

JA Trades: Construction: **BIM** Technology


Volunteer script and talking points.

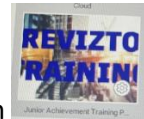
If locked out of laptop (email: bim03@jastl.org password: JAcadbim33)

If student gets lost in project, click the home icon on the bottom

2 tables / 5 students per table



Click on the  symbol to open program. Next double click on the Revizto Training Icon



Make sure **3D** is clicked at top. A 3D picture of **NEW OPS MIDDLE SCHOOL** should be on all laptops. If grids are showing click Toggle grids icon, bottom bar, to hidden. You may now continue with students. Ideally the above is set on laptops before students arrive.

Welcome students as they arrive.

This experience will introduce you to BIM with the use of a Middle School design.

What is BIM? **Building Information Modeling**, or 3D modeling technology.

The construction industry uses BIM technology to plan and coordinate buildings and their systems (HVAC, plumbing, lighting etc.) **virtually**, before building them **physically**.

This means, trade contractors of all types use BIM technology to manage projects and make sure their work will be installed correctly. Examples: Plumbers, electricians, fire protection, structural engineers etc. All use BIM.

BIM technology can be used on a computer, tablet, or smartphone.

BIM designers and coordinators have important jobs in the construction industry. These jobs are in high demand, pay well, and can be achieved through various career pathways.


Who plays video games? This is the same type of gaming technology as a video game. Let's explore!

Use your mouse or **W**-forward, **A**-left, **S**-backward, **D**-right on your keyboard to move through the building.

Navigate around the screen and find some objects: locate the dump truck, the truck with the crane, the cement truck (all are outside the building)

OVER



Click on the  icon upper left of your laptop. This is Viewpoints , these are saved views within the model. click arrow next to **Home Base** then Click on the arrow next to **Junior Achievement folder**, then click on **gymnasium**: What do you see? They should see a basketball player, scoreboard, bleachers etc.

BIM is all about the collaboration of different job roles in the construction industry in a virtual environment leading to more efficient project delivery. I will be passing out a trade job to each student

Plumber- Condensate pipes, roof drains, water line installation

Electrician- Conduit electrical lines, all lighting systems, lighting fixtures

Fire Protection Contractor- Fire protection sprinkler systems, alarms, extinguishing systems

Steelwork Contractor- structural, sheet metal workers, carpenter

HVAC technicians- Air duct installation, sheet metal, welding

First Activity: You will enter a room in the Middle School and identify the objects in the room that your trade job would install and is responsible for.



Click **3D** at top of screen, then the icon that looks like a door  top left.

Then **Instrumental 203** (type in search bar)

(Have students find the objects that match their given trade)

Electrician-**yellow**, Fire protection contractor- **bright red**, Plumber-**gold**, HVAC technician-**blue/green**, Steelwork contractor- **darker red**.... Have each student point out what they found.

Second Activity: This activity is about collaboration between job roles. Give students the ID numbers below one at a time, they will enter a room, find the conflict as a group, decide what job roles are involved, then those 2 contractors talk to decide who would fix the issue first and why.

Have students click on “**Issue Tracker**”

ID 12- Electrician and HVAC Contractor

ID 72- Plumber and Steelwork Contractor

ID 11- Plumber and HVAC Contractor

ID 10- Fire Protection Contractor and HVAC Contractor

Closing thoughts: We hope you enjoyed your experience today exploring the use of BIM technology!