



# Barnes Art Adventures—Grades 5–8

## STEAM Challenge

Tuesdays, 10–10:45 am & 1–1:45 pm ET

October through June

Free; reservations required

In our STEAM online learning series for grades 5–8, students go behind the scenes with creative professionals—art conservators, video game designers, and film animators—to learn how science and math skills are used in their work, providing real-world context for important STEM concepts. Each season, our STEAM Challenge series offers 45-minute live shows with Barnes educators and a final Meet the Professionals event where students learn from experts in the field. Teachers must register for episode 1 or 2 to participate in this event.

How do you storyboard a digital world? How do you study fragile artworks? How do such activities relate to STEM? Students will investigate these questions and more by working with Barnes educators and interviewing guest artists in fields that incorporate STEM learning to understand their work and solve a challenge. New series begin quarterly in October, January, and April. Shows are best viewed as a three-episode series.

## Fall STEAM Challenge: Art Conservation

### EPISODE 1: “ART CONSERVATION CHALLENGE”

October 12 & November 2, 2021

Students are introduced to the challenge they will solve over the next few episodes; they choose between two artworks in the Barnes collection and try to answer the same questions encountered (and solved) by our conservation team. Featured art and artists include Paul Cézanne and works from the Democratic Republic of Congo.

### EPISODE 2: “ART CONSERVATORS’ TOOLS”

November 23 & December 14, 2021

Learn how conservators use x-ray and infrared scans to investigate artworks. Students are asked to consider how these tools will help solve their challenge. Featured art and artists include Dogon culture, Pierre-Auguste Renoir, and Claude Monet.

### EPISODE 3: “MEET THE PROFESSIONALS” ONE-TIME EVENT

December 21, 2021, 10–10:45 am

Students meet the art conservators of the Barnes Foundation, who share how they solved the challenge and demonstrate other techniques they use to do their innovative work.



## STEAM Challenge (continued)

### Winter STEAM Challenge: Video Game Design

Students explore the three-dimensional environments created in video games. They look at artwork as inspiration for designs and discuss how artists consider concepts such as scale, geometric measurement, object relationships, and proportional reasoning in creating the illusion of three dimensions. After the show, students use what they have learned to storyboard a video game scene; teachers receive activity prompts to guide the storyboard challenge. Featured artists include Giorgio de Chirico and Jules Pascin.

#### **EPISODE 1: "GRIDS AND DESIGN"**

January 4 & 25, 2022

Students explore how artists create the illusion of three-dimensional space in two-dimensional work. They learn how grids are used to create areas of interest in design.

#### **EPISODE 2: "SCALE AND RATIOS"**

February 15 & March 8, 2022

Students explore scale in painting, sculpture, and video game design. They learn how objects are connected proportionally and how ratios can illustrate those relationships.

#### **EPISODE 3: "MEET THE PROFESSIONALS" ONE-TIME EVENT**

March 29, 2022

Students who participate in our winter show may register for a special one-time live event to meet an expert in video game design.

### Spring STEAM Challenge: Film Animation

Students learn how animators bring characters and scenes to life using concepts from nature. Students analyze portraits from various cultures to see how different artists portray the human experience, and study landscapes to see how artists interpret natural environments using light and color. After the show, students storyboard their own characters and scenes; teachers receive activity prompts to guide the storyboard challenge. Featured artists include Pablo Picasso, Chaïm Soutine, Pierre-Auguste Renoir, and Kerry James Marshall.

#### **EPISODE 1: "HUMAN BEHAVIOR AND CHARACTER DEVELOPMENT"**

April 19, 2022

Students explore the challenges of creating animated film characters and how observing human behavior informs the development process. Students discuss how artists convey personal meaning in art, and see clips illustrating how film studios such as Pixar create animated objects that seem human.



## STEAM Challenge (continued)

### **EPISODE 2: "ART AND NATURAL ENVIRONMENTS"**

May 10, 2022

Students explore how observations of light and color inform storytelling by looking at artwork from different places and time periods.

### **EPISODE 3: "MEET THE PROFESSIONALS" ONE-TIME EVENT**

May 31, 2022

Students who participate in our spring show may register for a special one-time live event to meet a director of animated film shorts.