



## Vets In 3D

### Veterinary Medicine and 3D Print

### S.T.E.A.M. Workshops

#### 4 Main courses

#### Laboratory Animal Veterinarian w/ a 3D Twist—1 hour

Students in your organization learn about this specialty of Veterinary Medicine.

Lab Animal medicine involves use of animals in research, so Dr. Croom will teach them about the Veterinarian's oath and how that works within a research realm where animals may experience negative effects.

Students will decide at the start which Lab animal we will focus on—the rabbit, rat, or monkey, and this is what animal will be 3D printed for the students during the class.

Students will learn about and discuss the real world usage of 3D printing in the Lab animal specialty and within Veterinary medicine as a whole. They will also learn about using their entrepreneurial spirit to become small business owners as future Vets.

Each student earns a pre-printed Lab Animal necklace as a souvenir and teaching tool.

### **Small and Large Animal Veterinarian w/ a 3D Twist—1 hr.**

Students in your group learn about these very common careers within Veterinary Medicine.

Small Animal medicine is what about 80% of graduating Vets specialize in. Dogs, cats, household pets. Large Animal medicine is a specialty that lacks enough new vets entering. Often rural, these vets are responsible for a wide swath of customers across the countryside, traveling tens of miles per day.

Students will decide at the start whether we will focus on large or small animals—the cat or dog or the cow or horse. This animal will be printed for the students during the class.

Students will learn about and discuss the real world usage of 3D printing in Small and Large animal medicine. They will also learn about using their entrepreneurial spirit to become small business owners as future Vets.

Each student earns a pre-printed Small or Large Animal necklace as a souvenir and teaching tool.

### **Public Health Veterinarian w/ a 3D Twist—1hr**

Students learn about careers as a Public Health vet, usually a government job.

Public Health Vets usually work for USDA in one of two agencies, FSIS or APHIS. FSIS vets deal with meat and other food safety, especially livestock, including their humane handling. APHIS vets deal more with epidemiology and communicable diseases—like TB, Zika virus, and other outbreaks.

Students will decide at the start which type of Public health animal we will focus on—pig, cattle, sheep, and this animal will be 3D Printed during the class.

Students will learn about and discuss real world usage of 3D Printing technology within the public health field. They will also learn about using their entrepreneurial spirit to become small business owners as future Vets.

Each student earns a 3D printed Public Health animal necklace as a souvenir and teaching tool.

## **Zoo, Wildlife, and Exotic Veterinarians w/ a 3D Twist—1hr**

Students learn about careers for Exotic, Wildlife, and Zoo Veterinarians.

These types of Vets are pretty specialized in that experience within these competitive fields is usually a strong requirement. The kids who started young volunteering and working with exotic and wildlife animals will have a leg up. Vets who work for SeaWorld, the St. Louis Zoo, and other large public animal displays need to balance their ethics with the job requirements.

Students will decide at the start which type of Exotic animal we will focus on, and we will 3D Print during the class.

Students will learn about and discuss real world application of 3D Printing for these Veterinary specialties. They will also learn about using their entrepreneurial spirit to become small business owners as future Vets.

Each student earns a 3D Printed Exotic animal necklace as a souvenir and a teaching tool.

### **Stand Alone or Add-On Courses**

## **3D CAD Design Primer—1.5 hrs.**

A computer and internet access for each child is required for this course.

Students in your organization will learn how to navigate and design a future 3D Printed item using the online program, TinkerCad. They will be guided by Dr. Croom as she shows them on the overhead projector how easy and fun this design process is.

Once the students have created a design (or five), they won't want to quit. But they will have the opportunity to send their design to Dr. Croom, who will add their design to the master print list.

For organizations with their own 3D Printers, Dr. Croom will ensure the designs are sent to the appropriate leader in the group.

For organizations with no 3D Printer, Dr. Croom will 3D Print the student's designs and mail them out shortly.

## **Pre-Veterinary & Animal Sciences Career Tutorial—1hr.**

This course focuses on the Veterinary Career, with very little 3D Print focus. This is for students who are serious about working within Animal Science and/or Veterinary fields.

Dr. Croom will teach students in your organization about each of the specialties within Veterinary Medicine. Most people think that a Veterinarian only works in clinics with dogs and cats. There is so much more!

And your students will leave this Tutorial being able to speak on the myriad of opportunities within this exciting field.

We will discuss ongoing and future trends in VetMed, especially the fact that this is one field where WOMEN are the majority of students and graduates.

After chatting with Dr. Croom, who has experienced being an Army Vet, a Lab Animal Vet, a Public Health Vet, and currently a Veterinary small business owner, your students will walk away with a new and widening understanding of how diverse and exciting Veterinary Medicine truly is.