

SD HOSA's BIOTECHNOLOGY VIDEO EVENT LOGISTICS

Background: Biotechnology is on the forefront of innovation. By creating an expansive bio-based economy in all areas of the life sciences including Human Health, Food and Agriculture and Renewable Energy Biotechnology, the SD Biotech Association Strives to establish a strong business and research climate to ensure a rich environment conducive to growth of the biotech industry in South Dakota and around the world.

Rationale: In order to create awareness of all the possibilities in the wide spectrum of biotechnology, this opportunity will help connect students with biotechnology businesses. In a collaborative effort, biotechnology business will provide insight to what they do by providing data and other content to guide the students in creating a 60-120 second video while also meeting science content standards.

Purpose: South Dakota HOSA, in collaboration with South Dakota Biotech, is creating a team event involving biotechnology businesses and the creation of a video. Depending on the biotech topic of the video and the business partnership you choose, there are multiple science standards that could be met:

- HS-LS1-1: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. (SEP: 6; DCI: LS1.A; CCC: Structure/Function)
- HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. (SEP: 2; DCI: LS1.A; CCC: Systems)
- HS-LS2-3: Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. (SEP:6; DCI: LS2.B; CCC: Energy/Matter)
- HS-LS4-3: Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. (SEP: 4; DCI: LS4.B, LS4.C; CCC: Patterns)
- HS-LS4-7: Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy. (SEP: 4; DCI: LS4.A ; CCC: Patterns)

The video will be entered in the Biotechnology Video Event at the South Dakota HOSA State Leadership Conference where winners will be presented with medals and prize money.

Logistics:

1. From a list of biotechnology businesses, 2-3 students select a business that may be of interest to them.
2. Students contact the business to set up a time to meet/tour/visit to gain a better understanding of the business and what they do.
3. After gathering data and other information, students use the creative process to design a video.
4. Students read through the rubric used to judge the video and share with the business.
5. Students begin with a rough draft to be shown to the business and then revised as needed.
6. Students enter the video into the SD HOSA event at the annual State Leadership Conference.
7. Awards and prize money will be given out at the Grand Awards Session at the SLC.

Rubric: Coming Soon!!