



2023 Oral Component Scenario

Adapting to a Changing Climate

The Scenario:

Human activity has been the main driver of climate change since the Industrial Revolution with greater increases being seen beginning in the 1950's. With activities such as burning fossil fuels, unsustainable forestry practices, fertilizing crops, raising livestock, and emissions from industrial production, humans have been pushing the earth's climate to an irreversible tipping point. While these activities have built the success of our nation and our communities, the consequences of those industries on our climate are only recently being recognized. Just as we all came together then to achieve industrial advances, we can do so again towards greener solutions, if we have the education and motivation to do so.

To raise awareness and inspire change, your local community has decided to host an Earth Day Festival to celebrate nature, recognize our changing climate, and discuss adaptation and mitigation strategies. Your Environmental Science teacher has graciously volunteered you, your school's Envirothon team, to present to the community during the festival about how climate change will not only affect the world, but also how it will affect Pennsylvania, and how you can take positive actions to benefit the environment. While some climate changes may be detrimental to certain species or ecosystems (potentially even to the point of extirpation or extinction), other changes may be able to be viewed in a positive light.

The Presentation:

As an Envirothon team, you are a student team that is presenting at your town's Earth Day Festival. You are presenting to community members who are attending the Festival. You are tasked with helping to educate others about the effects of climate change on different aspects of our natural resources. Keep in mind that effects could potentially include negative and positive changes, and that some adaptation to those changes is possible while in other cases extirpation or extinction will result.

Develop a 12-minute presentation that addresses the following tasks:

- I. **Task 1: Aquatic resources** – How does a changing climate impact aquatic resources? Discuss one example of a climate change impact on Pennsylvania aquatic resources and one example on global fisheries.
- II. **Task 2: Forestry** - How does a changing climate impact forestry? Discuss one example of a climate change impact on Pennsylvania forest resources and one example on global forests.
- III. **Task 3: Soils/Land use** – How does a changing climate impact soils? Discuss one example of a climate change impact on Pennsylvania soil resources and one example on global soil resources.

- IV. **Task 4: Wildlife** – How does a changing climate impact wildlife resources? Discuss one example of a climate change impact on Pennsylvania wildlife and one example on global wildlife species.
- V. **Personal action:** Outside of the roles given in this scenario, what is an action each team member feels they could take in their personal life to help mitigate their contributions to climate change? Each member needs to briefly mention an action, the impact on climate change, and if there are barriers to taking that action. We don't expect you to solve climate change! Students may select similar actions to each other without penalty.

References:

Be sure to incorporate/cite at least three (3) spoken, relevant, and reputable references as you present, such as a formal publication or information provided in the 2023 Current Issue Resources.

Examples of references:

1. "According to _____'s publication entitled _____, [fact that supports scenario]."
2. "Research from [organization/agency/etc.] outlined in their article _____, suggests [fact that supports scenario]."
3. "An article entitled _____, on _____'s website, says [fact that supports scenario]."

Final Notes:

While preparing, teams should feel free to include details of their choosing, not specifically referenced in the scenario, to aid the presentation. **The Pennsylvania Envirothon will not answer any questions regarding the scenario – the team must interpret and respond as it sees fit.**

There is a maximum of 20 slides allowed in your PowerPoint. The video submitted should mimic as closely as possible the team standing in front of a panel and presenting it to them in person. The entire team should be present and using its developed PowerPoint as a visual aid. The only visual aid acceptable is a PowerPoint presentation that the team develops. No video editing, animation, etc., is allowed. The goal of the video is to be a single take of the team using its PowerPoint as a visual aid and presenting its information addressing the points of the scenario to the panel of judges. The team will lose points if it edits its video and may be subject to disqualification. Note cards or cue cards are acceptable for use, however students will be judged on their delivery and style. Please read the full Oral Component Rules on our website.