



# Troy Science Summer Experience

Dates: July 29th-August 2nd, 2019
Students: Incoming 7th grade through incoming 9th graders

Week long program (5 - Day: Mon.-Fri.)

Cost: \$500/student

### Daily schedule:

• Morning Session: 8:00am - 12:00pm

• LUNCH (12pm - 12:30pm) Bring your own lunch

• Science Study Skills class: 12:30pm - 1:30pm

(Only for incoming 9th grade Troy students)

For more information and to be added to the contact list please send email to: jkirkpatrick@fjuhsd.org.

Visit www.thetroydifference.org for more information.

Need-based scholarships are available for students in free and reduced lunch program. 10% discount to siblings



## Troy Science Summer Experience July 29th-August 2nd, 2019

#### Classes

#### I. Field Biology Class

This class will explore the Tree of Life life by examining FIVE different fields science:



Entomology, Botany, Ornithology, Geology, and Fossils. Students will be introduced to the wide diversity of life starting with plants & insects, learn the art of collecting specimens, naming them

using a dichotomous key & field guides, and learning about the geographical distribution of various species. They will also learn how to critically examine a specimen identifying features and



key characteristics as they explore their interactions in nature. Finally, participants will learn

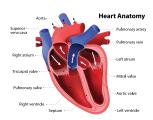


about extinct organisms by examining fossils and placing them in the geological time frames to capture a snapshot of the History of life on Farth

#### II. Anatomy & Physiology

This five day journey will allow students to explore the history and major advancements in

medicine, learn the art of dissection through an elaborate study of the anatomical structures and major systems of the Rat. Students will learn about sterile



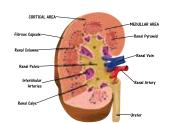
technique, how to properly use surgical instruments, do the various suturing techniques, and produce a "textbook" quality dissection. They will make cross sections of vital organs such as the heart, kidney, and stomach as they are introduced some of the physiological processes of the body.

#### They will also learn how to:

- Make cross sections of organs such as the heart, stomach, and kidney.
- Examine tissues using a dissecting microscope
- Document their work
- ID the major structures for the following systems: (Muscular, Respiratory, Circulatory, Digestive, Urinary, Reproductive, and Nervous)

#### At the Conclusion of the dissection students will:

- Have a complete record of their efforts and work
- Have learned how to work as a team
- Have some general knowledge of how the major organ systems work



Human kidney diagram

• Expanded their vocabulary base for future Anatomy classes

#### **III. Chemistry/Forensics/Food Science**

This one week program is designed to give students who are entering high school, an edge in their chemistry courses. The program will focus on chemistry topics that students find challenging,



and teaches critical thinking and problem solving skills. Chemistry topics to be covered will include atomic structure, the design of periodic table, formula writing and naming compounds, algebraic manipulation, dimensional analysis, Stoichiometry and basic problem solving in chemistry.

# IV. Engineering I - Simple Machines



Students will learn the mechanics of simple machines that will include the construction of mousetrap cars, bottle rockets, and other simple

machines. These projects will be tested at the end of the week and awards given for the best-most efficient car, rocket, etc.

#### Science Study Skills class

Only for incoming 9th grade Troy students

Time: 12:30pm - 1:30pm

Organization skills, Reading a Science Textbook, Vocab, Critical thinking Strategies, etc.

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