

Pioneer[®]

academics
magazine



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November 2016, Issue 2

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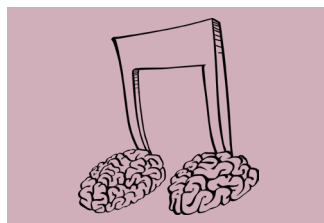
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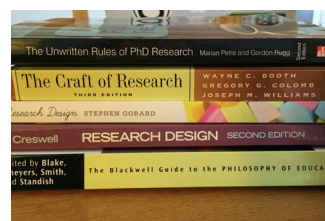
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Pioneer-Oberlin Partnership in the News

On October 11, Pioneer Academics and Oberlin College, a premier American liberal arts college, officially announced a partnership offering a new approach to online education.

Starting in 2016, Ohio-based Oberlin will grant course credit and provide an Oberlin transcript to Pioneer students upon their completion of the Pioneer Research Program. Additionally, Pioneer students will be granted access to Oberlin's library resources and scholastic databases, including the music library of Oberlin's world-renowned conservatory and the art library associated with the Art Department and the College's Allen Memorial Art Museum, one of the top collegiate art museums in the U.S.

The news was covered on several web portals, including Yahoo Finance, Inside Higher Ed, EconoTimes, MONEY@News, Stock Guru and 4-Traders. Inside Higher Ed published an in-depth article about the partnership with statements from Timothy E. Elgren, Dean of Oberlin's College of Arts and Sciences, and Pioneer Academics founder Matthew Jaskol.

Pioneer and Oberlin share a deep commitment to providing high-level educational opportunities to talented, intellectually motivated students of all backgrounds. Oberlin was the first college in the U.S. to adopt a policy admitting students of color, as well as the first to create a coeducational undergraduate program. Pioneer's fully online platform allows the Pioneer Research Program to draw students from around the world. Additionally, through Pioneer's generous need-based scholarship program, students of all backgrounds are able to participate in the program.



Voice of the Community

This space is dedicated to Pioneer Magazine readers' voices and opinions. In each edition we will publish one interesting question which readers can answer through our Facebook page or email. Collected answers will be published in the following edition of our bimonthly Magazine.

The November edition question is:

"Do you support the partnership between Pioneer and Oberlin to extend customized liberal arts education to high school students around the world?"

Send your answers to info@pioneeracademics.com or post them on our Facebook page at facebook.com/Pioneeracademics!



Admission Officer Dialogues: Pioneer Scholars Learn All about Top US Colleges and Universities

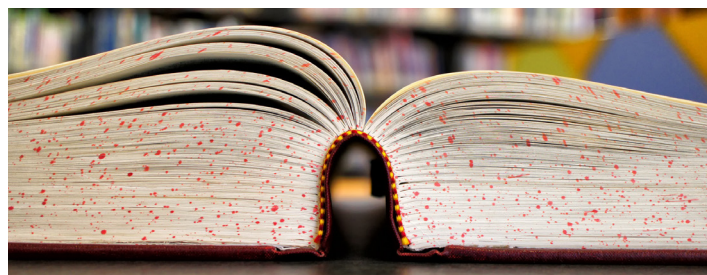
Pioneer Academics has been busy this fall organizing online sessions for Pioneer scholars with admission officers from top universities in the US. The Admission Officer (AO) Dialogues are a series of online meetings which help talented scholars better understand the options open to them so they can pursue the academic paths most suitable to their intellectual interests.

AO Dialogues allow Pioneer scholars around the world an opportunity to gain insight into top colleges and universities in the US without leaving their home. Pioneer Academics hopes that such international sessions can break down geographic boundaries to education.

After August sessions, during which Pioneer Academics hosted admission officers from University of Chicago and Columbia University, the AO Dialogues continued with representatives from Johns Hopkins University, UC - Berkeley, Carnegie Mellon University, Pomona College, Brown University and Yale University.

For each session, some 20 young scholars from all over the world were chosen to participate based on their academic performance, performance in Pioneer, and their interest in the universities involved. Selected scholars gained the opportunity to receive valuable information and advice, to briefly present their research work, and to ask questions.

Pioneer offers this opportunity so that our scholars can better understand the schools they are considering applying to and so that the schools can better understand the Pioneer scholars. College and university admissions departments do not endorse any program, organization or company. Any type of communication with admissions officers should not be construed as an endorsement of the communication organizer.



Pioneer Announces Nominees for Publication in the 2016 Pioneer Research Journal

Pioneer Academics has announced the nominees for publication in the 2016 Pioneer Research Journal! The nominated papers were produced by 10th and 11th grade high school students from around the world and are the culmination of their participation in the Pioneer Research Program.

The Journal is published each year to showcase the outstanding work of select young Pioneer scholars.

For many of the nominees, the paper represents an academic milestone. Despite their prior unfamiliarity with the academic research process, the students quickly learned how research is conducted at the undergraduate level and beyond. Under the guidance of their Pioneer professors, all distinguished educators at top American colleges and universities, the students mastered critical research skills, such as determining a research topic, locating sources, and forming cohesive, structured arguments to defend research results.

"Pioneer really taught me many skills, both academic and personal," said nominee Sophia Xu of China, whose paper provided a business model for app developers that could help create effective solutions for keeping diabetes in check. "The most important skills Pioneer taught me are the academic research skills. Pioneer showed me how to select information which was most important for my research paper. The second set of skills Pioneer taught me was on a more personal level – how to express my opinions and how to clearly communicate with professors."

"Something that surprised me is the amount of pride that I feel after having done the Pioneer Program," said nominee Rahil Bathwal of India, who worked up mathematical models to solve Mumbai's trash problems.

Each nominated paper will be evaluated by the Pioneer Research Journal Committee, a panel of distinguished professors from leading American undergraduate and graduate institutions, who will determine which papers are to be included in the Journal. The research papers under consideration represent the top 20% of papers written in the Pioneer Research Program's academic year of 2016.



How One Pioneer Alumna Discovered the Science of Music and the Art of Research

We all know the feeling of listening to our favorite songs. The tingles running down our spine, that feeling of complete immersion during our favorite parts, the emotions that stir up. But how do all of these physical and emotional reactions occur? And how to understand them?

Pioneer alumna Hannah Waters decided that for her research project at Pioneer, she wanted to find out the answers to these questions.

"I have always been interested in music and the effect it has on us. I played my clarinet in multiple bands for many years and never ceased to marvel at the chills I would get or the way that my heart would race during a particularly exhilarating piece."

Her Pioneer mentor **Prof. Jagmeet Kanwal** of Georgetown University turned out to be an expert on the brain and its ability to communicate through speech, music and nonverbal sounds. This enabled her to delve into the exact topic of her interest and start her Pioneer research project entitled **The Neuroscience of Music and Emotions** with plenty of assistance.

Hannah explained how Prof. Kanwal facilitated different discussions for his students based on what they were reading.

"I was actually rather surprised at how a college professor would be able to work at such a personal level with us. I began my experience a little nervously because I was curious about how

"I did not realise before the experience that truthfully research is so much more than the method used to complete it. It's about the potential and the realisation of a discovery or the impact of the breakthrough you're trying to get. And Pioneer is what brought me that conclusion."

Hannah, who is now studying neuroscience at Vanderbilt University in the US, said that her interest peaked when she discovered that she wanted to understand how our minds function. She admitted that she never expected that her classes in Pioneer would be able to cater to her interest both in music and neuroscience.

he would teach us the curriculum and how interactive he would be with his students. And it turned out that he gave out an extremely warm and approachable aura as soon as we began our classes."

Hannah also said she was very enthusiastic about communicating with students literally across the world.

"It wasn't really just a lesson-based or a textbook-based class. It was really interactive, and it was a great way to facilitate not only intellectual discussions for us as students, but also to get us to interact with each other to become a little bit closer as a class, and I really enjoyed that."

But after a fairly smooth start, she found herself facing an obstacle. Hannah discovered that finding the right materials for her Pioneer research was not an easy feat. Fortunately, she said, her professor was able to guide her efforts.

"It was definitely a reality check," Hannah said while describing the difficulties she faced. "It wasn't as stressful or as hard as I thought it would be; it was a learning experience, though. It showed me that in order to find what you're looking for, sometimes you cannot just take what you are given at face value; you have to be able to find little nuggets of information or the gold pieces in order to form your paper".

This, in turn, led her to another important realisation. She found out that research, just like music, is not about the destination, but, as the saying goes, it's about the journey.

the problem; it's also about what I can learn while solving the problem."

"I did not realise before the experience that truthfully research is so much more than the method used to complete it. It's about the potential and the realisation of a discovery or the impact of the breakthrough you're trying to get. And Pioneer is what brought me that conclusion."



Hannah Waters

After completing her Pioneer Project, Hannah applied to colleges and received a full tuition scholarship at Vanderbilt. She reports that the admissions personnel seemed impressed and surprised with the experience she was able to have through Pioneer. Hannah chose cognitive science, an inter-

Hannah advised upcoming Pioneer scholars that it is essential to communicate with their professors throughout the entirety of their project and to reach out for feedback and guidance. She also stressed that Pioneer scholars are expected to be independent enough to find some resources on their own. Her final advice was that students should choose a topic they are truly passionate about.

"If you're interested in your topic, the words will flow more freely, and the culminating paper will not feel like a chore."

She shared another reason why her Pioneer Research experience was unique. Hannah was the first scholar selected into Pioneer coming from the A Better Chance (ABC) program. The program is designed to give more academic opportunities for hard-working, talented students in the US who would not have the chance otherwise. Hannah was able to pave the way for other students in ABC to participate in the Pioneer Research Program after the two organisations formed a partnership.

"In terms of students that may come from backgrounds that are not as fortunate, I'd like to, with the influence I

"My Pioneer research experience was definitely the foundation of what I plan to continue once I get to Vanderbilt,"

"Honestly, before Pioneer I did not like the idea of research at all," said Hannah. "The thought of continuously searching for a solution that had no guarantee of appearing repelled my interest completely. However, after Pioneer I realised that research could be more than a stereotypical image of working in a white coat with gloves every day. And I even found the true value in that form of research as well. Research is not just a means to get to an end; it's about the discoveries on the way so that you can learn as you go towards a goal. This is basically how I see all problems that I look at now. It is not just looking for a way to solve

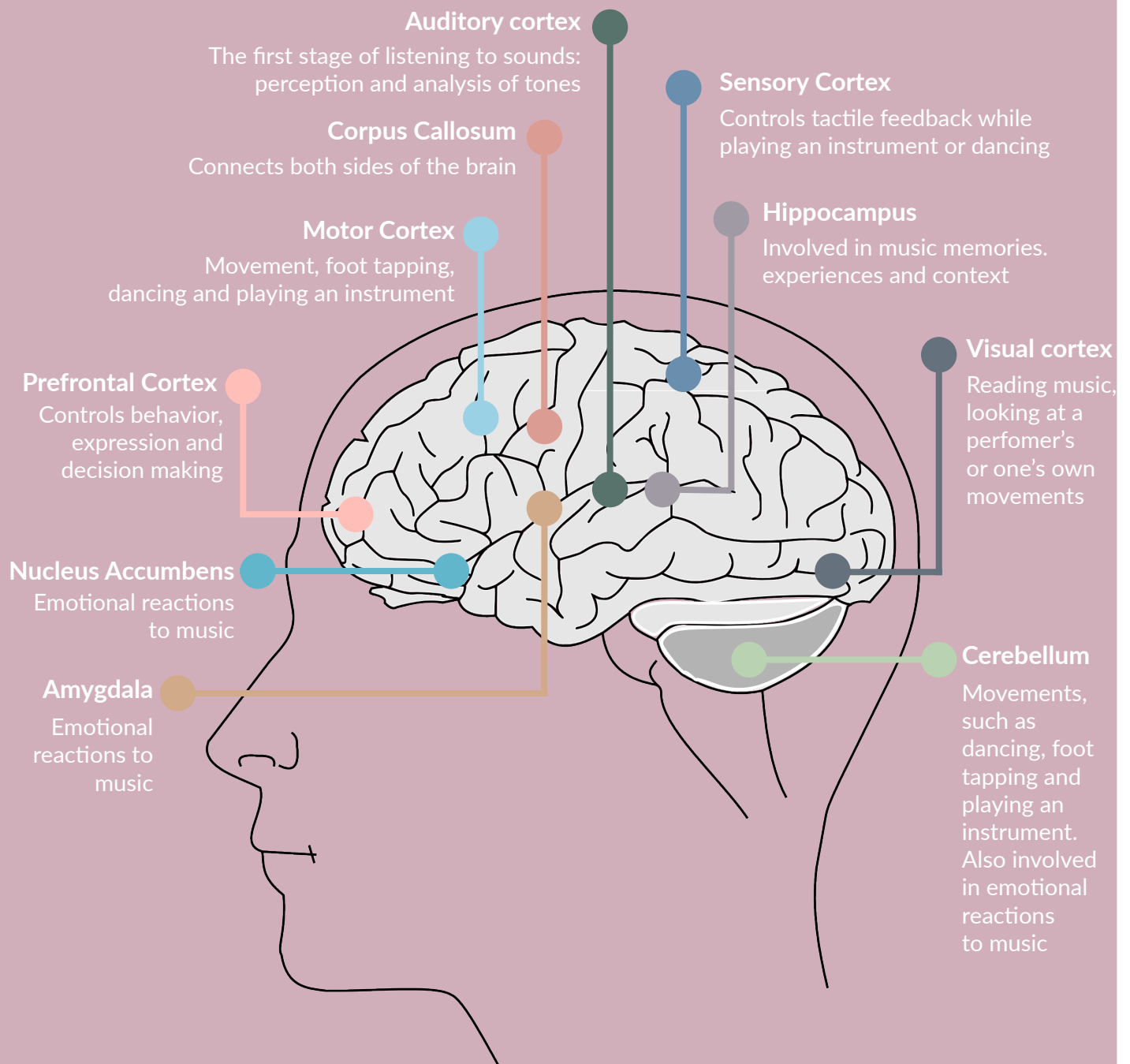
disciplinary science made up of five core areas: psychology, neuroscience, linguistics, anthropology and computer science.

"My Pioneer research experience was definitely the foundation of what I plan to continue once I get to Vanderbilt," said Hannah. "I hope to continue to focus on the research that I did in Pioneer or in other subject areas within that because I realized that, just like my major, the brain is multi-faceted, and I want to go into an area of study that would be as diverse as the brain that I was looking at."

hope to have one day, make an impact in those communities so that they can have access to different programs like Pioneer and other research, leadership, and travel opportunities," said Hannah.

"I believe that my ultimate vision is a network created by the scholars that participated in the program. To be truthful, we are brilliant minds, and we have contributions to make in this world. I think that it is important the world's upcoming best and brightest have a way to communicate and collaborate with each other. And I believe that if Pioneer created a way for us to continue to stay in contact with each other, that would be excellent."

Your Brain on Music



When we listen to music, it's processed by many different parts of our brain. The brain's ability to absorb and make sense of music is a highly complex process that scientists are still discovering.

Research shows that music can shape the brain in many ways: it can enhance our cognitive skills and even change the structure of the brain.

There are many theories about the origin of music. Some scientists believe it was invented to bring communities together through rituals, while others think it was a way for men to attract women.

According to Prof. Kanwal, bats can actually compose their own songs. He studies how the brain allows communication through speech, music and nonverbal sound which is bringing new insights into the evolutionary origins of speech, music and language.

Picture source: This is your brain on music: The science of a human obsession (Daniel J. Levitin)

How to Apply for the Pioneer Research Program in 10 Steps

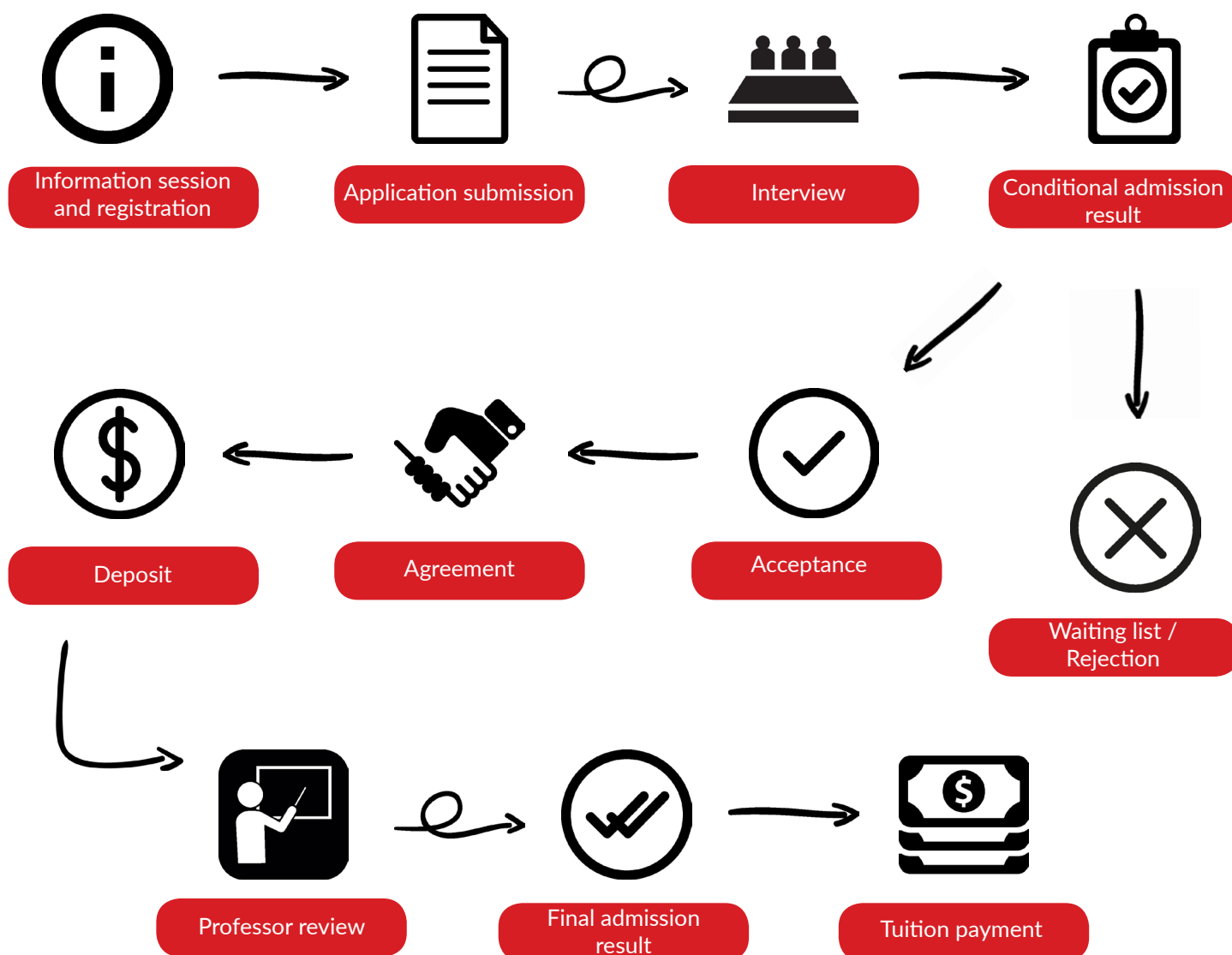
Want to gain training in and exposure to college-level research methods, analytical writing, critical thinking, and academic collaboration?

Explore a topic of your interest with guidance from an expert in the field?

Obtain a grade and an evaluation from an American college or university professor with elite credentials?

Write a college-level research paper that attests to your ability to perform research at the highest level?

Find out how you can apply for the **Pioneer Research program!**



Program duration and time commitment

The Pioneer Academics Research Program has two different scheduling configurations from which to choose: the spring term and the summer term. Both terms have the same number of meetings and content, however, the meeting times of the spring term are more flexible and the work intensity is lower due to the term's longer duration.

In either term, students meet with their professors for 10 sessions or more as the professor sees necessary. Time between meetings is at least one week.

Sign up for an information session to learn more about the Pioneer Research Program at this [link](#) or apply for the program [here](#). For more information about the application please contact info@pioneeracademics.com.

Did you know?



People worldwide spent the equivalent of 16, 000 years watching the "Gangnam Style" video on YouTube. With over two billion views, Gangnam Style is one of the most popular videos in the history of this streaming service. (Photo: Eva Rinaldi)



Your lipstick probably contains fish scales. Fish scales are used in cosmetics because they reflect light from many different angles and levels. They are also commonly used in nail polish since they are widely available and nontoxic. (Photo: wencor theo)



The world's largest tire manufacturer is LEGO. The company produces 318 million LEGO tires each year, more than any other tire company, including Bridgestone, Michelin, and Goodyear. (Photo: Rapholas)



Dolphins have individual names. Dolphins have a unique whistle that they often use in big group settings. New studies suggest that a dolphin will respond when it hears the sound of its own signature whistle.



Hugs make you more relaxed. A hug releases a hormone called oxytocin, which makes you feel relaxed, heals physical and mental wounds, and soothes body and mind.



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