We Are the One!

Let's explore global issues around the world and learn how to clearly express my opinions! Also, let's consider what I can do as a global citizen to protect the Earth and promote world peace!

Course Title	*Online Debate*
Course Duration	Aug 1, 2024 to Oct 4, 2024 **no class on June 6th due to Memorial Day*
Textbook	*Printouts* *Course Materials Link: https://jejueec.moe.go.kr/distance/data.php

Course Guidelines

1. 수업자료는 다음 경로에서 다운로드 가능
: 글로벌역량지원센터 홈페이지(*jejueec.moe.go.kr*) 접속 > “글로벌 원격 연수” 클릭 > “교육 자료실” 클릭
*링크: https://jejueec.moe.go.kr/distance/data.php
*업데이트 날짜: 수업 전날 오후 6시 이후

2. 이수증 발급 기준: (1) 출석률 70% 이상 (2) 사전/사후 평가 완료
* 두 가지 조건을 만족해야 이수증 발급 가능.

3. 이수증 발급 방법: 교육자료실 공지 확인 및 9주차 수업 때 안내 예정

Warm-Up: Structure

: Let's learn about how to structure my thoughts clearly to make my arguments more persuasive and understandable!

Claim - Reasons - Conclusion

1. Claim : Start by clearly saying what you believe or what you're arguing for.
2. Reasons: Give a few good reasons why you think your claim is true. Make sure each reason is different and explain them with examples or facts.
3. Conclusion: Wrap up your argument by repeating your main idea and the strongest points you made.

Commonly Used Expressions

1. Claim
   a. I believe that 저는 ...라고 믿습니다.
   b. In my opinion... 제 생각에는...
   c. It seems to me that... 제게는 ...인 것 같습니다.
   d. I think that... 저는 ...라고 생각합니다.
   e. From my perspective... 제 관점에서 보면...
   f. I would argue that... 저는 ...라고 주장합니다.
   g. My point of view is that... 제 의견은 ...입니다.
   h. It's my understanding that... 제가 이해하기로는 ...입니다.

2. Reasons
   a. This is because... 이는 ... 때문입니다.
   b. One reason is that... 한 가지 이유는 ...입니다.
   c. For example... 예를 들어...
   d. Firstly, Secondly, Thirdly... 첫째, 둘째, 셋째...
   e. Another reason is... 또 다른 이유는 ...입니다.
   f. In addition... 게다가...
   g. Furthermore... 더 나아가...
   h. To illustrate... 예를 들어 설명하자면...
   i. As a result... 그 결과...
   j. Due to the fact that... ...라는 사실 때문에...

3. Conclusion
   a. In conclusion... 결론적으로...
   b. To sum up... 요약하자면...
   c. Therefore... 그러므로...
   d. In summary... 요약하면...
   e. Ultimately... 궁극적으로...
   f. To wrap up... 마무리하자면...
   g. All things considered... 모든 것을 고려했을 때...
   h. Overall... 전반적으로...
   i. Thus... 따라서...

j. To conclude... 결론적으로 말하자면...

Today's issues...

: Inside the Extreme Plan to Refreeze the Arctic

*source: The Wall Street Journal Future of Everything, July 2024

Vocabularies

1. Arctic: 북극
2. Scramble: 허둥지둥하다, 급히 서두르다
3. Challenge: 도전, 문제
4. Mankind: 인류
5. Bead: 구슬
6. Reflect: 반사하다
7. In turn: 그 결과, 차례로
8. Desperate: 필사적인, 절망적인
9. Bid: 시도, 입찰
10. Geoengineering: 지구공학
11. Exclusively: 독점적으로, 오로지
12. Region: 지역
13. Inhabited: 거주하는
14. Roughly: 대략, 거의
15. Shrink: 줄어들다, 수축하다
16. Decade: 10년
17. Catastrophic: 파괴적인, 대참사의
18. Consequence: 결과
19. In essence: 본질적으로

1. Melt: 녹다
2. Absorb: 흡수하다
3. Complete: 완전한, 완성하다
4. Disappearance: 사라짐, 소멸
5. Emission: 배출, 방출
6. Intrigue: 흥미를 끌다
7. Inspiration: 영감
8. Enlist: (협조·참여를) 요청하다, 입대하다
9. Regenerative: 재생하는, 재생력 있는
10. Pump: 펌프, 퍼 올리다
11. Measures: 측정, 조치
12. Estimate: 추정하다, 평가하다
13. Salinity: 염분, 염도
14. Vital: 중요한, 필수적인
15. Saltwater: 염수
16. Freeze: 얼다, 얼리다
17. Gravity: 중력
18. Expel: 내쫓다, 배출하다

Dictations

ANNIE ZHAO: These researchers are deep inside the _____ Circle, scrambling to solve one of the biggest challenges mankind has ever faced: the _____ of sea ice. From underwater drones to tiny glass beads designed to reflect sunlight away from the ice, the race is on to slow the melt and, in turn, _____ _____ . In a desperate bid, researchers are increasingly turning to geoengineering innovations. The Wall Street Journal exclusively followed one team with a big plan to future-proof the region by _____ _____ _____ .

ANNIE ZHAO: This is Svalbard, one of the coldest inhabited places in the world. The Norwegian Archipelago is inside the Arctic, where sea ice covers roughly 6.2 million square miles in late winter. In summer, as the weather warms, it melts to its lowest level. But that ice _____ _____ _____ at a rate of around 13% per decade, which could have catastrophic consequences for the world.

JULIENNE STROEVE: In essence, it helps keep the planet cooler than it otherwise would be. So if we start melting away the snow and the ice, we're going to warm up faster.

ANNIE ZHAO: Sea ice reflects sunlight back into space, which means as it melts, the earth absorbs more heat. One study estimated that the complete disappearance of Arctic sea ice in summer would have the same warming impact as one trillion tons of carbon dioxide. That's more than double America's historic emissions. A Dutch startup is attempting to _____ the melt by geoengineering the Arctic.

HAYO HENDRIKSE: Why am I doing this? I was first intrigued by the question, will it work? It's partly because I thought if I can do something in a battle to curb climate change, then I should just do it and I should just go. I told my daughter, I'm going out to _____ _____ _____ new ice so we can potentially save the polar bears.

FONGER YPMA: So the Dutch way of trying to build ice rinks for ice skating marathons was really an inspiration for us for the ice thickening project.

ANNIE ZHAO: This is the team's first field test at this site in the south of Svalbard. The startup has enlisted scientists from two universities to experiment with ice _____ _____ used by the Dutch ice masters.

FONGER YPMA: They do the ice master, as they call it, in these villages. They put thin layers of water on top of the ice to make it freeze faster. If we thicken enough of the ice, we can maybe stop the decline long enough that we can bring down the CO2 emissions, and the ice becomes regenerative by itself again.

ANNIE ZHAO: Similar methods are widely used in Canada, where pumped water _____ _____ to create ice roads strong enough to carry the weight of trucks.

FONGER YPMA: That's been done for decades already. And that really helps. There's a lot of engineering knowledge about that.

ANNIE ZHAO: To see whether these methods could work to save the ice here in the Arctic, the team first needs to understand the environment they're in. To do this, they're drilling and taking samples, which allows the team to look inside the core.

HAYO HENDRIKSE: That's quite a thick piece of ice, but it has been very cold here last month.

ANNIE ZHAO: This ice core currently measures around 36 inches. The team estimates they could add up to 14 more inches of thickness.

HAYO HENDRIKSE: If we are really successful, that would be in the order of one third of the core.

ANNIE ZHAO: They're taking out hundreds of ice cores across the testing area.

HAYO HENDRIKSE: So we take two of those at every site where we probe, and the purpose is to obtain the _____ , temperature, and density of the ice.

ANNIE ZHAO: The salinity, or simply _____ _____ the ice is, is a vital question for the team to understand. Because when saltwater freezes, it creates small crystals that form into bigger ice chunks over time. During this process, gravity expels the salt back into the water below it. The researchers need to understand how putting salty water on top will interact with this natural process.

Passage

ANNIE ZHAO: These researchers are deep inside the Arctic Circle, scrambling to solve one of the biggest challenges mankind has ever faced: the decline of sea ice. From underwater drones to tiny glass beads designed to reflect sunlight away from the ice, the race is on to slow the melt and, in turn, global warming. In a desperate bid, researchers are increasingly turning to geoengineering innovations. The Wall Street Journal exclusively followed one team with a big plan to future-proof the region by making more ice.

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Passage (Korean ver.)

애니 자오: 이 연구자들은 북극권 깊숙한 곳에 있으며, 인류가 직면한 가장 큰 문제 중 하나인 해빙 감소를 해결하기 위해 분주히 노력하고 있습니다. 수중 드론에서부터 빛을 반사시켜 얼음을 보호하는 작은 유리 구슬에 이르기까지, 녹는 속도를 늦추고 지구 온난화를 완화하려는 경주가 시작되었습니다. 연구자들은 점점 더 지구공학 혁신에 의존하고 있습니다. 월스트리트 저널은 얼음을 더 만들려는 큰 계획을 가진 한 팀을 독점적으로 취재했습니다.

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줄리엔 스트로브: 기본적으로 해빙은 지구를 더 시원하게 유지하는 역할을 합니다. 그래서 우리가 눈과 얼음을 녹이기 시작하면 지구는 더 빨리 따뜻해질 것입니다.

애니 자오: 해빙은 태양빛을 우주로 반사시킵니다. 이는 얼음이 녹을수록 지구가 더 많은 열을 흡수하게 된다는 것을 의미합니다. 한 연구는 북극의 여름 해빙이 완전히 사라질 경우, 이는 1조 톤의 이산화탄소와 같은 온난화 영향을 미칠 것이라고 추정했습니다. 이는 미국의 역사적 배출량의 두 배가 넘는 양입니다. 네덜란드의 한 스타트업은 북극을 지구공학적으로 재설계하여 녹는 속도를 늦추려 하고 있습니다.

하요 헨드릭세: 왜 제가 이 일을 하고 있냐구요? 처음에는 이 질문에 흥미를 느꼈습니다, 과연 이게 효과가 있을까? 또한 기후 변화를 막기 위해 뭔가 할 수 있다면, 해야 한다고 생각했기 때문입니다. 저는 제 딸에게 말했습니다, 나는 새로운 얼음을 만들기 위해 가고 있다고, 그래서 북극곰을 구할 수 있을지도 모른다고요.

폰거 입마: 아이스 스케이팅 마라톤을 위해 아이스 링크를 만드는 네덜란드 방식이 우리에게 얼음을 두껍게 만드는 프로젝트에 영감을 주었습니다.

애니 자오: 여기는 스발바르 남부의 이 사이트에서 팀의 첫 현장 테스트입니다. 이 스타트업은 두 대학의 과학자들을 고용하여 네덜란드 얼음 마스터들이 사용하는 얼음 두께 증가 방법을 실험하고 있습니다.

폰거 입마: 그들은 이 마을의 얼음 마스터라고 불리는 사람들이 물의 얇은 층을 얼음 위에 뿌려서 얼음을 더 빨리 얼리게 합니다. 우리가 얼음을 충분히 두껍게 하면, CO2 배출량을 줄이고 얼음이 다시 자립적으로 재생되도록 충분한 시간을 벌 수 있을지도 모릅니다.

애니 자오: 유사한 방법이 캐나다에서도 널리 사용되고 있으며, 거기서는 트럭의 무게를 지탱할 수 있을 만큼 강한 얼음 도로를 만들기 위해 물을 펌프질하여 얼립니다.

폰거 입마: 이런 방법은 이미 수십 년 동안 사용되어 왔습니다. 그리고 그것은 정말 도움이 됩니다. 이 분야에는 많은 공학적 지식이 있습니다.

애니 자오: 이 방법이 북극의 얼음을 구하는 데 효과가 있을지 알아보기 위해, 팀은 먼저 그들이 있는 환경을 이해해야 합니다. 이를 위해, 그들은 시추 작업을 하고 샘플을 채취하며, 이로 인해 팀은 얼음의 코어를 들여다볼 수 있게 됩니다.

하요 헨드릭세: 꽤 두꺼운 얼음 조각이네요, 지난달 여기는 매우 추웠습니다.

애니 자오: 이 얼음 코어는 현재 약 36인치 두께입니다. 팀은 최대 14인치 더 두께를 추가할 수 있을 것으로 추정합니다.

하요 헨드릭세: 우리가 정말 성공한다면, 이는 코어의 1/3 정도가 될 것입니다.

애니 자오: 그들은 테스트 지역 전반에 걸쳐 수백 개의 얼음 코어를 채취하고 있습니다.

하요 헨드릭세: 그래서 우리는 탐사하는 모든 사이트에서 두 개의 샘플을 채취하며, 그 목적은 얼음의 염도, 온도 및 밀도를 파악하는 것입니다.

애니 자오: 염도, 즉 얼음의 염분이 얼마나 되는지에 대한 문제는 팀이 이해해야 할 중요한 질문입니다. 왜냐하면 소금물이 얼면 시간이 지나면서 더 큰 얼음 덩어리로 형성되는 작은 결정체를 만들기 때문입니다. 이 과정에서 중력은 소금을 아래 물로 다시 밀어냅니다. 연구자들은 이 자연적인 과정과 염분이 표함

Debate

I. What innovative methods are being explored to combat the melting of Arctic sea ice, and why is it important to address this problem?

Sample Answer1.

[Claim] In my opinion, innovative methods such as using underwater drones and spreading tiny glass beads are being explored to combat the melting of Arctic sea ice.

[Reason 1] One reason these methods are being used is that underwater drones can provide detailed data on ice thickness and temperature, helping scientists understand how to protect the ice better.

[Reason 2] Another reason is that glass beads can reflect sunlight, reducing the amount of heat absorbed by the ice, which slows down the melting process.

[Conclusion] Therefore, addressing this problem is crucial because the loss of Arctic ice accelerates global warming, impacting global climate patterns and ecosystems.

2. Do you think the geoengineering methods described in the article are long-term or short-term solutions to the problem of melting sea ice? Why?

Sample Answer1. - Long-term perspective

[Claim] I believe that the geoengineering methods have the potential to be long-term solutions to the problem of melting sea ice.

[Reason 1] This is because, with further research and implementation, methods like sunlight-reflecting technologies could consistently reduce heat absorption, helping to maintain ice levels over time.

[Reason 2] Another reason is that these methods can be integrated into broader climate strategies, complementing efforts to reduce carbon emissions and supporting overall environmental sustainability.

[Conclusion] In conclusion, while geoengineering alone may not be sufficient, it can be a valuable component of a long-term strategy to mitigate climate change and protect the Arctic.

Sample Answer 2. - Short-term perspective

[Claim] I believe that the geoengineering methods described are primarily short-term solutions to the melting of sea ice.

[Reason 1] Firstly, these methods, like creating more ice, provide immediate relief by slowing the melting process but do not tackle the root causes of climate change, such as carbon emissions.

[Reason 2] Secondly, these interventions are currently experimental and may not have sustainable long-term effects without broader systemic changes.

[Conclusion] In conclusion, while helpful in the short term, these methods need to be part of a broader strategy that includes reducing greenhouse gas emissions for a long-term solution.

3. As global citizens, what practical steps can individuals take to help protect the environment and slow down climate change?

Sample Answer

[Claim] As global citizens, we can take several practical steps to protect the environment and slow down climate change.

[Reason 1] One important step is reducing energy consumption, which can be achieved by using energy-efficient appliances and conserving electricity.

[Reason 2] Another practical step is minimizing waste by recycling and choosing reusable products, which reduces the amount of plastic and other non-biodegradable materials in the environment.

[Conclusion] Overall, by adopting these practices and supporting sustainable policies, individuals can make a significant positive impact on the environment and help slow the effects of climate change.