

THE ART & SCIENCE OF LUCASFILM

LUCASFILM ANIMATION: STAR WARS REBELS



CLASSROOM GUIDE

ABOUT
THE FILM ▶

PRESENTATION
TEAM ▶

DISCUSSION &
EXERCISES ▶

SUPPLEMENTAL
RESOURCES ▶

VFX TERMS ▶

LUCASFILM
OVERVIEW ▶

PRESENTATION OVERVIEW

Star Wars Rebels continues the epic tradition of the legendary *Star Wars* saga with all new exciting, action-packed adventures. This live presentation takes students behind the scenes with Executive Producer Dave Filoni, Animation Supervisor Keith Kellogg, Art Director Kilian Plunkett, and Line Producer Athena Portillo. The presenters will discuss the creation of the show, the technology and artistry of the animation, and the career paths that brought each of them to Lucasfilm.

Grades 6-12

Suggested Subject Areas: Arts/Media, Language Arts, Physics, Math, Computer Science, Career Advisory

THE ART & SCIENCE OF LUCASFILM

For the seventh consecutive year, the Film Society continues its successful collaboration with legendary film and entertainment company Lucasfilm. In this yearlong series, experienced professionals from the various Lucasfilm divisions share their knowledge—and their spectacular secrets—with Bay Area students in engaging and interactive multimedia presentations that demonstrate the intersection of art and science in the entertainment industry.

**SAN FRANCISCO
FILM SOCIETY.**


**LUCASFILM
ANIMATION**
A LUCASFILM COMPANY

ABOUT STAR WARS REBELS

Star Wars Rebels continues the epic tradition of the legendary *Star Wars* saga with all-new exciting, action-packed adventures. It is a dark time in the galaxy, as the evil Galactic Empire tightens its grip of power from world to world. As the series begins, Imperial forces have occupied a remote planet, ruling with an iron fist and ruining the lives of its people.

The clever and motley crew of the starship *Ghost* is amongst a select few who are brave enough to stand against the Empire. Together, this ragtag group will face threatening new villains, encounter colorful adversaries, embark on thrilling adventures and become heroes with the power to ignite a rebellion.

PRESENTER BIOS

Dave Filoni
Executive Producer



A diehard *Star Wars* fan, Dave Filoni realized a lifelong dream when he was selected by George Lucas to helm Lucasfilm Animation's *Star Wars: The Clone Wars* as Supervising Director. Exploring the many wartime tales and stories that take place between *Star Wars: Episode II Attack of the Clones* and *Star Wars: Episode III Revenge of the Sith*, the series surpassed the rare industry milestone of 100 episodes and was awarded an Emmy in 2013 for Outstanding Special Class Animated Program.

Now as Executive Producer, Filoni is leading the development of *Star Wars Rebels*, the highly anticipated new animated television series premiering fall of 2014.

Filoni joined Lucasfilm Animation fresh from another touchstone fantasy franchise – Nickelodeon's animated *Avatar: The Last Airbender*, for which he served as director, helping to further articulate the complex and dynamic world of the wildly popular series.

He began his animation career working as an assistant director for Film Roman's Emmy-winning *King of the Hill*, created by Mike Judge and Greg Daniels. While with Film Roman, Filoni also served as assistant director for *Mission Hill* and *The Oblongs*, both of which ran on the WB. From there, he moved to Walt Disney Television Animation, where he contributed in various capacities to series such as *Teamo Supremo*, *Kim Possible*, *Dave the Barbarian* and *Lilo & Stitch*.



PRESENTER BIOS

Athena Portillo Line Producer

Athena Portillo was an Emmy Award-winning Line Producer for *Star Wars: The Clone Wars* and is now Line Producer on *Star Wars Rebels*. She has been a part of the *Star Wars* universe since 1996 when she started at Lucasfilm as an intern in the Licensing department. From contributing stories to Lucasfilm's official fan magazine *Star Wars Insider* to a production role at Industrial Light & Magic and now as a Line Producer at Lucasfilm Animation, she has spent more than 18 years in the entertainment industry.

Kilian Plunkett Art Director

Kilian Plunkett was born in Dublin, Ireland and moved to the US after finding work with Dark Horse Comics. He illustrated comic books and covers for Marvel and DC before moving to San Francisco to work on *Star Wars: The Clone Wars* for Lucasfilm in 2005. He is currently the Art Director on *Star Wars Rebels*.

Keith Kellogg Animation Supervisor

Keith Kellogg is an animation professional with over 15 years of experience working in visual effects and animated films. He was a Senior and Lead Animator working on such films as *The Matrix Reloaded*, *The Matrix Revolutions*, *The Chronicles of Narnia*, and many others. He then worked for Robert Zemeckis as a Digital Performance Supervisor on his performance capture films. The past two years he was nominated for an Annie Award for his work on the two-time Emmy Award-winning show *Star Wars: The Clone Wars* and is the Animation Supervisor for *Star Wars Rebels*.



DISCUSSION AND EXERCISES

POST-PRESENTATION DISCUSSION

1. Did you enjoy this presentation? What were your favorite moments? What do you like best about *Star Wars Rebels*?
2. What did you know about computer animation or software development before attending this presentation? What did you learn?
3. Did you enjoy the animators and film professionals who presented? What more would you like to know about them? What are some of your favorite movies and shows that they have worked on? What did you find most interesting about their jobs and the work that they do?
4. Do you think that art direction would be a rewarding career? What about visual effects or computer animation? What about producing? Why or why not? Did this presentation change your interest level at all?
5. Why did Executive Producer Dave Filoni want to create *Star Wars Rebels*? What is special about Lucasfilm and Disney's relationship to the show?
6. What new technologies did the animators use in creating *Star Wars Rebels*? How does physics come into play in animation? Where did you see applications of math and science in the animation process?
7. Which was your favorite *Star Wars Rebels* character? How does each character's appearance reflect his or her personality? Why do you think the artists chose certain physical characteristics for the different characters? For example, why does Kanan have a ponytail? How does this connect his character with the *Star Wars* film series?
8. What relationship do the animators have to the script? In what areas does the script dictate their work and where do they have creative freedom? What personal touches do the animators add to the characters? What special details did they get to create for the character of Sabine?
9. What process do the animators go through to create new characters and new species? How do villains differ visually from heroes and heroines?
10. How are the droids in *Star Wars Rebels* different than the droids in the original *Star Wars* series? Why do you think the writers and animators wanted to update the droid personalities? What makes Chopper special among the droids?
11. Who was Ralph McQuarrie? How did the artists working on *Star Wars Rebels* draw on the Ralph McQuarrie designs for the original *Star Wars* films? What challenges did the artists face in making reference to the original designs?
12. What role did each of the presenters play in creating *Star Wars Rebels*? What surprised you about the teamwork and collaboration involved in creating an animated film? Which roles in the animation and film production processes did you find the most interesting?
13. What is a producer? What did you learn about the career path of a producer and what a producer contributes to a finished film? Do you think you would be interested in working as a producer at a place like Lucasfilm?
14. How did Executive Producer Dave Filoni begin his career? When did he first decide that he wanted to be an animator and a director? What steps did he take to realize his goals?

TRY COMPUTER ANIMATION FOR YOURSELF

Autodesk offers free versions of CGI software Maya and MotionBuilder to education community members. You may also view a demo version and see classroom examples of SAM Animation, a stop-frame system developed at Tufts University's Center for Engineering Education and Outreach, at iCreate to Educate. Softronic offers several free programs, including the popular Pivot stick figures animator. See the Supplemental Resources section for links.



SUPPLEMENTAL RESOURCES

Lucasfilm Animation home page	http://lucasfilm.com/animation
Star Wars Rebels on StarWars.com	http://www.starwars.com/tv-shows/star-wars-rebels
Star Wars Rebels on DisneyXD	http://disneyxd.disney.com/star-wars-rebels
Interview: Dave Filoni discusses Star Wars Rebels with /Film	http://www.slashfilm.com/star-wars-rebels-interview-dave-filoni/
Q&A with Dave Filoni	http://blog.sfgate.com/thebigevent/2014/10/13/qa-star-wars-rebels-executive-producer-dave-filoni/
Ralph McQuarrie's Star Wars portfolio	http://www.starwars.com/news/an-annotated-guide-to-the-star-wars-portfolio-by-ralph-mcquarrie
Star Wars Rebels on IMDB	http://www.imdb.com/title/tt2930604/
Free software downloads from Autodesk	http://www.autodesk.com/education/free-software/all
SAM animation software for kids	https://www.kaplanco.com/SAM/
iCreate to Educate animation software for kids	http://icreatetoeducate.com/



VFX TERMS

CHARACTER ANIMATION: A specialized area of the animation process, which involves bringing animated characters to life. Character Animators must create the illusion of thoughtfulness, emotion and personality by developing every character's appearance, body language and facial expressions from scratch. While an actor generally provides the vocals in an animated film performance, the character animator provides all else.

COMPOSITING: The combining of visual elements from separate sources into single images, often to create the illusion that all those elements are parts of the same scene or space.

CREATURE ANIMATION: Not unlike character animation, creature animation is the process of bringing animated beasts, aliens and animals to life.

FACIAL ANIMATION: The detailed process of animating characters' facial features to convey particular appearances, emotions, reactions, etc.

GREEN SCREEN: A special effects film technique involving filming actors against a green screen on which effects such as computerized graphics can be added later and integrated into a single sequence.

MOTION CAPTURE: A process by which patterns of movement are captured via a series of sensory nodes applied to various body/face parts of a live actor; these nodes record data about the spatial configuration of these nodes over time; simulation software then processes these data and applies them to a virtual actor on a computer.

MOTION CONTROL: A process that generally utilizes robotic camera mounts, enabling identically configured and timed camera movement on every take. This process facilitates digital compositing on shots that involve camera movement, as it eliminates the many variables of human camera operation.

PHOTOGRAMMETRY: The age-old practice of determining the geometric properties of objects based on photographic images.

ROTOSCOPING: An animation technique in which live-action video is traced and "painted" to create 2-D animation that mimics the live-action.

TELECINE: The process of transferring celluloid film footage into electronic formats.

VIRTUAL CINEMATOGRAPHY: The process of creating the illusion of camera movement by digitally compositing and sequencing background images that change position relative to live action footage.

VIRTUAL SET: A 3-D software module that collates and arranges a massive series of (background) images according to the spatial organization and geometry of a given scene setting such that live action green screen footage of actors can be dynamically combined with the virtual space.



LUCASFILM OVERVIEW

About Lucasfilm Ltd.

Lucasfilm Ltd., a wholly owned subsidiary of The Walt Disney Company, is a global leader in film, television and digital entertainment production. In addition to its motion-picture and television production, the company's activities include visual effects and audio post-production, cutting-edge digital animation and the management of the global merchandising activities for its entertainment properties including the legendary *STAR WARS* and *INDIANA JONES* franchises. Lucasfilm Ltd. is headquartered in northern California.

Industrial Light & Magic

Industrial Light & Magic, a division of Lucasfilm Ltd., has become synonymous with groundbreaking visual effects work and the company continues to be a recognized leader in the field. ILM, headquartered in San Francisco, also has operations in Singapore, Vancouver and London – the facilities work hand in hand to produce cutting edge visual effects work for feature films and themed entertainment. ILM has been awarded 15 Academy Awards® for Best Visual Effects and 26 Scientific and Technical Achievement Awards by the Academy of Motion Picture Arts and Sciences. To learn more, visit ILM online at <http://www.ilm.com>.

Lucasfilm Animation Lucasfilm Animation Ltd., a subsidiary of Lucasfilm Ltd., is a digital animation studio launched to produce the Emmy® - Winning *Star Wars: The Clone Wars* – the acclaimed computer-generated, animated series with a production quality unprecedented in TV animation. This fall the studio debuted the latest installment in the *Star Wars* cannon, *Star Wars Rebels*, to Disney and Disney XD. The studio also focuses its efforts on additional animated content, feature film animation, and other new intellectual property.

Skywalker Sound Skywalker Sound, a division of Lucasfilm Ltd, is one of the largest, most versatile full-service audio post-production companies in the industry. A dynamic force in the art of sound design, editing, and mixing for more than 25 years, its work has been honored with 18 Academy Awards. Skywalker Sound has provided sound services for more than half of the top 25 highest-grossing films of all time.

Lucas Licensing is responsible for licensing and merchandising activities relating to *Star Wars*, *Indiana Jones*, and other Lucasfilm entertainment properties. With over \$8 billion in worldwide consumer sales, Lucas Licensing manages a program that includes the bestselling boys' action toys of all time; merchandise sold in over 100 countries; and the prestigious *Star Wars* museum exhibitions, attended by more than 3.5 million visitors.

Lucas Online was founded in 1997 as a digital destination for Lucasfilm properties. It has pioneered entertainment on the web in areas such as video streaming, web documentaries, interactive content, insider access to Lucasfilm's creative teams and daily news updates. The current Lucas Online project is starwars.com.