



Your Predicting Brain

Materials

- Worksheet

Brainstorm

Ask the class, *What do you think the purpose of your brain is?* Accept responses and list them on the board.

Discuss

Those are great ideas, but the answer may surprise you. The entire purpose of your brain is to keep your body alive. Let's talk about how we think the brain works, based on the research from Dr. Lisa Feldman Barrett and her team at the Interdisciplinary Affective Science Lab at Northeastern University.

Dive in!

*From the moment the brain perceives sensations from the body, it begins to attempt to categorize this information. Upon birth, the brain begins to receive significantly more information, which it continues to categorize. These categories are called concepts. The entire purpose of the brain is to help maintain the body and keep it in balance called **allostasis** or body budget - not too cold, not too hot, not too hungry, not too thirsty, etc. The brain tries to anticipate the needs of the body. The information that the brain receives from the body is called **interoception**, which is information from the senses that the brain interprets into concepts. Language is an important part of concept formation, which represents past experiences. As more concepts are formed, the brain begins to predict based on the interoceptive information and the context or situation in which you find yourself. These concepts are how the brain makes meaning of all the sensations and input it receives. Sometimes, the prediction of meaning is an emotion like happy, sad, mad, etc.*

Emotions do not have markers or specific, recognizable, universal facial features. Take the experience of happy for instance. Sometimes we smile, sometimes we cry, sometimes we show nothing on our face to indicate to others how we feel. When we say we are happy, we are not experiencing ALL the kinds of happy that can be experienced. We are experiencing one example of happy, or an instance of the emotion happy. To say that happy is experienced in only one way is, by instinct, incorrect because we have felt "happy" in many different situations.



High School

The brain is predicting the sort of “happy” concept that it thinks is appropriate in this moment. And, it does it so rapidly, that we do not perceive this guessing game at work.

Activity

Distribute copies of the worksheet to each student. *Let’s work to understand the idea of a “concept”. Look at the chart and try to come up with as many examples listed in the concept column. Let’s do one together: The first example is “something to write with” - so we might say a pen, a pencil, a crayon, a marker, a lipstick, a stick and some sand, chalk etc. All these things might be grouped into our concept of “something to write with” but what other things can you think of? Accept students' responses (markers, etc.) and then encourage students to work in pairs to complete the chart. As time permits, call on student volunteers to share their responses.*

Reflect

To wrap up this lesson, ask the students to respond to the questions on the worksheet. *In thinking about how you came up with the examples for the various concepts in the chart above, where did you get your ideas? What had to occur in order for you to think about the different options that you listed?*



High School

Professional Development

Reflect on some of the ideas you have about emotions. Emotions are predictions that our brain makes from information from the body, the context you find yourself in, and your concepts. In thinking about your own emotion concepts, what past experiences have you had that have gone into making up your emotion concepts? List some of your memories of:

Happy times	
Sad times	
Proud times	
Disappointed times	

For Further Study:

[Cartoon Science \(How Emotions are Made\)](#)

[Ask How, Not Where \(How Emotions are Made\)](#)

[Core Systems \(How Emotions are Made\)](#)

[Making Emotion \(How Emotions are Made\)](#)

[Degeneracy \(How Emotions are Made\)](#)

[Emotion in the Media \(How Emotions are Made\)](#)

[Implications \(How Emotions are Made\)](#)

[Simulation \(How Emotions are Made\)](#)

[The Cascade \(How Emotions are Made\)](#)