

## **Contest Date(s):**

**March 18, 2021 and March 19, 2021  
(Orientation will begin at 10:00am)**

## **Contest Type: VIRTUAL**

**(All contest types are listed on the website. YOU NEED TO BE FAMILIAR  
WITH BOTH THIS DOCUMENT AND THAT DOCUMENT.)**

## **Zoom Contest Link:**

**For March 18, 2021**

**[https://ohioskillsusa-  
org.zoom.us/j/92434887311?pwd=SkdjaktxMW95dWVBcHdKclhxVkFEZz09](https://ohioskillsusa-org.zoom.us/j/92434887311?pwd=SkdjaktxMW95dWVBcHdKclhxVkFEZz09)**

**Meeting ID: 924 3488 7311**

**Passcode: 980425**

**For March 19, 2021**

**[https://ohioskillsusa-  
org.zoom.us/j/92143876745?pwd=eIJLR3ZVOFlIN3czUmgxRGI4SSsxZz09](https://ohioskillsusa-org.zoom.us/j/92143876745?pwd=eIJLR3ZVOFlIN3czUmgxRGI4SSsxZz09)**

**Meeting ID: 921 4387 6745**

**Passcode: 049759**

## PURPOSE

To evaluate each contestant’s understanding of basic technical concepts/principles of the applied sciences and their ability to demonstrate and explain the concept/principle in action and application.

## ELIGIBILITY

For a CTPD to have a contestant, that CTPD must have an approved Principles of Technology program in place. Open to all active members of SkillsUSA who are enrolled or have completed a course in Principles of Technology. Eligibility is in accordance with the SkillsUSA Ohio Program Guidelines.

## ORIENTATION

Orientation will begin at 10:00am.

## CLOTHING REQUIREMENTS

Official SkillsUSA dress or business attire.

|       |  |
|-------|--|
| Men   | Official red blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern or SkillsUSA black tie, black socks and black shoes.   |
| Women | Official red blazer or jacket; black dress skirt (knee length) or slacks with businesslike white, collarless blouse or white blouse with small, plain collar that may not extend onto the lapels of the blazer; black sheer or skin-tone hose and black shoes. |

**Note:** Contestants must wear their official contest clothing to the contest orientation meeting. Teams will be judged in official attire at the contestant briefing.

## SPECIAL INFORMATION

Demonstrations with moving devices and/or chemicals of any nature require safety precautions. There will be a penalty for infractions of safety procedures during the demonstration. A serious infraction will result in the contestants being asked to discontinue the demonstration, at the discretion of the judges.

The judges will remain seated at the judging table and the contestants are to remain in the 8' x 12' space provided for their demonstration. If any part of the demonstration needs to be made visible to the judges from another angle or close up, it is the responsibility of the contestant to provide a means of viewing for the judges within the above limitations. The contestants will be provided a table; however, if the table does not need to be used, the floor area within the space provided may be used.

## TOOLS PROVIDED BY CONTESTANTS

1. Equipment and materials to complete one demonstration
2. Any safety equipment that is necessary (safety glasses, apron, etc.)
3. Standard 25” Measuring Tape to measure parameters of display on camera for judges

## SCOPE OF THE CONTEST

The contest will be judged based on the criteria established in the current year’s National Technical Standards, which are updated annually. National Technical Standards are accessed through your Professional SkillsUSA Membership benefits by logging on to your SkillsUSA account at <https://www.skillsusa-register.org/Login.aspx>.

## Knowledge of Performance

There is no written knowledge test for this contest.



## Skill Performance

A portion of the contest is a technical demonstration where the knowledge, underlying theories, and applications of the chosen principle(s) in action and application will be demonstrated.

## Contest Guidelines

1. Present a technical demonstration of (a) chosen principle(s) of technology. Demonstrate the principle(s) in theory and/or application, and leave the judges with a clear comprehension of the subject unit or sub-unit from principles of technology.
2. Answer questions and discuss the application of the principle(s) with the judges.
3. Any technical concept may be demonstrated, provided it is related to physics, can be referenced to the course curriculum, and incorporates basic principles of applied physics. If any hazardous or caustic materials are used, contestants must bring the associated Material Safety Data Sheet(s) (MSDS) to the contestant meeting and present five copies along with the five copies of the discussion paper for committee review.
4. The recitation of curriculum experiments is not, in and unto itself, sufficient to meet the requirements of the contest. Thorough research and in-depth treatment of the subject matter will be required to comply with the requirements of the contest and to be competitive. Imagination and innovation will be expected by the judges.
5. Any visual aids (signs, charts, transparencies, slides, diagrams) are to be prepared by the contestants. Professionally prepared visual materials are not permitted. No sound device of any kind may be used to transmit or amplify audible words unless they are integral to the technical demonstration itself. No compressed air, gas or flammable liquid may be used.
6. The Principles of Engineering contest is an individual performance event. However, others can assist to set up and/or tear down the demonstration. Only students can be used as models or props in the demonstration.
9. Technical demonstration — The contestant shall prepare and present a technical demonstration to a panel of judges in accordance with the following requirements. The purpose of the technical demonstration is for the contestants to demonstrate thorough knowledge and awareness of the history, underlying theories, descriptive knowledge and applications of the chosen principle(s) in action and application. Exhibition of the contestants' demonstrations to the general public will be required, but not scored.
10. Contestants will be allowed five minutes to set up the demonstration and five minutes to clear the demonstration room. Penalty: Five points will be deducted for each 30 seconds or fraction thereof over the five- minute setup or clearing times.  
Each presentation of the technical demonstration to the judges shall be at least 10 minutes in length and shall not exceed 15 minutes in length. Penalty: Five points will be deducted for each 30 seconds or fraction thereof under 10 minutes or over 15 minutes in length. The timekeeper will indicate elapsed time of the demonstration at the 10-, 13- and 15-minute points. The demonstration time will begin when the contestant indicates readiness and will stop when the contestant indicates that the technical demonstration has ended. The tear-down time will be timed from the end of the question and answer period until the contestant indicates completion to the lead judge.
11. A question and answer period will be allowed at the conclusion of each demonstration to permit the contest judges to query the contestants and further evaluate the contestants' understanding of the demonstrated principle. Questions by the judges may cover any aspect of a contestant's chosen principle(s) as presented. **This question and answer period is not to exceed 10 minutes in length.**