their notice and wonder (if possible, write them down on a board or big sheet of paper)   Slide the bar back and forth to show the entire picture in 1986 and in 2019.  Guiding questions:   1. What do you notice about the glacier coverage? 2. Look at the bodies of water (liquid, not glacier) when I slide the bar back and forth. Have any of them changed? If so, how? (\*Multiple the bodies of water have risen because the ice has melted) 3. What has changed since 1986 to 2019 that could lead to this? 4. How do you think this is affecting human beings and wildlife in the Arctic and across the globe? 5. How are indigenous populations of the Arctic impacted by climate change?   Share that they will be learning about human impact on the Arctic during the lesson today. Ask the compelling question, **“Why should we care about the impact of climate change on human communities that live on the Arctic?”** |
| Instruction  \_\_\_40\_\_ Minutes | **Whole Class Work** – watch YouTube Video “[Alaskan Native Elders Tell Their Climate Change Story | After the Ice](https://www.youtube.com/watch?v=OzMkyeYP7NM)” and corresponding areas in guided notes (7 minutes).  The video explains the changes that indigenous people have noticed in Alaska since their childhood and from what they have learned from their families. On the guided notes, there is a section for the video. There is a ‘before’ and an ‘after’ chart students will fill out. In the ‘before’ section, students will write how Indigenous people described Alaska’s climate in the past. In the ‘after’ section, students will write how Indigenous people describe Alaska’s climate today.  At the end of the video, ask students to share out.  Guiding questions:   1. How is Alaska different today from in the past? 2. Why is it important to listen to Indigenous people’s experience and knowledge in Alaska? 3. How have the changes in Alaska’s climate impacted Indigenous people?   **Partner Work** – read selected paragraphs from Origins Article [*Killing the Arctic*](https://origins.osu.edu/article/pollution-climate-change-killing-arctic) and complete the corresponding areas in their guided notes (15 minutes).  The section in the guided notes that corresponds with the article is labeled. Students can partner read or read independently the required paragraphs. After they are done reading they can discuss the questions on the guided notes.  Have partners look at NASA’s “[Artic Sea Ice Extent](https://climate.nasa.gov/vital-signs/arctic-sea-ice/)” and answer the corresponding question on guided notes (5 minutes). This should only take a few minutes because it is an interactive image and a chart. There is only one question about it.  Guiding questions:   1. What do you think the most concerning human impact on the Arctic is? 2. How does warmer temperatures create consequences in the Arctic? 3. What are the impacts on wildlife and people? 4. Who is responsible for the health of the Arctic?   **Individual Work** – students will create a public service announcement based on the information they have learned today (10 minutes). They can choose to do this on paper or on a device (Google Slide, [Canva](https://www.canva.com)) if available. Their PSA should include the following:   1. Images (drawn or pictures) and color 2. Information (by text or images) about how humans are harming the Arctic (unsustainable hunting and/or climate change) 3. Information explaining why people should be concerned about the health of the Arctic   Guiding Questions   1. How does your PSA show that the Arctic is in trouble? 2. What do you want people to feel when they look at your PSA? 3. Why is this a message we should tell other people about? |
| Closure  \_\_\_\_8\_\_\_\_ Minutes | First, give students 2 minutes to show a partner or their table their PSA. Share that their PSA’s will be hung up around the room (if they did it online, it can be printed and hung up), so they will have a chance to see their peers’ PSAs later.  Have a wrap up discussion and ask students the compelling question, “**why should we care the impact of climate change on the human communities that live in on the Arctic?”** |
| Accommodations/ Enrichment | * Students will work as a whole group, in partners, and independently * Students have the choice to create PSA digitally or on paper * Bolded words and italics used in instructions * Guided notes are separated into sections * Students have the choice to read independently or with a partner * Students who need enrichment can explore the interactive NASA websites more in depth after finding the needed information or if they complete their work earth |