

Make Learning Come To Life Through Stop-Motion Animation

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RATIONALE

Dr. Leann Fiore teaches Anatomy and Physiology at Tulsa Community College. When faced with a sudden pivot to online learning in March 2020 due to the COVID pandemic, Leann had to get creative in finding a way for students to experience virtual specimen dissections and anatomy model exploration similar to that of a hands-on lab experience.

PEDAGOGICAL PROBLEM

Unable to find resources meeting her criteria, Leann began creating stop-motion animation videos for her classes and uploading them to YouTube under the channel name “Pop Up Biology.”

THE IDEA

Stop-motion animation brings objects and drawings to life as a fun alternative to traditional tutorial/presentation videos. Stop-motion has many educational uses such as animating static lab models, realistic tutorials, and immersive dissection videos. It can also serve as a creative outlet for students by assigning a stop-motion project in lieu of a slide presentation!

IMPACT ON STUDENTS

The videos have since been shared with instructors across the nation accumulating more than 45,000 views since March of 2020. Leann’s YouTube channel has been shared by the Tulsa Regional STEM Alliance and other outreach organizations. Leann also earned her “TCC Goody Award” presented by Tulsa Community College President Dr. Leigh Goodson.

THE NOMINATION

The 2020 COVID pandemic forced the nation’s colleges to move to online learning. This created a challenge for science classes that utilize the laboratory experience to facilitate “hands-on” learning. Traditional face-to-face laboratory opportunities have traditionally been key to comprehension and retention of information important for students following a STEM pathway. Leann was nominated for this award by her colleague because of her unique and creative solution to the challenges brought about by the pandemic. She has created 14 videos, each of which can take between six and ten hours to create. Her main Pop Up Biology page is linked below, as well as links to her 14 videos. The videos are amazing and provide a fun alternative to online learning. Go to Leann’s page and watch a couple of her videos. You’ll easily see why Leann is so deserving of this award.

PopUp Biology YouTube page



<https://www.youtube.com/channel/UC00Wtnp8alBIFp76omXd4JA>

Digestive System Fetal Pig Dissection Anatomy Compared to 3D Model

<https://www.youtube.com/watch?v=ecITKjbmQec>

Muscle Terms Explained: Movements, Origin and Insertion

<https://www.youtube.com/watch?v=W9xKU9SmcSw>

Hip and Leg Bone Anatomy of the Lower Appendicular Skeleton

<https://www.youtube.com/watch?v=mQpxAPHNAsI&t=24s>

Shoulder and Arm Bone Anatomy How to Tell Left and Right Bones of the Appendicular Skeleton

<https://www.youtube.com/watch?v=8Aa1TgTLnDY>

Skull Anatomy with Helpful Tips to Remember Bones!

https://www.youtube.com/watch?v=3Ocd_rpsu4

How To Use a Microscope Realistic Experience Tutorial

<https://www.youtube.com/watch?v=CQ3XDfunnRY&t=33s>

Anatomy Directions, Planes and Landmark Terminology on a 3D Model

<https://www.youtube.com/watch?v=-1K1DKn8tsI>

Reproductive System Anatomy Male and Female Fetal Pig Anatomy

<https://www.youtube.com/watch?v=a2HzFr-uCso>

Urinary (Renal) System Anatomy Male and Female Fetal Pig Dissection

https://www.youtube.com/watch?v=gB_wKcF9mOQ

Digestive System Fetal Pig Dissection Anatomy Compared to 3D Model

<https://www.youtube.com/watch?v=ecITKjbmQec>

Respiratory System Fetal Pig Dissection Anatomy Compared to 3D Model

<https://www.youtube.com/watch?v=dOjRX8HOSjM>

Sheep Heart Dissection VS Heart Model Anatomy 3D Anatomy

<https://www.youtube.com/watch?v=HYovdWTOmv8>

Blood Typing Test and Transfusion Reaction | Blood Groups Anatomy & Physiology

<https://www.youtube.com/watch?v=JPyzUIhbrbs>

Heart Anatomy and Pathway of Blood Through the Heart (3D Model Stop Motion Animation)

<https://www.youtube.com/watch?v=R24jSnhleas>