



# 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*.
- Animals and humans both have *amygdalae*, and therefore both have *Myg Moments*.

## Lesson Preparation

- ✓ Read and/or review the video, script, lesson plan, and handouts
- ✓ Print “Alarm Systems” primer worksheet (one per student/pair/group)
- ✓ Print “Myg Moment” worksheet (one per student)
- ✓ (Optional) print “Animal Myg Moment” worksheet (one per student)
- ✓ Print “Home Letter” and “Meet Myg Book” (one per student)

## **Review**

This review activity is designed to activate students’ learning from the previous lesson. Students are asked to choose an animal and consider what it seeks/avoids and why.

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

- “Before we begin our new Brain Talk lesson, let’s review what we remember about seeking and avoiding.”
- [Individually, in pairs, or in small groups] “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.”
- “Who would like to share about their animal?” (class discussion to follow).

## **Primer**

This primer activity is designed to prepare students for the lesson by activating known information to scaffold new learning. Students are 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:

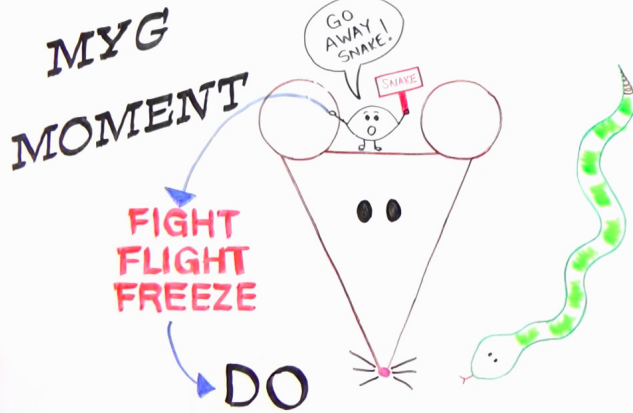
- “Today we’ll be talking about the brain’s alarm system.”
- “What types of alarm systems do you know about? How does X alarm work? How does X help things stay safe? What would happen if X wasn’t working?”

Provide the “Alarm Systems” primer worksheet for students to discuss/complete [Individually, in pairs, or in groups].



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## Watch Video: Meet Myg



## Guided Instruction

### Discussion Points:

- What gives Mr. Mouse a Myg Moment impulse?
- Myg Moments can lead to three different kinds of reactions: fight, flight, or freeze. Myg creates these reactions with the hope that the scary/threatening thing goes away.
  - Talk about animals that typically have fight reactions.
  - Talk about animals that typically have flight reactions.
  - Talk about animals that typically have freeze reactions.
  - Humans have Myg Moments too. What are common situations/triggers for human Myg Moments?
  - Although alarms are helpful by alerting us to danger, they can become problematic when they are overactive (e.g., overly sensitive smoke detector, overly sensitive car alarm, etc.). What might happen if the brain's Myg is overactive?

### Activity

- "Myg Moment" Worksheet

### Additional Activity

- "Animal Myg Moment" Worksheet

## 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.
- However, for humans, this 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.
- 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.



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## Teacher Notes

- Often, animals and humans engage in fight, flight, and/or freeze in quick succession rather than only experiencing one per event (e.g., a deer initially freezes, and then runs).
- Although Myg in the human brain is part of a future lesson, look for opportunities to help students connect this lesson to their own lives by identifying school-based activities that create Myg Moments for them (e.g., tests, competitive sports, etc.).

## Taking it Further

- Students can create a Myg-on-a-stick puppets by drawing and cutting out their own Myg and gluing it to a popsicle stick. Use your Myg-on-a-stick to notify others of Myg Moments.
- Think of a situation that would give you a Myg Moment. Describe the likely outcome of each Myg Moment reaction: fight, flight, and freeze. Do any of them make the situation better or worse? Use provided Middle/High School worksheet: "My Myg Moment".