* **Week 1 Learning Objectives**

Upon successful completion of this unit, you will be able to:

* + Name and identify the purpose of each of the three main insect body structures: head, thorax, abdomen on next quiz.
  + Compare and contrast insect leg types through the interactive video listed below.  
    - Apply your understanding of each leg type on next quiz by matching the leg type with the function as well as identify examples of insects with each leg type.
  + Compare and contrast insect circulatory and respiratory systems to your own by watching the insect circulatory system videos.  
    - After this module, you will be able to clearly identify the key differences between how insects circulate 'blood', and receive oxygen compared to how we, humans, do. You will identify these differences on the next quiz.
  + Identify the main sections of an insect digestive tract by watching the insect digestive tract video.
    - After watching the video, be prepared to identify key functions of each section on the next quiz.

**Step 1: Read Textbook, Article and Listen to Audio**

Read

* + textbook chapters 1, 6, and 7.
  + [Values and Perceptions (article)](http://www.insects.org/ced1/val_perc.html)1

This article is about the value and perceptions people have about insects, and how that impacts invertebrate conservation.

Listen

* + [Flight of the Bumblebee (audio)](https://www.youtube.com/watch?v=aYAJopwEYv8)2

This musical piece may be familiar to you. As mentioned in the article *Values and Perceptions*, 'Flight of the Bumblebee' by Rimsky-Korsakov.

**References**

* + Kellert, Steve, Dr. "Values and Perceptions." Insectsorg Values and Perceptions Comments. N.p., n.d. Web.
  + TheWickedNorth. "Flight Of The Bumblebee - Rimsky-Korsakov." YouTube. YouTube, 31 Aug. 2008. Web.

**Step 2: View Lecture Presentations**

[Chapter 6: External Anatomy of Insects (presentation)](https://connect.cpp.edu/chapter6new/)

**Step 3: View Interactive Presentation, Watch Videos, and Read Website**

[Insect Leg Types (interactive presentation)](https://connect.cpp.edu/insect_legs/)

You will be tested on information within this presentation. There is no audio for the presentation (yet!). What you will learn:

* + 4 main insect leg types
  + How these legs enable insects to perform certain functions
  + Examples of insects that utilize each leg type

[Insect Circulatory System (video)](https://www.amara.org/en/videos/Z9OVTJNBNQdA/info/6-insect-circulatory-system/)1 | [Transcript: Insect Circulatory System (docx)](https://blackboard.cpp.edu/bbcswebdav/pid-3386445-dt-content-rid-12774734_2/xid-12774734_2)

Within the video you will see a diagram of the circulatory system of a grasshopper. As you watch the presentation, consider these points:

* + What does an insect 'heart' look like?
  + What direction does the 'heart' pump the 'blood'?

[Human Circulatory System (video)](https://www.youtube.com/watch?v=_qmNCJxpsr0)4

Within the video you will see a diagram of the human circulatory system. As you watch the presentation, consider:

* + How is the circulatory system of insects different from your own?
  + How does oxygen enter the blood? Is this the same or different from what happens within insects?

[Insect Digestive and Excretory Systems (video)](https://www.amara.org/en/videos/VPqvuL9H2t44/info/7-insect-digestive-and-excretory-systems/)2| [Transcript: Insect Digestive and Excretory Systems (docx)](https://blackboard.cpp.edu/bbcswebdav/pid-3386445-dt-content-rid-12774735_2/xid-12774735_2)

Within the video you will see a diagram of the digestive system of a grasshopper. As you watch the video, consider these points:

* + How many main sections are within an insect digestive tract?
  + What are the names of each section?
  + Within which region of the digestive tract is where the absorption of nutrients takes place?
  + Which organ floats within, and filters the hempolymph (blood) much like our kidneys do to produce urine?

[What Insects See (website)](https://askabiologist.asu.edu/content/bugvision-hollywood-misconception)3

'See' through the eyes of insects!

**References**

* + Keeley, Larry. "6. Insect Circulatory System." YouTube. YouTube, 4 Sept. 2011. Web.
  + Keeley, Larry. "7. Insect Digestive and Excretory Systems." YouTube. YouTube, 4 Sept. 2011. Web.
  + "School of Life Sciences | Ask A Biologist." Insect Vision. N.p., n.d. Web.
  + GetSchooledNow CA. "Human Circulatory System." *YouTube*. YouTube, 15 Dec. 2013. Web. 05 Sept. 2016.

**Step 4: Post to Discussion Board**

Navigate to the Discussion Board using the link located in the **My Course** area in the left navigation menu. Post to the forum titled "Welcome: Self Introductions and Article Response."

Due date: See course calendar

**Step 5: Mark Your Calendar**

**Mandatory Field Trip and Assignment**

This course is categorized as an asynchronous local course, meaning students are expected to be within commuting distance to CPP. All course material, however, is delivered online independent of face-to-face or scheduled online conference style lecture meetings. As a requirement of this course, students will be required to attend a **mandatory insect-related event** during the quarter.

**Fall Quarter (2016) Mandatory Insect Fair Attendance:** Students will attend the Cal Poly Pomona annual Insect Fair and to experience 'bug culture' and document their experience in a written assignment.

* + **Insect Fair dates:** October 8-9, 2016
  + **Insect Fair Location:** Cal PolyPomona Farm Store  visit [event website](http://www.cpp.edu/~farmstore/Insect-Fair.shtml) for additional information such as location directions and admission prices.
  + **Assignment Information:** Students will find detailed assignment instructions for the Insect Fair attendance and written assignment within the Assignment tab on our course menu.
  + **Assignment Due Date:** See Course Calendar under Course Syllabus and Info tab.