



You Be The Chemist Challenge® Video Guidelines

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As part of the *You Be The Chemist Challenge*®, teams will create a video investigating the concept of **states of matter** related to **space**. Videos should explain the chemistry behind the concept of states of matter, highlight examples of the concept found in space, and explore a career related to space.

Your video must:

1. Be 3-5 minutes in length. Videos shorter than 3 minutes or longer than 5 minutes will not be scored.
2. Provide an engaging explanation of **states of matter** related to **space**.
 - a. Include at least some detail describing particle/molecular behavior and how the core concept of states of matter contributes to observable properties.
3. Explain why **states of matter** are important in understanding **space**.
4. Describe one career path related to space that interests your team (selected career path may not be “astronaut”), including the education path and job duties of your chosen career.
5. Identify and explain 3 different phenomena found in **space** that are related to **states of matter**.
 - a. Note: 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.
6. Opening and closing titles
 - a. Opening titles must include video title and concept.
 - b. Closing titles must include school, student names (first names and last initials), team member contributions, and citations in APA or MLA format.
 - c. Opening and closing titles should be a maximum of 10 seconds in length each.
7. Be submitted along with a completed [Video Storyboard Template](#).

Research Topics:

The word banks below provide 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 Banks:

States of Matter: Chemical Properties, Chemical Reactions, Compounds, Condensation, Conservation of Energy, Conservation of Matter, Density, Deposition, Displacement, Elements, Energy, Energy Transfer, Forces, Freezing, Gas Pressure, Gases, Liquids, Melting, Mixtures, Phase Change, Physical Properties, Plasma, Solids, Sublimation, Surface Temperature, Surface Tension, Vaporization, Viscosity, Volume

Space Phenomena: Astrochemistry, Astronautics, Atmospheric Chemistry, Black Holes, Bose-Einstein condensate, Composition of Stars, Coronal Holes, Elemental Origin, Flow Chemistry, Galactic Recycling, Galaxies, International Space Station, Life Stages of Stars, Milky Way, Moons, Planetary Composition and

Atmospheres, Planet Properties, Planetary Geological Mapping, Rocket Ships, Solar Flares, Solar phenomena, Star death, Stellar Nurseries, Star Types and Properties, Sunspots

For purposes of this competition, space begins at the Kármán Line (an imaginary line 100 kilometers [62 miles] above earth which continues outwards throughout the universe), at which there is no appreciable air to breathe or to scatter light. Videos do not need to solely focus on the space beyond this line, and videos may include research done on Earth related to space or space exploration. This definition of space is provided for clarity on where space begins for purposes of this competition.

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 also 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 which invalidates educational use.
3. Non-team member contributions
 - a. Adult and/or other non-team member involvement in the video competition must be minimal. Challenge Organizers, Coordinators, teachers, parents, 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 those 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/200767/2021-2022-video-challenge>

Videos may be submitted between January 10 and March 4, 2022. Team Coordinators will receive Team Identifiers to use when submitting videos by January 10, 2022.