Welcome to the national level of the *You Be The Chemist* Challenge®! This year, teams need to create a video investigating the concept of sustainability and its role in your community. Videos should explain the chemistry behind the concept, highlight examples of sustainability found in everyday life, and explore how understanding of the concept can help solve a problem people face in your community.

Some places to identify issues in your community include the news, your local newspaper, community bulletins, and your local government's website.

Your video must:

1. Be 3-5 minutes in length.
2. Provide an engaging explanation of **sustainability**.
   a. This should go into at least some detail on particle/molecular behavior and how the core concept contributes to observable properties.
3. Explain how **sustainability** solves a problem people face in their everyday lives or in your community.
4. Have 3-4 different phenomena found in everyday life that can be explained using **sustainability** with explanations.
   a. A phenomenon is an observable event that occurs in the universe. A phenomenon does not have to be complex, just something you observe happening that you **can** explain using your scientific knowledge.
5. Opening and closing titles
   a. Opening titles must include video title and incorporate concept in some way.
   b. Closing titles must include school and student names and citations in APA or MLA format.
   c. Opening and closing titles should be a maximum of 10 seconds in length each.
6. Be submitted along with a completed *Video Storyboard Template.*

Research Topics:

The word bank below provides suggestions for possible research topics for your team's competition video. This word bank is not an exhaustive list and many topics are not included. Your team is not required to use any of the below suggestions in your video; rather, this word bank serves as inspiration for possible topics to explore in your video. Whatever topic you choose, whether it is from this list or not, it is your team's responsibility to connect that topic and your research to the video prompt.

Key Word Bank:

Agriculture, Biodiversity, Carbon Emissions, Energy, Plastics, Pollution, Recycling, Transportation, Waste Management, Water Stewardship

Additional Requirements:
1. Format and resolution
    a. Videos should be saved in .mp4 – a universal video format that is viewable on all platforms
    b. Resolution should be at least 640 x 480 pixels (HD is 1920 x 1080)

2. Original content and copyrighted material
    a. A bibliography listing all sources used in researching and creating the video in APA or MLA format must be included in the end titles of the video. Please refer to this resource created by Science Buddies® for more step-by-step directions on creating a bibliography.
        i. Source list must include title, author, publisher, and copyright date
        ii. Bibliography must include internet sources, interviews, images, and videos
    b. All content must comply with copyright rules and regulations. We advise that students use wholly **original** content in their videos to avoid violation of copyright. However, if using anything other than original content in your video, be sure that one of the following applies:
        i. It is in the public domain, meaning it was published in 1922 or earlier. However, be sure that the particular *performance* of the song you are using is in the public domain. For example, a performance of "Twinkle, Twinkle Little Star" by Taylor Swift probably has its own copyright protections, but you could perform the song with your team and use it freely. For more information about what is in the public domain, visit https://www.pdinfo.com/public-domain-music-list.php.
        ii. It has a Creative Commons Attribution license. This license allows you to use a particular work as long as you credit the original author/performer. Be careful when researching a work's particular Creative Commons license and be sure it is a Creative Commons *Attribution* license. Visit https://creativecommons.org/licenses/ for more information.
        iii. It is completely royalty-free. If an original author/composer allows their work to be used without restrictions, this is royalty-free. Websites that offer royalty-free music will usually indicate this, so be sure to look for the licensing of a particular work you are interested in using. Be careful! If a song, image, etc. is "royalty-free for educational use," you may NOT use it in your video submission because the prizes for the *You Be The Chemist* Challenge® have monetary value.

3. Non-team member contributions
    a. Adult and/or other non-team member involvement in the video competition must be minimal. Challenge Organizers, Coordinators, and other non-team members cannot actively participate in the research, storyboarding, filming, or editing of any parts of the project.
    b. Non-team member contributions to the storyboard and video may *only* include:
        i. Helping to organize the team
        ii. Supporting time management
        iii. Providing critical feedback or highlighting factual errors
            1. Non-team members may point out factual inaccuracies or explanations that are confusing or convoluted, BUT they may not contribute ideas, or provide solutions at the risk of disqualifying a team. *(Note – this can include pointing out factual errors but NOT correcting factual errors. Students should be directed to re-check facts or do more research on a specific explanation if an adult sees a misconception or specific factual error.)*

    iv. Providing meeting places
    v. Ensuring safety
          1. Adults may instruct students on how to use tools—including lab materials, hardware, and software needed to create the project, BUT they may not actively work on the project.
    vi. Giving encouragement
    vii. Acting as extras in video

Video Submission: https://youbethechemist.submittable.com/submit/178543/2020-2021-video-challenge