



## The Fifth Grade Field Trip

### The Making of a Bronze Soccer Ball Tour: 40 minutes

#### 1. Mold and Wax Room

Explanation of a Mold

- Rubber
- Plaster/Mother Mold

Explanation of a Wax Pattern

- Why multiples
- Fixing flaws
- Thickness

#### 2. Foundry/ Investment Room

Explanation of Last Wax/Investment

- Gating
- Core/Hollow casting principle
- Burn out/Last wax

Metal Pouring

- Metal flow
- Temperatures
- Cooling

Metal Casting History

#### 3. Metal Shop

Safety- Equipment and Precautions

Clean up and Chasing Flaws/ Finishing

- Tools: grinders and accessories

Assembling Parts

- Putting pieces back together
- Matching the original

Welding and Tooling

- Explanation of Process
- Chasing explanation with examples
- Texture

#### 4. Patina

Description

Hot Patina Test Tile

- Cold: Liver and Birchwood Casey Dip Patinas
- Hot: Cupric Nitrate Patina