



Meet Myg

Lesson Plan



Target Concepts

- The brain has a full-time alarm system that is constantly looking out for potential threats.
- Perceived threats trigger a *fight/flight/freeze impulse*. This impulse is called a *Myg Moment*.
- The *fight/flight/freeze survival instinct* is not always helpful. For this reason it is important to recognize this impulse for what it is, in order to choose whether following it will be helpful or harmful.

Background Information

- The *amygdala* is an almond-shaped cluster of neurons located within the limbic system, which is activated by fearful stimuli.
- When the *amygdala* is activated, it blocks information from going to the higher-order thinking areas of the brain and initiates the reactionary survival instinct called *fight, flight, or freeze*.
- The *fight, flight, freeze survival instinct* has helped keep animals (and humans) alive throughout history by helping them react quickly to avoid things that appear threatening.

Review

This review activity is designed to activate students' learning from the previous lesson. The student is asked to review what he/she remembers about seeking and avoiding.

Choose from the following discussion points to guide your review:

- Choose an animal and think/talk about what it seeks and why. Then think/talk about what it avoids, and why.
- Describe a situation when your animal would simultaneously experience both seek and avoid urges, which one wins out, and why.
- Describe a situation when *you* simultaneously experience seek and avoid urges. Which one wins out, and why?

Primer

This primer activity is designed to prepare the student for the lesson by activating known information to scaffold new learning. The student is asked to consider various alarm systems and their purposes.

The following script is intended to provide a general guide for how you may choose to lead this activity:

- "Today we'll be talking about the brain's alarm system."
- "What types of alarm systems do you know about? How does X alarm work? How does X help things stay safe? What would happen if X wasn't working?"

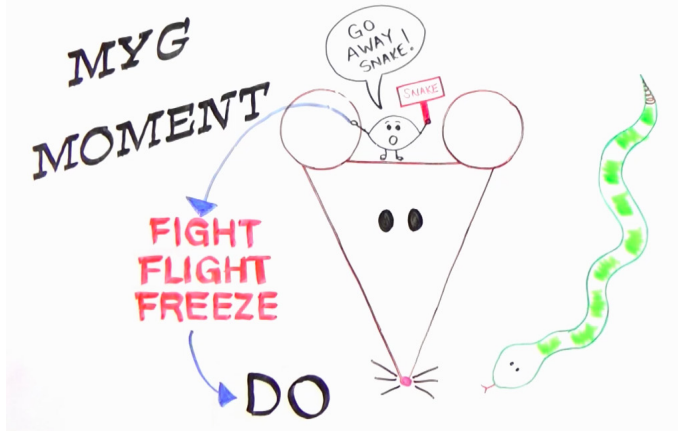
Provide the "Alarm Systems" primer worksheet (choose from Upper Elementary Worksheet or Middle/High School Worksheet) for the student to discuss/complete.



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Watch Video: Meet Myg



Background Information on Fear as a Super Power:

Our bodies produce adrenaline in response to threatening situations to prepare the body for vigorous and/or sudden action. By redistributing blood to the muscles, adrenaline can give people superhuman strength when they need it to survive a stressful situation.

For more information:

<http://entertainment.how-stuffworks.com/arts/circus-arts/adrenaline-strength1.htm>

Concept One Discussion Points:

The brain has a full-time alarm system that is constantly looking out for potential threats.

- What gives Mr. Mouse a Myg Moment? What might give other animals Myg Moments?
- How does a Myg Moment help Mr. Mouse, or other animals, to stay alive?
- What would happen if the brain didn't perceive fear or threats?
- Discuss the idea of "fear as a superpower" (i.e., the beneficial effects of adrenaline on your body).
 - For more mature students, this can lead a discussion about lobotomies and medical case studies of animals and people who have had their amygdalae removed.
 - For more mature students, you can introduce the relationship between an overactive amygdala and anxiety.



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Concept Two Discussion Points:

Perceived threats *trigger a fight/flight/freeze impulse*. This impulse is called a *Myg Moment*.

- Myg Moments can lead to three different kinds of reactions: fight, flight, or freeze. Myg generates these impulses with the hope that the scary or threatening thing goes away.
 - Talk about animals that typically have primary fight reactions, primary flight reactions, and primary freeze reactions.
- Animals and humans both have amygdalae, and therefore both have Myg Moments. The fight, flight, freeze survival instinct has helped keep animals (and humans) alive throughout history by helping them react quickly to avoid things that appear threatening.
- What are common situations/triggers for human Myg Moments? What does fight/flight/freeze look like for a human versus an animal?
 - Common *fight* reactions for humans include yelling, hitting and arguing.
 - Common *flight* reactions for humans include procrastinating and engaging in off-task behaviors.
 - Common *freeze* reactions for humans include drawing a blank and refusing to participate in an activity.
- Help the student identify his/her own fight/flight/freeze reactions: what do they look like?
- Sometimes you can have multiple Myg Moment reactions in quick succession. Generate examples of when this happens and what it looks like (e.g., in a deer flight often follows freeze- it freezes and then immediately runs away, in a human flight might be followed by fight- an activity might start as procrastination/ distraction and then when it continues past a request for it to stop it becomes fight).

Concept Three Discussion Points:

The *fight/flight/freeze survival instinct* is not always helpful. For this reason it is important to recognize this impulse for what it is, in order to choose whether following it will be helpful or harmful.

- Myg Moment triggers can be anticipated (they are often patterned).
 - Help the student identify any situations that commonly lead to a Myg Moment for them.
 - Describe the likely outcome of each Myg Moment reaction: fight, flight, and freeze. Do any of them make the situation better or worse?