



# Lily Topples the World

## STUDY GUIDE

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All SFFILM Education materials are developed in alignment with California educational standards for media literacy. SFFILM Education welcomes feedback and questions on all printed study materials.



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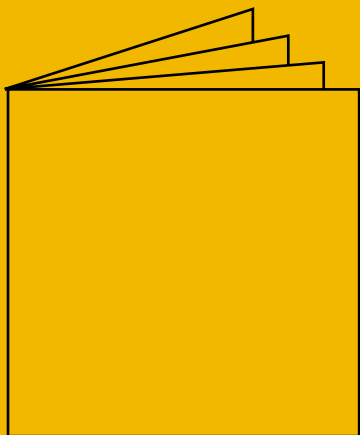






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## About the Film

**Lily Topples the World** follows 20 year old sensation Lily Hevesh – the world’s most acclaimed domino toppler and the only girl in her field – as she rises as an artist, role model, and young woman. Filmed for over 3 year across countless cities and featuring appearances by Jimmy Fallon, Katy Perry, Will Smith, YouTuber Casey Neistat, and a steady stream of Gen-Z creators, **Lily Topples the World** is a coming-of-age story cloaked within a unique portrait of an artist, a story of how passion and artistry can make dreams come true, and an unlikely American tale of a quiet Chinese adoptee who transforms into a global artistic force with over 1 billion YouTube views. From director Jeremy Workman (**The World Before Your Feet, Magical Universe**) and from executive producer Kelly Marie Tran (**Star Wars: The Last Jedi**), in her first film in a producing role.

DIRECTOR  
**Jeremy Workman**

(USA 2020) English,  
90 min

[lilytopplestheworld.com](http://lilytopplestheworld.com)

## Teaching the Film

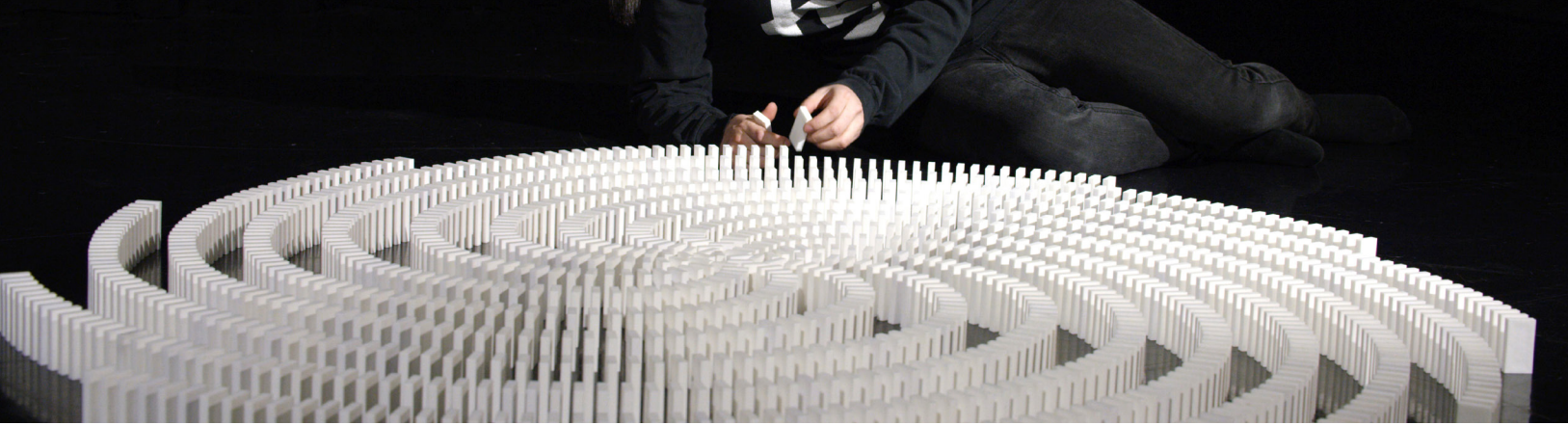
Watch **Lily Topples the World** and join us for a fun and educational Q&A to learn about the making of this visually stunning and moving coming of age story. The star of the documentary, Lily Hevesh, and the film’s director, Jeremy Workman, will be joining us virtually to talk about the process that went into making this film, and will answer questions from the audience. Taught in conjunction with this guide, the film will encourage students to learn about domino art and how it connects to STEAM topics, while also developing their social emotional skills, and broadening their understanding of career and college planning. This study guide is intended to flexibly support educators and families alike. Please feel free to adapt and abridge the content as necessary to meet your unique learning objectives and circumstances.

**Recommended for grades 4–12**

## Subject Areas

- **Visual Arts/Media**
- **Peer/Youth Issues**
- **Science, Technology, Engineering, Art, Math (STEAM)**
- **Social Emotional Development**





## About the Film



Jeremy Workman is a documentary filmmaker and award-winning editor. His newest documentary **Lily Topples The World** – about domino toppling sensation Lily Hevesh - will premiered at SXSW in March 2021. In 2018, he made the documentary **The World Before Your Feet** (Greenwich Entertainment) about Matt Green's mission to walk every street of New York City. Executive Produced by Jesse Eisenberg, **The World Before Your Feet** was released in over 75 US cities during 2018/2019 and played in theaters for nearly 6 months. It currently stands at 100% on Rotten Tomatoes. His documentary **Magical Universe** (IFC Films) about outsider artist Al Carbee was a Los Angeles Times and Village Voice Critic's Pick when it was released in theaters and on Netflix in 2014/2015. Additionally, Jeremy is well-known for his editing work, particularly for indie movie trailers. A two-time Emmy award nominee, Jeremy has edited over 100 indie movie trailers.



Lily Hevesh is a professional Domino Artist and YouTube creator. She designs, builds, and topples thousands of dominoes to create beautifully intricate chain reactions. Her work has been viewed over 1 billion times on YouTube ([www.youtube.com/user/Hevesh5](http://www.youtube.com/user/Hevesh5)) where she has over 3 million subscribers.



# Discussion Questions

## PRE-VIEWING TOPICS

**Lily Topples the World** highlights topics from media and visual arts to career planning to STEAM. This fun and compelling documentary tells a coming of age story about a college age domino artist and YouTuber who is brave enough to forge her own path in the world.

You might choose to prepare students for the film by asking some of the following questions to your students.

1. Do you know what a documentary is? (More information on documentaries on page 10).
2. Have any of you toppled dominoes or participated in another form of art or science that took patience and persistence? Was it difficult? How long did it take? What planning went into it?

You might choose to show students a Hevesh5 YouTube Video so they can understand ahead of time what she does, and get excited to see more! Here is [a compilation of some of her favorite builds](#) from 2019.

3. How many of you regularly watch YouTube videos? What kind of creators do you watch? What makes a good YouTube creator in your eyes?
4. Does anybody make YouTube videos? Is anyone interested in exploring either YouTube or filmmaking of some sort as a career?

## POST-VIEWING TOPICS

1. What are the major themes of the film? What story or stories is the filmmaker trying to tell?
2. If you could summarize the plot of Lily Topples the World in 2-3 sentences, how would you describe it?
3. Would you recommend this film to a friend or family member? Why or why not?
4. How was Lily different at the beginning, middle and end of the film? How did she change as a person? What did she learn? How did she grow?
5. Lily and her family discuss in the documentary how she was adopted from China as a baby. [In this interview](#) Lily goes into more detail about her feelings around growing up with white parents, and how going to college helped her connect with other Asian Americans and reconnect with her Chinese heritage. Can you relate to this part of Lily's story?
6. At one point early on in the film, the teenage boys who are also domino artists talk about how Lily is the only profession domino artist who is a girl. One of the teen boys says that before the first in person domino artist meet up in the US in 2012, they all assumed that all domino artist were "teenage guys." Why do you think they made this assumption? Do you think the assumption is fair? How do you think those kinds of assumptions affect Lily?
7. [In this video interview](#) produced by WIRED, Lily discusses her process for creating her domino art. When discussing what happens when she accidentally knocks over projects or situations where her tricks don't work, she says, "As a domino builder you have to learn to get through fails and just try to figure out what failed and how to improve it and get better". Are there any activities you partake in that require a lot of patience and concentration? What do you tell yourself when you make mistakes while doing those activities? Do you use mistakes as a way to improve your skills like Lily? Do you think this sort of mindset is helpful at mastering a skill?
8. Lily says that her formula for being
9. a great domino artist is "patience, perseverance, creativity, and time". What is an activity that you devote your patience, perseverance, creativity and time to? Why do you commit yourself to this activity?
10. Did you know that YouTubing can be a life-long career? Do you think making YouTube videos would be a fun job? Why or why not?
11. If you were to create a YouTube channel what would it be about? Do you have a passion you would like to share with the world like Lily?





# Activities

## Learn from Hevesh5 Herself

Lily has a really impressive collection of domino videos going back over 11 years! She has expanded her YouTube footprint from 1 to 4 channels, each with different kinds of content. Her channel, [H5 Domino Community](#), has tons of [tutorials](#) on how to get started with dominoes and enhance your skills! Spend some time watching Lily's tutorials and community centered videos and see if you find the inspiration to try domino art yourself!

## The Incredible Science Machine

Watch this video of [The Incredible Science Machine](#). The Incredible Science Machine is the largest chain reaction/Rube Goldberg Machine in the WORLD with 858 steps and 200,000 dominoes - the American Domino Record! 16 builders aged 11-50 worked 10 days (14 hours per day) to complete this chain reaction machine. The reaction goes on for over 15 minutes!

After watching the reaction with your class, ask them these questions:

1. What types of science did you see represented within the patterns and tricks of The Incredible Science Machine?
2. What do you think went into the prep, planning, and building of this enormous Rube Goldberg Machine?
3. What kind of science do you need to have an understanding of in order to build a Rube Goldberg Machine?

## Build a Rube Goldberg Machine

After watching the video about The Incredible Science Machine, take it a step further, and build your own Rube Goldberg Machine! Here is a [resource](#) for getting started. The great thing about Rube Goldberg Machine's is that you can use literally anything you have lying around your house or classroom. Get creative and have fun with it!

## Map Out Your World Record

Lily helped set the Guinness World Record for the most dominoes toppled in a single arrangement (over 76,000 dominoes). Visit the [Guinness World Records website](#) and look at some other records. List a few that are especially interesting to you and describe why you chose each one. Then try to come up with an idea for a new world record that you might want to break. Ask yourself these questions: After watching the reaction with your class, ask them these questions:

4. Why do you want to break this record?
5. What would make you the right person to break this record?
6. How would you make a plan and practice your skills?
7. How long do you think it would take you to break the record?

## THE DOMINO EFFECT

Lily says one physical phenomenon in particular is essential to a great domino setup. "Gravity is the main thing that makes my projects possible," she says. This force pulls a knocked-over domino toward Earth, sending it crashing into the next domino and setting off a chain reaction.

Stephen Morris, a physicist at the University of Toronto, agrees that gravity is key when it comes to dominoes. "When you pick up a domino and stand it upright, lifting against the pull of gravity, you store some potential energy in it," he says.

As a domino falls, energy is converted from one form to another. This change creates a chain reaction, causing domino after domino to topple. Standing a domino upright gives it potential energy, or stored energy based on its position. When the domino falls, much of its potential energy is converted to kinetic energy, or energy of motion.

Falling dominoes slide against one another, and their bottoms slip against the surface they're on. Both movements create friction. This slowing force comes into play whenever moving surfaces make contact. "Plastic dominoes on a polished floor can be very slippery. They're going to topple differently than wooden dominoes on a rougher surface," says Lily.

To account for such variations, Lily makes test versions of each section of an installation to make sure they work individually. Filming the tests in slow motion allows her to make precise corrections when something doesn't go right. Once each section works perfectly, she puts them all together. The biggest 3-D sections go up first. Then she adds flat arrangements and finally the lines of dominoes that connect all the sections together.

Source: [Scholastic ScienceWorld](#)



# College & Career Planning

## Dreams and Nightmares

On a blank sheet of paper, students should record their thoughts into four quadrants labeled: and see if you find the inspiration to try domino art yourself!

1. Dream Jobs and Careers
2. Dream Activities
3. Dream Destinations
4. Nightmares (the nightmares section may include jobs, destinations, and activities that would not interest them)

Allow students some time to write down their dreams and nightmares. Have students identify a couple of interests that they would like to have in their future job. Ask students which interests they might want to keep as hobbies. For example, in *Lily Topples the World*, Lily makes the decision to turn her hobby, domino art, into a career. She forges her own path, and creates space for herself in the world. She could have chosen to stay in college, and keep domino art as a hobby, but she took a chance on herself and made the decision to turn her hobby into a career. To help students get in the right head space, you can ask them what the advantages and disadvantages of her career choice were, and use her as an example.

Once all students have identified a few dreams and nightmares, give students the opportunity to share with the class. This can be a great community building activity as students might get to share something about themselves that not everyone in the class knows. It can also help students practice networking, as they might have similar dreams and nightmares as other people in the class.

## Take It a Step Further

Provide students the opportunity to showcase their talent by singing, writing a poem, creating a work of art, building something or demonstrate a lesson on a favorite subject or a dream job.

Ask students to interview one another about their dream career, and then have the interviewer share about their partner.

Host a “networking event” for students where they have a set of questions to ask each other about their dream jobs, lives, destinations, and nightmares. After the event, reflect with the class using these questions:

1. How can networking with people who share your interests help you make good educational and career choices?
2. How might a fun connection like a “favorite hobby” or “animal” help in your career development?
3. Can social media, like Instagram or Snapchat, help us network? If so, how? Can it hurt our networking opportunities?





# College & Career Planning

## The Skills and Interests Grid

Think of 10 things that you're good at, and write them down in a list. It does not matter if you like these things. You just have to be good at them. To figure out what you're good at ask yourself these questions:

1. Up to this point, what have been your favorite classes in school? List them specifically. Why have these been your favorites? What skills do those classes use?
2. What do you like to do for fun? Why? Be specific! Do you like any of them because you're good at them?
3. List the organized clubs or formal activities you belong to. Which are your favorites and why? What skills and abilities do these use?
4. Have you won any awards or competitions in any of your classes or for any of your activities? List them and explain what they were for – they might be for things you're good at.

From this list of 10 things you're good at, pick 5 of those things that you really like doing. If you're having a hard time distinguishing which things you like and which you don't like, then rank the items from 1 to 10 in order of interest and then write these 5 things down across the top of your Skills and Interests Grid.

Next, write a list of things you're interested in. These things need to be different from the first list you entered, and they don't have to be anything you've ever actually done, just topics or activities you think you find interesting. To help you think of things you're interested in ask yourself these questions:

1. Are there any other hobbies or interests you wish you had more time to pursue?
2. If you had 24 hours to do anything you wanted, what would you do?
3. What do you like spending your time on even if and when no one tells you should?

Add your list of 5 interests down the left side of the grid.

Finally, in each box at the intersection of a row and column, brainstorm a job or activity that involves those two things. For example, if the top of your column says "Basketball" and the intersecting row says "Videogames" you could write "Designing a basketball video game" in that box.

Once you're finished, you can use your Skills and Interests Grid as inspiration to help you set goals for college and career choices!

For more college planning activities, check out Blue Star's Teen Power College Planning Workbook.



# California Media Literacy Standards

According to the [California Department of Education](#), Media literacy is the ability to access, analyze, evaluate, and use media and to encompasses the foundational skills that lead to digital citizenship.

Digital citizenship is a diverse set of skills related to current technology and social media, including the norms of appropriate, responsible, and healthy behavior.

These literacies closely relate to information literacy: the ability to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.

California is now offering, at no cost to local schools, districts, or students, three online databases for use by every K–12 school and student in the state, with access starting at the beginning of the 2018–19 school year.

Online content from [Encyclopaedia Britannica](#), [ProQuest](#), and [TeachingBooks.net](#) will be available individually to all K–12 students in California, as well as all public schools in the state.

The following resources are ready-made curricula, usually consisting of scope and sequence learning outcomes and activities, for media and information literacy as well as digital citizenship:

1. [California MSLS](#)—K–12 information literacy outcomes.
2. [Assignment: Media Literacy](#)—K–12 history-social science, language arts, and health curricula to teach media literacy as a critical consumer.
3. [Critical Media Project](#)—High school media literacy video-based curriculum focusing on topics like age, class, disability, gender, race/ethnicity, religion, etc.
4. [International Society for Technology in Education Technology Standards](#)—Kindergarten through adult digital literacy outcomes.
5. [Common Sense Media](#)—K–12 digital citizenship curriculum, including PD

6. [Fairfield-Suisun Unified School District Digital Citizenship](#)—K–12 digital citizenship curriculum based on Common Sense Media.
7. [Teaching Tolerance Digital and Civic Literacy Skills](#)—K–12 specific history-social science digital citizenship framework with lessons.
8. [Be Internet Citizens](#)—High school digital citizenship curriculum.
9. [MediaWise: Navigating Digital Information](#)—Subject-neutral middle and high school 10-part video series by John Green

Find more media literacy resources on the [California Department of Education](#) website.

## COMMON CORE STATE STANDARDS

CCSS.ELA-LITERACY.SL.4-12.1  
 CCSS.ELA-LITERACY.SL.4-12.2  
 CCSS.ELA-LITERACY.SL.4-12.3  
 CCSS.ELA-LITERACY.RH.6-12.7

## NEXT GENERATION SCIENCE STANDARDS

4-5-PS3  
 3-5-ETS1  
 5-PS2  
 MS-PS3  
 MS-ETS1  
 HS-PS2  
 HS-PS3  
 HS Engineering Design





# Media Literacy Resources: Screening with Meaning

We live in a world where technology mediates a large portion of human interaction and the exchange of information. Every projected image, every word published on a page or a website, and every sound from a speaker reaches its audience through the medium, through the language of the device. The ability to parse the vast array of media messages is an essential skill for young people, particularly in a mainstream commercial culture that targets youth as a vulnerable, impressionable segment of the American marketplace. Most students already have a keen understanding of the languages different media use and the techniques they employ to inspire particular emotions or reactions, but they often lack the skill or awareness to fully deconstruct the messages they continuously receive. Analysis of a media message—or any piece of mass media content—can best be accomplished by first identifying its principal characteristics:

1. **Medium:** the physical means by which it is contained and/or delivered
2. **Author:** the person(s) responsible for its creation and dissemination
3. **Content:** the information, emotions, values or ideas it conveys
4. **Audience:** the target audience to whom it is delivered
5. **Purpose:** the objectives of its authors and the effects of its dissemination.

Students who can readily identify these five core characteristics will be equipped to understand the incentives at work behind media messages, as well as their potential consequences. Media literacy education empowers students to become responsible consumers, active citizens and critical thinkers.

## COMMON CORE STANDARDS

### MEDIUM

#### All Media Is Constructed.

- What is the message, how is it delivered and in what format?
- What technologies are used to present the message?
- What visual and auditory elements comprise the media content?
- What expectations do you bring to the content, given its medium and format?

### AUTHOR

#### All Media Is Constructed by Someone.

- Who is delivering the message?
- Who originally constructed the message?
- What expectations do you have of the content, given its author(s)?

### CONTENT

#### Media Is A Language For Information.

- What is the subject of the media message?
- What information, values, emotions or ideas are conveyed by the media content?
- What tools does the author employ to engage the viewer and evoke a response?
- To what extent did the content meet your expectations, given the format/author?

### AUDIENCE

#### All Media Messages Reach an Audience.

- Who receives the message?
- For whom is the message intended?
- What is the public reaction to the media content and/or its message?
- What is your reaction to the media content and/or its message?
- How might others perceive this message differently? Why?

### PURPOSE

#### All Media Messages Are Constructed for a Reason.

- Why was the message constructed?
- Who benefits from dissemination of the message? How?
- To what extent does the message achieve its purpose?
- What effect does the message have on the audience it reaches, if any?



# Documentary Filmmaking

A documentary is a film that has a goal to capture truth, fact, or reality as seen through the lens of the camera. There are many kinds of documentaries, and obviously not everyone's idea of truth is the same.

The Scottish filmmaker John Grierson coined the term "documentary" in 1926 to describe American filmmaker Robert Flaherty's romanticized culture studies, but nonfiction filmmaking dates back to the earliest motion picture reels.

The definition of documentary expanded as filmmakers experimented with technology and the goals of nonfiction. Avant-garde documentarians, like Dziga Vertov in the 1920s, believed that the mechanical eye of the camera gave a truer image of reality than the human eye and pointed his lens at newly industrialized cities. The international cinema vérité or observational movements of the 1960s attempted to remove authorship from the documentary. The observational cinema vérité filmmaker hovered like a "fly on the wall" watching the world without commentary.

Modern documentaries often seek to raise awareness about a social, environmental or political issue, guiding their audiences toward civic participation and activism. Even though they are nonfiction films, most modern documentaries structure their content around a traditional story arc, with a beginning, middle and end, as well as characters, and a conclusion, theme or thesis to impart to the audience.

Most documentary filmmakers begin their projects with an idea or an issue that they wish to explore more deeply. Through research and planning, they develop a comprehensive plan before they begin shooting.

While watching a documentary, it is important to remember the core concepts of media analysis:

1. Who made the film?
2. Who funded the film?
3. Why was the film produced?
4. What is the intended audience?

The nonfiction format can be deceptively subjective, as all filmmaking involves an inherent selection process: in the images that are shot, the music and narration that accompanies them and, most significantly, the way in which they are all edited together. Media literacy means always analyzing a documentary for its message and authorial intent.

## A BRIEF HISTORY OF THE DOCUMENTARY

**1895** The Lumiere brothers develop the first motion picture film reel, capturing brief unedited clips of life around them called 'actualities.'

**1900-1920** Travelogue or 'scenic' films become popular showcasing exoticized images from around the globe.

**1926** Dziga Vertov, with the Soviet Kino Pravda movement, released the experimental nonfiction film, *Man With A Movie Camera*.

**1939** John Grierson collaborated with the Canadian government to form the National Film Board of Canada, with the initial goal of creating Allied propaganda in the support of war.

**1960s** The 'cinema vérité' movement began in Europe, followed by the 'direct cinema' in the US. Portable cameras and sync sound allowed filmmakers to capture intimate footage with minimal intervention.

**1968** The Argentine film, *La Hora de los Hornos*, opened the door to activist cinema of the 1970s, using film as a tool to counter capitalist politics in Latin America.

**1988** Independent Television Service (ITVS) was founded.

**2000s** The widespread use of digital cameras and editing software made the documentary medium more affordable to independent filmmakers. The term 'doc-umentary' comes to encompass a wide range of nonfiction cinema.