



## Grade 9 Sample Lesson Plan: Unit 6 – BAC, What's it to me?

### SOLs

- 9.1.h Explain how alcohol and other drugs increase the risk of injury.

### Objectives/Goals

- The student will be able to understand drink size equivalents.
- The student will understand BAC levels, legal limits, and how quickly the body processes drinks

### Materials

- [BAC Handouts](#)
- [BAC Answer Key](#)
- [BAC Presentation](#)

### Procedure

- Alcohol Knowledge Pre-Quiz (first page in handout)
- Have the students complete this independently
- After they are all finished, go over the answers with them and let them grade their own
- Discuss what they knew, what they didn't know
- Explain Drink Size Equivalents and briefly go through them in the Slides
- Show the video that explains all different drinks
- After the video, explain what proof means using the Slides
- Explain the calculating drink totals worksheet and have the students complete it in groups of 4 with the people near them
- Go over the answers and Have them create their own scenario in groups
- All groups to share their scenarios with the class
- Show the BAC Youtube Video while the students complete their note sheet
- Go over the answers in the Slides and discuss them as a class
- Have the students flip to the Am I Safe to Drive page and complete it while the How much is too much? Youtube video is shown from the Slides
- Discuss what the students found interesting as a class
- Discuss what factors contributed to BAC

- Have the students flip to the BAC scenarios instructions page in their packet
  - Make sure the students can access the Celtic Kane BAC calculator
- Have the students complete the 4 scenarios and then create their own scenario
  - Go over the answers to each scenario and discuss
- Go over and discuss the scenarios that they created themselves

### **References**

- Melanie Lynch, M.Ed. North Allegheny School District.

### **Handout**

The next page includes a handout for the lesson. The handout is designed for print use only.

# B.A.C.



# Binge Drinking

NAME: \_\_\_\_\_

# ALCOHOL KNOWLEDGE

## PRE-QUIZ

1. How many ounces are in a standard size can of beer?
  - a. 8 ounces
  - b. 12 ounces
  - c. 16 ounces
  - d. 24 ounces
2. What is the legal driving limit for someone under 21 years old?
  - a. 0.00 BAC
  - b. 0.02 BAC
  - c. 0.08 BAC
  - d. 0.10 BAC
3. 12 ounces of wine is equal to 12 ounces of beer.
  - a. True
  - b. False
4. A red solo cup filled to the brim holds 12 ounces of liquid
  - a. True
  - b. False
5. Approximately, how many drinks can the body process per hour?
  - a. .5
  - b. 1
  - c. 2
  - d. 3
6. If a bottle of liquor is labeled "70 proof", that means it contains what percentage of alcohol?
  - a. 7%
  - b. 35%
  - c. 70%
  - d. 50%
7. What does BAC stand for?
  - a. Beer Alcohol Content
  - b. Blood Alcohol Content
  - c. Blood Alcohol Concentration
  - d. Blood Alcohol Class
8. What are the standard drink sizes?
  - a. 1.5 ounces liquor, 12 ounces beer, 5 ounces wine
  - b. 2 ounces liquor, 16 ounces beer, 12 ounces wine
  - c. 1 ounce liquor, 24 ounces beer, 10 ounces wine

# Standard Alcoholic Drink Sizes

## A Standard Drink



12 fl oz  
of beer

=



4-5 fl oz  
of wine

=



1.5 fl oz of  
80 proof liquor

# CALCULATING DRINK TOTALS

**DIRECTIONS:** Read the scenarios below. Then, using the standard drink sizes chart on the previous page, calculate how many standard drinks the person in the scenario would have consumed. Show your work.

**Scenario 1:** Jenny goes to a bonfire with her friends on Friday night. Before they go out she drinks a 25 ounce bottle of wine by herself. Then, at the party she drinks 3 bottles of bud light. How many standard drinks did Jenny have Friday night?

**Scenario 2:** Adam goes to a bar to watch the super bowl on Sunday night. While he is there he drinks 3 pints of miller lite and takes 3 shots of rum. How many standard drinks does Adam have?

**Scenario 3:** Mason goes to party at his friend's apartment and he hears that there is only going to be beer available which he hates. He empties a 16oz water bottle and fills it up with vodka. During the party he drinks the whole thing. How many standard drinks does Mason have at the party?

**Scenario 4:** Riley spends her Saturday night "pre-gaming" in her dorm and then going to a frat party with her friends. Before they leave she has 3 shots of tequila. At the frat she drinks 4 cups of red kool-aid flavored drink called "jungle juice". How many standard drinks does Riley consume throughout the night?

**Scenario 5 - CREATE YOUR OWN:** In the space below, create your own scenario that describes a person's night out. Give your individual a name, describe what their night consisted of, and a detailed description of every alcoholic beverage that they drank throughout the night. Be prepared to share your scenario with the class.



# BLOOD ALCOHOL CONCENTRATION VIDEO SHEET



A Blood Alcohol Concentration level of .10 means that the person has what percentage of alcohol in their blood?

Alcohol is metabolized at what rate?

BAC of .02 - .04: What are the effects?

BAC of .07 - .09: What are the effects?

BAC of .10 - .15: What are the effects?

BAC of .16 - .19: What are the effects?

BAC of .20 - .25: What are the effects?

BAC of .30- .40: What are the effects?

BAC of .40 and higher: What are the effects?

# AM I SAFE TO DRIVE?

Watch the News Report and complete the questions below:

What were three things that you found interesting while watching the news report:

1.

2.

3.

What were three factors that influenced the participant's BAC?

1.

2.

3.



# What Is My BAC???

1. Read the following scenarios.
2. After reading it, estimate what the person's BAC would be if they were to take a breathalyzer test.
3. Then, fill out the contributing factors for each scenario and enter the info into "Celtic Kane BAC Calculator" on your Chromebook. The URL is <http://celtickane.com/projects/blood-alcohol-content-bac-calculator/>.
4. Once you have entered all of the info for the scenario, press the calculate button and enter your new correct total and compare it to the estimate you made.
5. Answer the reflection questions that go along for each scenario.

# What Is My BAC???

**Scenario 1:** Tyler is the star quarterback on the high school football team. Standing 6'2" and weighing 200lbs he is being recruited by some big time college programs. Tyler is a social drinker and decides to go to a party after the game on Friday. He drinks a six pack of coors light and also has 3 shots of Fireball Whiskey over the course of 3.5 hours.

BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_

Sex: \_\_\_\_\_

Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive?

What symptoms might they be feeling at this BAC level?

What may have influenced them to drink?

# What Is My BAC???

**Scenario 2:** JoAnna finishes her workout at the gym and weighs herself afterward where she reaches her goal weight of 140lbs. Her favorite band is playing at the BJC this evening and she has tickets to go with her friends. She rarely ever drinks and considers herself a cheap date, but since it is a special occasion they start drinking at 6PM before the concert at her apartment. JoAnna drinks 4 Mike's Hard Lemonade bottles (12oz). She sneaks a water bottle with 12oz of Jack Daniels in the concert and finishes it by the end of the concert at midnight.

**BAC Estimate:** \_\_\_\_\_%

## Tolerance Factors

**Weight:** \_\_\_\_\_

**Sex:** \_\_\_\_\_

**Metabolic Rate:** \_\_\_\_\_

**Elapsed Time:** \_\_\_\_\_

## Consumed Alcohol

**Type:** \_\_\_\_\_ **Percent Alcohol:** \_\_\_\_\_ **Servings:** \_\_\_\_\_

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**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive?

What symptoms might they be feeling at this BAC level?

What may have influenced them to drink?

# What Is My BAC???

**Scenario 3:** Ben is the biggest partier among all his fraternity brothers. At just 145 lbs he can keep up with even the biggest guys in the frat. On Saturday, it is a nice day out so they wake up and start drinking at 11:00AM. Ben drinks a six pack of Natural Ice beer and then a 40oz bottle of Colt 45. Later on he switches to drinking Vladimir Vodka (40%) and takes 6 shots of it before stopping drinking to leave at 7:30 to go to the basketball game on campus.

**BAC Estimate:** \_\_\_\_\_%

## Tolerance Factors

**Weight:** \_\_\_\_\_

**Sex:** \_\_\_\_\_      **Metabolic Rate:** \_\_\_\_\_

**Elapsed Time:** \_\_\_\_\_

## Consumed Alcohol

**Type:** \_\_\_\_\_      **Percent Alcohol:** \_\_\_\_\_      **Servings:** \_\_\_\_\_

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**Type:** \_\_\_\_\_      **Percent Alcohol:** \_\_\_\_\_      **Servings:** \_\_\_\_\_

**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive?

What symptoms might they be feeling at this BAC level?

What may have influenced them to drink?

# What Is My BAC???

**Scenario 4:** David (168 pounds) is home alone for the weekend and is bored on Friday night and starts drinking his dad's alcohol even though he is usually only a social drinker. He finishes a 6 pack of Budweiser pints and two regular sized glasses of Barefoot Wine from 5:30-11:30. He gets hungry so he stops drinking to drive to McDonald's for something to eat. He figures it is ok since he has been drinking over a few hours now.

**BAC Estimate:** \_\_\_\_\_%

## Tolerance Factors

**Weight:** \_\_\_\_\_

**Sex:** \_\_\_\_\_      **Metabolic Rate:** \_\_\_\_\_

**Elapsed Time:** \_\_\_\_\_

## Consumed Alcohol

**Type:** \_\_\_\_\_      **Percent Alcohol:** \_\_\_\_\_      **Servings:** \_\_\_\_\_

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**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive?

What symptoms might they be feeling at this BAC level?

What may have influenced them to drink?

# What Is My BAC???

**Scenario 5:** Create your own scenario in the space below. Be sure you include all contributing factors in your scenario.

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BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_ Height \_\_\_\_\_

Sex: \_\_\_\_\_ Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive home?

What symptoms might they be feeling at this BAC level?

What may have influenced them to drink?

**B.A.C.  
Down From**



**Binge  
Drinking**

# ALCOHOL KNOWLEDGE PRE-QUIZ

1. How many ounces are in a standard size can of beer?
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  - d. 24 ounces
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  - b. 0.02 BAC
  - c. 0.08 BAC
  - d. 0.10 BAC
3. 12 ounces of wine is equal to 12 ounces of beer.
  - a. True
  - b. False**
4. A red solo cup filled to the brim holds 12 ounces of liquid.
  - a. True
  - b. False**
5. Approximately, how many drinks can the body process per hour?
  - a. .5
  - b. 1**
  - c. 2
  - d. 3
6. If a bottle of liquor is labeled "70 proof", that means it contains what percentage of alcohol?
  - a. 7%
  - b. 35%**
  - c. 70%
  - d. 50%
7. What does BAC stand for?
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  - c. 1 ounce liquor, 24 ounces beer, 10 ounces wine



# Standard Alcoholic Drink Sizes

## A Standard Drink



12 fl oz  
of beer

=



4-5 fl oz  
of wine

=



1.5 fl oz of  
80 proof liquor

# CALCULATING DRINK TOTALS

**DIRECTIONS:** Read the scenarios below. Then, using the standard drink sizes chart on the previous page, calculate how many standard drinks the person in the scenario would have consumed. Show your work.

**Scenario 1:** Jenny goes to a bonfire with her friends on Friday night. Before they go out she drinks a 25 ounce bottle of wine by herself. Then, at the party she drinks 3 bottles of bud light. How many standard drinks did Jenny have Friday night?

**8 drinks.**

**Scenario 2:** Adam goes to a bar to watch the super bowl on Sunday night. While he is there he drinks 3 pints of miller lite and takes 3 shots of rum. How many standard drinks does Adam have?

**7 drinks.**

**Scenario 3:** Mason goes to party at his friend's apartment and he hears that there is only going to be beer available which he hates. He empties a 16oz water bottle and fills it up with vodka. During the party he drinks the whole thing. How many standard drinks does Mason have at the party?

**10.67 drinks.**

**Scenario 4:** Riley spends her Saturday night "pre-gaming" in her dorm and then going to a frat party with her friends. Before they leave she has 3 shots of tequila. At the frat she drinks 4 cups of red kool-aid flavored drink called "jungle juice". How many standard drinks does Riley consume throughout the night?

**Unable to answer. Jungle juice alcohol content is unknown.**

**Scenario 5 - CREATE YOUR OWN:** In the space below, create your own scenario that describes a person's night out. Give your individual a name, describe what their night consisted of, and a detailed description of every alcoholic beverage that they drank throughout the night. Be prepared to share your scenario with the class.

# BLOOD ALCOHOL CONCENTRATION VIDEO NOTE SHEET

A Blood Alcohol Concentration level of .10 means that the person has what percentage of alcohol in their blood?

**Alcohol is metabolized at what rate?**

1 drink per hour

**BAC of .02 - .04: What are the effects?**

Slight buzz in head, feel more at ease

**BAC of .07 - .09: What are the effects?**

Vision, hearing, reaction time, and speech are impaired

Judgement also inhibited

Illegal to drive (if 21 and older)

**BAC of .10 - .15: What are the effects?**

Emotional responses are no longer regulated

Increased aggression

Decreased motor control

**BAC of .16 - .19: What are the effects?**

Intense nausea

All previous symptoms are increased

**BAC of .20 - .25: What are the effects?**

Dazed and confused

Standing and walking seems impossible

Pain signals inhibited

Vomiting

Memory blackouts

**BAC of .30- .40: What are the effects?**

Breathing, heart rate, blood pressure, and vomiting no longer regulated

Risk of choking on vomit = fatal

**BAC of .40 and higher: What are the effects?**

Alcohol has turned off all communication in the brain

Coma and death possible

# AM I SAFE TO DRIVE?

Watch the News Report and complete the questions below:

What were three things that you found interesting while watching the news report:

1.

2.

3.

What were three factors that influenced the participant's BAC?

1.

2.

3.

# What Is My BAC???

1. Read the following scenarios.
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5. Answer the reflection questions that go along for each scenario.

# What Is My BAC???

**Scenario 1:** Tyler is the star quarterback on the high school football team. Standing 6'2" and weighing 200lbs he is being recruited by some big time college programs. Tyler is a social drinker and decides to go to a party after the game on Friday. He drinks a six pack of coors light and also has 3 shots of Fireball Whiskey over the course of 3.5 hours.

BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_

Sex: \_\_\_\_\_ Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC:   113%**

Is it safe to drive?

No

What symptoms might they be feeling at this BAC level?

Emotional, aggression, decreased motor control

# What Is My BAC???

**Scenario 2:** JoAnna finishes her workout at the gym and weighs herself afterward where she reaches her goal weight of 140lbs. Her favorite band is playing at the BJC this evening and she has tickets to go with her friends. She rarely ever drinks and considers herself a cheap date, but since it is a special occasion they start drinking at 6PM before the concert at her apartment. JoAnna drinks 4 Mike's Hard Lemonade bottles (12oz). She sneaks a water bottle with 12oz of Jack Daniels in the concert and finishes it by the end of the concert at midnight.

BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_

Sex: \_\_\_\_\_ Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC: .375%**

Is it safe to drive?

No

What symptoms might they be feeling at this BAC level?

Breathing, heart rate, blood pressure, and vomiting no longer regulated

Risk of choking on vomit = fatal

# What Is My BAC???

**Scenario 3:** Ben is the biggest partier among all his fraternity brothers. At just 145 lbs he can keep up with even the biggest guys in the frat. On Saturday, it is a nice day out so they wake up and start drinking at 11:00AM. Ben drinks a six pack of Natural Ice beer and then a 40oz bottle of Colt 45. Later on he switches to drinking Vladimir Vodka (40%) and takes 6 shots of it before stopping drinking to leave at 7:30 to go to the basketball game on campus.

BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_

Sex: \_\_\_\_\_ Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC: .167%**

Is it safe to drive?

No

What symptoms might they be feeling at this BAC level?

Intense nausea

All previous symptoms are increased



# What Is My BAC???

**Scenario 4:** David (168 pounds) is home alone for the weekend and is bored on Friday night and starts drinking his dad's alcohol even though he is usually only a social drinker. He finishes a 6 pack of Budweiser pints and two regular sized glasses of Barefoot Wine from 5:30-11:30. He gets hungry so he stops drinking to drive to McDonald's for something to eat. He figures it is ok since he has been drinking over a few hours now.

**BAC Estimate:**\_\_\_\_\_%

## Tolerance Factors

**Weight:**\_\_\_\_\_

**Sex:**\_\_\_\_\_ **Metabolic Rate:**\_\_\_\_\_

**Elapsed Time:**\_\_\_\_\_

## Consumed Alcohol

**Type:**\_\_\_\_\_ **Percent Alcohol:**\_\_\_\_\_ **Servings:**\_\_\_\_\_

**Type:**\_\_\_\_\_ **Percent Alcohol:**\_\_\_\_\_ **Servings:**\_\_\_\_\_

**Type:**\_\_\_\_\_ **Percent Alcohol:**\_\_\_\_\_ **Servings:**\_\_\_\_\_

**ACTUAL BAC:** .14%

**Is it safe to drive?**

No

**What symptoms might they be feeling at this BAC level?**

Emotional, aggression, decreased motor control

# What Is My BAC???

**Scenario 5:** Create your own scenario in the space below. Be sure you include all contributing factors in your scenario.

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BAC Estimate: \_\_\_\_\_%

## Tolerance Factors

Weight: \_\_\_\_\_ Height \_\_\_\_\_

Sex: \_\_\_\_\_ Metabolic Rate: \_\_\_\_\_

Elapsed Time: \_\_\_\_\_

## Consumed Alcohol

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

Type: \_\_\_\_\_ Percent Alcohol: \_\_\_\_\_ Servings: \_\_\_\_\_

**ACTUAL BAC:** \_\_\_\_\_%

Is it safe to drive home?

What symptoms might they be feeling at this BAC level?