

Study Guide – Texas 4-H Entomology ID Contest
Mantodea

1. Review the Mantodea YouTube video for your age level at the Bexar Entomology page.
2. Follow along with your 4-H Entomology Study Guide
(<https://entomology.tamu.edu/extension/youth/4-h/4h-contest/>)
3. Review the definitions for the key words for Mantodea.
4. Read the Mantodea Facts
5. Answer the study guide questions
6. Quiz yourself to identify the species of Mantodea and if they are a pest/beneficial/inconsequential and where they are found in nature and/or their host.

Key Words to Know for Mantodea:

Sit and wait predator
Hemimetabolous
Chewing
Mandibulate
Beneficial
Raptorial
Ootheca

Mantodea Facts:

- Praying mantises are sit and wait predators, meaning they do not hunt for prey
- Praying mantises have triangle shaped heads and raptorial legs
- Praying mantises have an incomplete or hemimetabolous lifecycle
- Praying mantises are considered beneficial because they are predators but are not specific about what food they consume and may even eat other beneficial insects
- Praying mantis females lay egg cases called ootheca

Study Guide Questions:

How do praying mantises get their food?

What type of mouthparts do praying mantises have?

What is the lifecycle of a praying mantis?

What is an ootheca?

Study Guide – Texas 4-H Entomology ID Contest
Orthoptera

7. Review the Orthoptera YouTube video for your age level at the Bexar Entomology page.
8. Follow along with your 4-H Entomology Study Guide
(<https://entomology.tamu.edu/extension/youth/4-h/4h-contest/>)
9. Review the definitions for the key words for Orthoptera.
10. Read the Orthoptera Facts
11. Answer the study guide questions
12. Quiz yourself to identify the species of Orthoptera and if they are a pest/beneficial/inconsequential and where they are found in nature and/or their host.

Key Words to Know for Orthoptera:

Saltatorial
Mandibulate
Hemimetabolous
Omnivorous
Herbivorous

Orthoptera Facts:

- Orthoptera are hemimetabolous.
- Orthoptera are made up of grasshoppers, crickets and katydids.
- Katydids have stout/fat bodies and wings that mimic leaves.
- All Orthoptera are considered pests
- All Orthoptera have chewing or mandibulate mouthparts
- All Orthoptera have hind legs modified for jumping, called saltatorial.

Study Guide Questions:

Name the species of Orthoptera you are required to know based on your 4-H level.

Are crickets/grasshoppers/katydid beneficial?

Which species of Orthoptera has front legs modified for digging?

Which species of Orthoptera feed on leaves/plants?

What is the name for the type of legs Orthoptera have?

What is the name for the type of front legs mole crickets have?

Which species of grasshopper has a barb under their chin?

Junior Species (3): Differential grasshopper, long-horned grasshopper, field cricket

Intermediate & Senior Species (5): Banded winged grasshopper, differential grasshopper, long-horned grasshopper, field cricket, mole cricket, true katydid