

ALCOHOL AND YOUR DEVELOPING HIPPOCAMPUS

HIPPOCAMPUS

Length: 30-40 minutes | Designed for 5th and 6th grade

Summary

This lesson is intended to teach students about the dangers of underage drinking by detailing the important functions of the hippocampus. This lesson highlights the value in preventive health in avoiding risk, and allows students to test their own memories and learn about various parts of the brain.

Objectives

- Identify the functions of the hippocampus
- Identify certain parts of the brain and their various functions
- Communicate the effect of alcohol on the hippocampus
- Comprehend concepts related to health promotion and prevention to enhance health



Vocabulary

- Hippocampus
- Limbic system
- Memory
- Retrieval



What you'll need

- Hippocampus Comprehension Questions [↗](#)
- Hippocampus Vocabulary Cards [↗](#)
- Brain diagram [↗](#)
- Fill-in-the-blank brain diagram [↗](#)
- Readworks: "Focus: How the Brain Works" (Free to register!) [↗](#)

Comprehension Questions

- What system is the hippocampus a part of?
- What is the primary job of the hippocampus?
- What happens when the hippocampus is impaired by alcohol?



For your next class...

How Alcohol Affects Your Hypothalamus [↗](#)

To learn more about teaching units on the impacts of underage drinking and peer pressure, see additional lessons from *Ask, Listen, Learn*

[See all lessons](#)

For more info head to [AskListenLearn.org](https://www.AskListenLearn.org)

Artwork created by Brandan "BMike" Odums.





- 1** Introduce the unit by playing the video, **“How Alcohol Affects Your Hippocampus”**. Have the “class neurotransmitter” (one student chosen at random) pass out the comprehension questions to all students (neurons).

2 minutes
- 2** When the video is over, have the students get into groups to discuss the questions.

3 minutes
- 3** Lead a discussion on the dangers of being unable to create new memories in terms of underage drinking (blackouts, getting lost, being unable to grasp new knowledge).

5 minutes
- 4** Activity: *Memory Storage*

10 minutes
- 5** Emphasize the importance of not engaging in drinking behaviors to protect your health, both physical and emotional. Have the students explore: kidshealth.org/en/teens/alcohol.html#

10 minutes
- 6** Lead a discussion on the brain parts - have a new “class neurotransmitter” pass out the brain diagram to all students. Read aloud the different names and functions of the brain and have the students repeat after you.

2 minutes

Hand out fill in the blank diagrams and have students fill in names and functions.

5 minutes
- 7** Activity: *Brain Scramble*
- 8** Have students read and answer the questions to the “Focus: How the Brain Works” individually.

10 minutes
- 9** Have new “class neurotransmitter” pass out the vocabulary cards. For homework, ask the students to rewrite definitions for the vocabulary in their own words, and draw a picture to help them remember.
- 10** Pass out index cards and ask students to write down two things they learned and one thing they would like to learn more about.

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Memory Storage Activity (10 minutes)

- Teams of 4 will have a set of index cards that have an experience written on them. Each card will be crumpled up into a ball.
- One teammate will be the “Hippo” and the other teammates will be the “Memory Makers.”
- There should be 3 bins, the “Emoji Bins,” that are labeled with emojis that correspond with happy, sad/angry, and neutral (similar to the bins in the video!)
- The Memory Makers will be on one end, the Hippo in the middle, and the Emoji Bins on the other end.
- The goal is for the Memory Makers to throw the experiences to the Hippo so he/she can unfold the card read the experience and place it into the correct Emoji Bin.

Round 1

- The Memory Makers will take turns throwing 1 experience to the Hippo at a time.
- If the experience is dropped, it is lost. Move on to the next experience.
- If the experience is caught, the Hippo will read the experience and decide which Emoji bin it should go in. The Hippo will drop the experience in the bin and get another experience until the time runs out or there are no more experiences.
- The team with the most experiences in the correct bins wins!

Round 2

- Same rules except for two changes. Reuse the same experiences.
- The Emoji Bin labels are removed and the bins are rearranged.
- All 3 Memory Makers must throw an experience at the same time every time the Hippo wants another experience.
- Any experiences that hit the floor are lost.

Brain Scramble (10 minutes)

- Have students in groups of 3-4 work together to fill in the brain parts and functions. Have students cut out pieces of their brain diagram, and hand the pieces back to the teacher.
- Students will hand their pieces to the teacher, who will then scramble every groups pieces and hand five random cut outs back to each group.
- Students will work in their groups to put them back together and find the matching pieces. Other groups may have their pieces, so they'll have to trade pieces with other groups to get a full brain!
- This activity tests their memory from earlier in the lesson and from previous units.



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