

WE OFFER **5 UNIQUE ACTIVITY-BASED STEM LESSONS**THAT MATCH WHAT YOU ARE TEACHING IN THE CLASSROOM!

# MIDDLE SCHOOL STEM LESSONS

### LESSON 1: THE SCIENCE OF ROLLER SKATING \*

Students will learn about the parts of a roller skate/inline skate and how each part functions to make the skate. They will discuss how surfaces in the rink are made of different materials and how that affects the skate in motion. Students will have a chance to showcase their creativity and design a new feature for a skate.

Topics Like: Geometry, Friction, Reverse Engineering, Design

### LESSON 2: MUSIC, MATH & ROLLER SKATING

Students will learn how to count using the beats of the music played in a roller rink and will learn how the type of music affects the speed of the skater. Students will also learn how to control the speed of skaters using the beat of the music.

Topics Like: Sound Waves, Beats per Minute, Frequency

### LESSON 3: HEART, HEALTH & FITNESS

Students will learn about the functions of the cardiovascular system and about leading a healthy lifestyle. They will make predictions and then calculate their average heart rate through physical activity.

Topics Like: Cardiovascular System, Heart Health, Importance of Exercise

## LESSON 4:

FORMULAS, FRACTIONS, AND FUN;
THE RELATIONSHIP BETWEEN MATH & ROLLER SKATING

Students will learn how math concepts can be found all over the skating rink. Students will measure, compare, and average the speed of several skaters, discover how engineers use geometry in the rink, and how statistics relates to roller skating.

**Topics Like: Averages, Geometry, Statistics** 

#### LESSON 5 NEWTON'S LAWS OF MOTION \*

### \* Great for wider range of student grade levels

Students will learn that each one of Newton's Three Laws of Motion are present in the skating rink. They will experiment with force and mass and discuss the importance of physics and roller skating.

Topics Like: Physics, Laws of Motion, Inertia

### **NEED TRANSPORTATION?**

Skate City Has Busing Transportation AVAILABLE!



(District approved, CDE certified, affordable busing fee applies)