



High School

National FFA Organization

Lesson HS.98

BRAINSTORMING SOLUTIONS

Unit. Stage Three of Development—DO

Problem Area. How Does the Vision Get Accomplished?

Precepts. A2 Focus on results.

National Standards. NL-ENG.K-12.7 — Evaluating Data — Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources to communicate their discoveries in ways that suit their purpose and audience.



Student Learning Objectives. As a result of this lesson, the student will ...

- 1 Define brainstorming.
- 2 Identify guidelines for effective brainstorming.
- 3 Identify benefits of effective brainstorming.
- 4 Identify possible barriers to effective brainstorming.



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Time. Instruction time for this lesson: 50 minutes.



Tools, Equipment, and Supplies

- ✓ Writing surface
- ✓ Five black 35mm film canister with a small object inside, such as chalk, marker caps, paper clip...
- ✓ Scrap paper
- ✓ Role cards from HS.98.AS.A for every group of six students
- ✓ HS.98.AS.A—one per student
- ✓ HS.98.Assess—one per student
- ✓ Poster paper, tag board, or construction paper



Key Terms. The following terms are presented in this lesson and appear in bold italics:

- ▶ Brainstorming



Interest Approach



In this interest approach, you are going to try to peak the students' curiosity. The small objects that are in the five black film canisters can be anything small, like a marker cap, chalk, a paper clip, or the same small object in all five containers.



There are five black 35mm film canisters here, each with a small object inside. The object may be the same in all five canisters, or it may be five different objects. The color does not allow you to see what the object is. In a moment, you will have a chance to examine the film canisters. Your challenge is to guess what is inside of each canister without opening it. You will have three minutes to guess what is in the canister. To accomplish this, we will work in groups.

Divide the class into five groups. Give each of the groups a film canister. Give them three minutes to guess what is in the canister.



What did your group conclude was in the canister. Why did you choose that object.

Call on each group to give you ideas, and reasons why they came up with those ideas.



At the beginning of this activity, you were given a specific problem of guessing what was inside the black film canister. What clues did you use to make your decision.

Give them a moment to share ideas. Suggested responses include: sound, weight, smell.



 Your groups used different reasoning tactics, such as sound, weight, and smell, to make assumptions about what was inside the canister. Your group came up with several ideas, and after further testing, you narrowed it down to one guess. That thinking process is what we will be discovering today. This process is a tremendous tool for coming up with fantastic ideas, new

and creative ways of doing things, and for getting a large group of people involved in the process. Take a moment now and open your film canisters to see what was really inside.

Pause and let them see. Collect materials. Share context for this lesson.

 Oftentimes the solutions we want-solutions to our personal goals, solutions to challenges teams face-are close. We can hear them, shake them, feel their weight, but we can't quite tell exactly what they are. We can't know the future, but if we use the best of our gifts-imagination-we can brainstorm ideas that lead us the solution we desire. Let's explore this idea of brainstorming.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1. Define brainstorming.

The first thing to do here is establish a sense of what students know about brainstorming.

 Take out a sheet of scrap paper, and, based on your understanding, define the word “brainstorming.” Use pictures, words or symbols to help your description

Give the students 30 seconds to define the word “brainstorming.” Call on students to share their response.

 Be prepared to share your definition of brainstorming when you are called on.

I. Brainstorming

A. **Brainstorming** is a process of collaborated thoughts or ideas relating to a certain topic or issue.

 Now that we have more understanding of what brainstorming means , let's discover how to do it effectively.

Objective 2. Identify guidelines for effective brainstorming.

 Some of you may remember the television hit show McGyver, where the star always found himself in a “worst case scenario,” and was able to use his ordinary items to make his way out of trouble. Or maybe you’ve seen the latest



James Bond movie, where the star uses handy little devices to save the country. The stars of the shows find themselves in a seemingly impossible situations and brainstorm creative solutions to save themselves, save the day, and sometimes save the world.

Imagine you are with McGyver or James Bond. They are trying to save a group of people, and have only an hour to do it. But there's a problem! They've forgotten how to brainstorm! Your group is panicky, and time is clicking away. They are depending on you. You need to answer the following: How do you brainstorm for solutions? What's important to remember?

Divide the class into groups of three or four.



You only have five minutes to save the group. Create the steps that McGyver or Bond will use to brainstorm the solution.

Keep in mind that everyone in the group has different experiences and can bring different ideas to the brainstorming session. You need to work quickly as a team. Go!

Start the timer to simulate the McGyver or James Bond situation, and allow the students five minutes to brainstorm.



When your group is called on, share a guideline for effective brainstorming your group came up with. We will write them on the board until we have developed a list of effective brainstorming guidelines we all agree on.

Suggested responses to guidelines for effective brainstorming include: being open-minded; respecting each other's suggestions; everyone should feel comfortable to participate; don't make any decisions until you've heard everyone's suggestions.

Review these with the class, and write them on a public writing surface. Add to the list any of these that have not been identified.

II. Guidelines for effective brainstorming include:

- A. Being open-minded.
- B. Respecting each other's suggestions; don't turn an idea down—record all ideas.
- C. A climate where everyone feels comfortable about participating. Listen to everyone's ideas before making a decision.
- E. One speaker at a time—no interrupting others.

Lead discussion for students to see application of these guidelines in group problem solving.



The world may not depend on the solutions created by the FFA chapter banquet committee, but they do face a problem: how to feed the 600 people that attend in less time? Imagine what the committee would look like if they didn't use the guidelines we just listed.



Pause and ask for responses.



Now, imagine what that same group would look like if they were the premier models of how brainstorming effectively.

Pause and ask for responses.



I don't know about you, but I'd rather be part of groups like the second one and not the first. When you show up as a team member knowing how to effectively brainstorm, you can help other make great things happen, and other recognize your contribution. Let's see what other benefit emerge from effective brainstorming.

Objective 3. Identify benefits of effective brainstorming.



This next section focuses on the excitement they've built so far. Now that they understand brainstorming, and know how to effectively do it, they will now apply it to a specific situation they are presented.



Being the superheroes you have been so far, you are now going to get another challenge. You will need to use all of your group's resources to do the next challenge. While you are working against the clock, remember the guidelines for effective brainstorming.

Have students switch into various groups of three to four to work with different people.



Working in your groups, and without leaving the classroom, here is your challenge. Your starting point is the front door of the school. Your group needs to come up with specific directions to get from the front door of the school to the front door of the state capitol in the quickest and cheapest means. Depict this on a sheet of scrap paper to map out your path. You will have 3 minutes to accomplish this challenge.

Provide time for students to complete task. Have them share results.

Have students capture the two benefits of brainstorming in their notes.

III. Brainstorming

- A. Develops creative solutions
- B. Saves time

Process the activity and lead into the application of benefits.



How did the mapping activity provide proof of these two benefits?

Elicit responses.



One of the tenets of we use when talking about leaders is that leadership is defined by influence. If you show up to a group and show them how they can develop creative solutions to their problems and save time, you'll demonstrate



Leadership, even if you are the newest member of the group. Besides, knowing how to brainstorm helps groups get more done with fewer resources and less time. That means they can use those resources to accomplish other goals. Brainstorming, though, isn't without its challenges. Let's examine those next.

Objective 4. Identify possible barriers to effective brainstorming.

Students receive a scenario where each has a different role to play in the brainstorming process.



Many times, there are several people in the group coming into the situation with different experiences. Not every instance is going to be with group members who know the guidelines for effective brainstorming. I'm sure we can all think of an instance when this was the case. To visually show this, we're going to get into groups of six.

Have the students get into groups of six; this will depend on the size of the class.



Each member of the group is going to get a note card that has a specific role. Do not show anyone else in your group what the role is. Each role is different. Once you have your roles, you will be given a challenge to perform as a group.

Each of the students in the group should be given a card that has one of the following roles on it. They are on HS.98.AS.A: daydream and don't listen to anything; disagree with everything that is said and act disgusted; don't say a word; remain talking the entire time and try to dominate the group members; question everything that everyone says; be yourself



The challenge is: list the 11 states that border Canada. You will have four minutes to complete the challenge.

Give the groups four minutes to complete the challenge. Using the Eyewitness News Moment, have the student who received the role card "be yourself" be the eyewitness news reporter for the group. Have the student report to the class on how the group performed with the challenge and why it was difficult.



The challenge you were given was made more difficult because of the roles each of you acted in the group. Based on this activity, let's brainstorm what we think are some possible barriers to effective brainstorming.

Write the responses on a public writing surface. Possible answers include: lack of communication; side conversations; pre-determined attitudes; shyness; not feeling comfortable about participating in the group; not understanding the subject being brainstormed.



How do each us, as leaders and team members, work to overcome these challenges?

Elicit answers.



 Do the potential benefits of brainstorming outweigh the possible barriers? Why?

Elicit answers.

 Over the next week, watch the groups you are in. Notice if the groups attempt to brainstorm or not. If so, discover if it is successful or not. And if not, watch to see why.

Review/Summary

Use the Cartographer Moment to have students create a map of the land of solutions where brainstorming is a new freeway being built. Challenge students to show on the map where points from today's lesson would appear on the road map. Have students share their results.

Application

►Extended Classroom Activity:

Have the group facilitate a brainstorming session. Have them write a reaction to how it went, and make suggestions on how to make it more effective.

►FFA Activity:

Explain how you can use these brainstorming tips to help plan activities for FFA week. Participate on a committee where brainstorming is used.

►SAE Activity:

Brainstorm possible SAE areas you could work with, or brainstorm ways your SAE team can increase profits or expand to other markets. Brainstorm ways in which you could present SAE information to get new members interested.

✓ Evaluation

Copy and handout HS.98.Assess.

Answers to Assessment:

1. Brainstorming is a process of collaborated thoughts or ideas relating to a certain topic or issue.
2. Guidelines for effective brainstorming include: being open-minded; respecting each other's suggestions; producing a climate where everyone feels comfortable about participating; and listening to everyone's ideas before making a decision.
3. Members being off task, members not listening, a group member dominating the problem, and not listening to other group members' ideas.
4. Provides the most effective way to solve a problem.



BRAINSTORMING SOLUTIONS

1. Define brainstorming.
2. List three guidelines for effective brainstorming.
3. Identify three barriers to effective brainstorming.
4. Why is brainstorming an effective tool to use to solve a problem.



HS.98.AS.A Name: _____

Daydream; don't listen to anything.

Disagree with everything that is said and act disgusted.

Don't say a word.

Remain talking the entire time and try to dominate the group members.

Question everything that everyone says.

Be yourself.

