**LESSON PLAN
Geography**

|  |  |
| --- | --- |
| **Title of the lecture** | Climate change solutions |
| **Subject(s) and grade** | Geography, 1st grade, high school |
| **Key words** | 1. Climate Change2. Solutions3. Mitigation4. Adaptation5. Global-Level |
| **Short description** | The main goal of the lesson is to explore diverse solutions for combating climate change, emphasizing the importance of actions at local, national, and global levels. The lesson covers key concepts such as mitigation and adaptation strategies, individual and community actions, and the significance of international agreements and clean technology investments. Through a comprehensive approach that includes practical initiatives and collective efforts, the lesson aims to empower individuals and communities to address climate change effectively and create a more sustainable and resilient future for the planet. |
| **ICT tools** | Microsoft PowerPoint, Kahoot quiz.  |
| **Expected prior knowledge** | Prior knowledge needed to follow and understand the lesson on climate change solutions may include:1. Understanding of the basic concepts of climate change and global warming.
2. Familiarity with greenhouse gases and their role in the Earth's atmosphere.
3. Awareness of the impacts of climate change such as rising temperatures, sea level rise, and extreme weather events.
4. Knowledge of the difference between mitigation (reducing emissions) and adaptation (adjusting to impacts).
5. Awareness of the importance of renewable energy, energy efficiency, and sustainable practices in combating climate change.
6. Understanding of the significance of individual and collective actions in addressing environmental challenges..
 |
| **Expected learning outcomes** | The expected learning outcomes of the lesson on climate change solutions may include:1. Increased awareness of the causes and impacts of climate change on a global scale.
2. Understanding of the importance of mitigation and adaptation strategies in addressing climate change.
3. Knowledge of various solutions at local, national, and global levels to combat climate change.
4. Ability to identify the role of individual actions, community initiatives, and international agreements in mitigating climate change.
5. Appreciation of the significance of clean technology investments and sustainable practices in reducing greenhouse gas emissions.
6. Empowerment to take informed actions to contribute to climate change mitigation and create a more sustainable future for the planet.
 |
| **Expected duration** | 45 minutes (1 shool hour) |
| **Preparation/material** | If you will use some material for the lesson, for examle work sheets, pronted docs, etc, explain here. |
| **Detailed description of activities** | Descriptions of the activities during the class.Activity 1: Understanding Climate Change BasicsDescription:1. Begin by introducing the concept of climate change and its causes, emphasizing human activities that contribute to greenhouse gas emissions.
2. Show visual aids such as graphs, videos to illustrate the impacts of climate change on the environment and society.
3. Engage students in a discussion to ensure they grasp the fundamental concepts of climate change, global warming, and related terminology.
4. Provide examples of real-world climate change effects to make the topic more relatable and impactful for students.
5. Encourage questions and facilitate a Q&A session to clarify any uncertainties and deepen understanding.

Activity 2: Exploring Mitigation and Adaptation StrategiesDescription:1. Present the difference between mitigation (reducing emissions) and adaptation (adjusting to impacts) strategies in response to climate change.
2. Discuss various mitigation approaches such as renewable energy adoption, energy efficiency improvements, and carbon capture technologies.
3. Explore adaptation measures like infrastructure resilience, water management strategies, and biodiversity conservation.
4. Facilitate a group discussion to compare and contrast the effectiveness and challenges of various strategies in addressing climate change.

Activity 3: Analyzing Global-Level SolutionsDescription:1. Introduce students to international climate agreements like the Paris Agreement and their role in setting emissions reduction targets.
2. Discuss the importance of clean technology investments in driving large-scale solutions to combat climate change.
3. Explore the significance of deforestation mitigation as a strategy to protect carbon sinks and reduce greenhouse gas emissions.
4. Encourage critical thinking by asking students to propose additional global-level solutions or improvements to existing agreements.

Activity 4: Implementing Local Climate Action ProjectsDescription:1. Inspire students to take action at the local level by initiating climate change projects in their community.
2. Brainstorm potential project ideas such as tree planting initiatives, energy conservation campaigns, or waste reduction programs.
3. Guide students in developing project proposals outlining goals, action plans, and expected outcomes.
4. Provide resources and support for students to implement their projects, collaborate with local organizations, and engage community members.
5. Organize a showcase event where students present their projects, share results, and reflect on the impact of their local climate action efforts.

Activity 5: Reflecting on Personal Climate CommitmentsDescription:1. Encourage students to reflect on their individual carbon footprint and personal contributions to climate change.
2. Have students assess their energy consumption, transportation habits, dietary choices, and waste generation patterns.
3. Guide students in setting personal climate goals such as reducing energy use, adopting sustainable transportation options, or shifting dietary habits.
4. Create a pledge board where students can publicly commit to specific actions to mitigate climate change.
5. Facilitate a closing discussion where students share their commitments, discuss challenges and strategies for overcoming them, and express their motivation to contribute to a sustainable future.
 |
| **Possibility for extended activities** | Proposals for extended activities after the class.Extended Activity 1: Climate Change Simulation GameDescription:1. Develop a climate change simulation game where students role-play as different stakeholders (e.g., government officials, environmental activists, industry representatives) in negotiating climate policies.
2. Assign roles and provide scenarios that challenge students to balance economic interests, environmental concerns, and social impacts in decision-making.
3. Facilitate discussions after the simulation to debrief on the outcomes, analyze the effectiveness of different strategies, and reflect on the complexities of climate governance.
4. Encourage students to propose modifications to the game rules or scenarios to explore alternative approaches to addressing climate change.

Extended Activity 2: Climate Change Art ExhibitionDescription:1. Organize a climate change art exhibition where students create artworks (paintings, sculptures, photographs) that convey messages about climate change, sustainability, and environmental stewardship.
2. Provide guidance on artistic techniques, themes, and mediums related to climate change awareness and advocacy.
3. Invite the school community, parents, and local stakeholders to visit the exhibition and engage in discussions about the role of art in raising awareness about climate issues.
4. Facilitate a reflection session where students share the inspiration behind their artworks, discuss the impact of art in promoting environmental consciousness, and explore future art projects related to climate change.

Extended Activity 3: Climate Change Documentary Film ProjectDescription:1. Task students with creating documentary films on climate change topics such as renewable energy innovations, community resilience initiatives, or environmental justice issues.
2. Provide training on video production techniques, storytelling, and research skills to help students develop compelling and informative documentaries.
3. Host a film screening event where students showcase their documentaries to peers, teachers, and community members, followed by a Q&A session.
4. Encourage students to submit their films to local film festivals, environmental organizations, or online platforms to amplify their message and reach a broader audience.

Extended Activity 4: Climate Change Policy ProposalDescription:1. Challenge students to research and develop comprehensive climate change policy proposals addressing specific environmental challenges or sustainability goals.
2. Guide students in analyzing existing policies, conducting stakeholder consultations, and crafting evidence-based recommendations for policy interventions.
3. Organize a policy pitch competition where students present their proposals to a panel of judges, including teachers, experts, or community leaders.
4. Provide feedback on the feasibility, impact, and implementation strategies of the policy proposals, and encourage students to advocate for their ideas with local decision-makers or policymakers.
 |
| **Additional notes** |  |
| **Author** | Igor Leščešen |