

**Shopping for Virtual Tips:
Using Bingo as an Online Horticulture Produce Identification Teaching Strategy**

Sydney Hollingsworth, *Graduate Teaching Assistant*
New Mexico State University
PO Box 30003, MSC 3501
Las Cruces, NM 88003
505-850-6003
sleigh15@nmsu.edu

Matricia Garcia, *Graduate Teaching Assistant*
New Mexico State University
matricia@nmsu.edu

Amador Gonzales, *Graduate Teaching Assistant*
New Mexico State University
agg97@nmsu.edu

Justin B. Armstrong, *Graduate Teaching Assistant*
New Mexico State University
armstj@nmsu.edu

Ema Voldahl, *Graduate Teaching Assistant*
New Mexico State University
emagrace@nmsu.edu

Shannon Norris, *Assistant Professor*
New Mexico State University
norriss@nmsu.edu

Frank Hodnett, *Professor*
New Mexico State University
fhodnett@nmsu.edu

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Introduction

As educators and students face continued uncertainty as a result of teaching and learning in virtual and hybrid environments, engaging activities to reinforce instruction becomes vital. “Agricultural education exists, in part, to provide the development of life skills for students to discover their career path and realize success through experiential learning” (Lundry et al., 2015, p. 44). To address the need for instruction supporting career preparation, the National FFA Organization designed Career Development Events (CDEs) to “develop individual college and career readiness skills” (National FFA Organization, 2017, p. iii). These events support secondary student development through hands-on applications; however, teaching key elements for these events presents unique challenges for students and teachers in an online or hybrid learning environment. McKim and Sorenson (2020) suggested that “skill-based lab instruction without a face-to-face component can be extremely difficult for SBAE [school-based agricultural education] teachers trying to get students to master certain skills” (p. 216). The horticulture produce CDE is valuable contest because the contest assesses a student’s ability to understand and identify standards of quality in produce and introduces students to the “economic importance of the horticulture industry” (New Mexico FFA Association, 2018, p. 1). As a result, the purpose of our innovative idea was to create an innovative remote activity to support classroom instruction for teaching horticulture produce.

According to the New Mexico FFA Association (2018), the purpose of the horticulture produce CDE is “to stimulate the study of and interest in the science of growing, harvesting, storing, processing, and marketing of fruits, nuts, and vegetables through Agricultural Education [*sic*] curriculum” (para.1). The primary components of the contest are classes, math assessment and solution, and identification. While many components of the horticulture produce CDE can be delivered through online presentations and oral reasons, students still need exposure to identifying common produce listed on their respective state’s identification list, which has proven to be difficult in remote learning environments.

How it Works

To increase engagement and ignite student interest, we implemented a horticulture produce Bingo activity that challenged students to work with peers to identify common household produce items in an advanced agricultural education course at New Mexico State University. Bingo is “a game of chance played with cards having numbered squares corresponding to numbered balls drawn at random and won by covering five such squares in a row” (Merriam-Webster, 2021, para. 1). Rather than using pre-made Bingo cards, we adapted a Bingo grid using produce commonly found in most households rather than using numbers on the card. To reinforce identification skills, we also designed the Bingo card to only include pictures of unlabeled produce so students would have to use their deductive reasoning skills to identify the produce based on characteristics they observe from the photos. We included the following 24 produce items on the Bingo card with one free spot in the middle of the produce photos: almond, asparagus, avocado, banana, basil, bell pepper (any color), broccoli, cantaloupe, corn, gala apple, garlic, grapes (any color), kiwi, lemon, lime, onion, orange, oregano, pecan, pineapple, pistachio, raisin, raspberry, and strawberry.

After showing the Bingo card and linking the document in the Zoom chat, we placed students in breakout rooms of 3–4 people. Breakout rooms provide a collaborative environment for students to work together to complete a common task, such as a Bingo card (Vanderbilt University, 2020). We gave students 10–15 minutes to find as many of the produce items listed on the Bingo card as possible. As a team, students were encouraged to use their surroundings, such as their refrigerators or pantries, to find as many items on the card as possible. The goal of the game was to complete a “blackout” on the cards by finding and identifying the greatest number of produce items in their collective homes. We also added instructions to the bottom of the Bingo card to support clear direction as the students searched for produce.

Results to Date

After piloting the Bingo activity using Zoom, students provided positive feedback for the activity increasing engagement and competition in the lesson. A few students suggested providing access to the Bingo card via posting the document to the classroom’s learning management system, such as Canvas, Blackboard, or Google Classroom, rather than only sharing the Bingo card on the screen. One student asked for clearer verbal instructions regarding the expectation of each group when separated into breakout rooms. Some students also suggested possibly listing the names of the produce on the images on the card if the activity is taught as an introduction to horticulture produce lesson. We found that this activity engaged students’ competitive nature as they were given an incentive to complete as many items as possible as a team to complete with the class.

Advice to Others

Based on our pilot, we recommend educators provide clear instructions regarding the activity before sending students to breakout rooms. Because breakout rooms cater to participant-driven instruction, we also recommend instructors encourage students to take ownership in the peer-led activity. Some students may become confused about the title of the card reading Bingo, so we recommend updating the language on the card to read “Blackout.” Another piece of advice we encourage instructors to consider is the time limit. Because our pilot was designed for an introduction to horticulture produce lesson, we allowed 10–15 minutes; however, that time may need to be adjusted to match students’ experience and ensure students stay on task if they complete the assignment early. To use the activity more than once, we recommend modifying the Bingo card to include the names of the produce rather than only photos, or using different horticulture produce photos. We recommend varying the card to help students stay engaged in the activity and become familiar with different ways to identify produce. For students who may have a vision impairment, we recommend using a closed-captioning reader to read the name of the produce to the students so they can still help their teams search for the items.

Resources Needed

To complete this activity, students and instructors have minimal preparation. Educators will need have access to Zoom or some online video conferencing platform, such as Microsoft Teams, Skype, or Google Meet. We also recommend having access to a learning management system, such as Canvas or Blackboard to post the Bingo card where all the students are able to obtain a copy. In addition, because the Bingo card assessed the household produce students already had in their refrigerators or pantries, there should be no additional cost for produce specific to this activity.

References

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