

Middle School Construction Technologies Courses

		Curriculum Code/Hours		
Subject Code	Course Title	VT	V3	VM
Structural Systems Pathway (DD)				
178000	Construction Technology – Core and Sustainable Construction	120-280	60	30-90
178001	Carpentry and Masonry Technical Skills	120-280	60	30-90
178002	Mechanical, Electrical and Plumbing Systems	120-280	60	30-90
178019	Plan Reading and Estimating	120-280	60	30-90
178030	Principles of Wood Construction	60-280	60	30-90
178040	Fundamentals of Architecture and Construction	60-280	60	30-90
990364	Career Connections			30-90
Mechanical, Electric and Plumbing Pathway (DE)				
178000	Construction Technology – Core and Sustainable Construction	120-280	60	30-90
178001	Carpentry and Masonry Technical Skills	120-280	60	30-90
178002	Mechanical, Electrical and Plumbing Systems	120-280	60	30-90
178019	Plan Reading and Estimating	120-280	60	30-90
178030	Principles of Wood Construction	60-280	60	30-90
178040	Fundamentals of Architecture and Construction	60-280	60	30-90
990364	Career Connections			30-90
Construction Design and Management Pathway (DF)				
178000	Construction Technology – Core and Sustainable Construction	120-280	60	30-90
178001	Carpentry and Masonry Technical Skills	120-280	60	30-90
178002	Mechanical, Electrical and Plumbing Systems	120-280	60	30-90
178019	Plan Reading and Estimating	120-280	60	30-90
178030	Principles of Wood Construction	60-280	60	30-90
178040	Fundamentals of Architecture and Construction	60-280	60	30-90
990364	Career Connections			30-90

Curriculum Code	Grades	CT Funded	Assessment	Counts toward Concentrator
VT	7-12	Yes	Required	Yes
V3	7-12	Yes	Not required	No
VM	7-10	Yes	Optional	No

- Career-Technical Middle School Courses require schools to complete a CTE-26 and program of study*.
- Students enrolled in Career-Technical Middle School Courses (VT, VM) are eligible for participation in Career-technical Student Organizations (CTSO).
- Granting High School credit for Career-Technical Middle School Course high school courses is a local school district decision.
- VM Courses do not count towards four course minimum.

*If you have a 7-12 grade building with a current CTE-26 on file, no additional CTE26 is required, unless you add a new program to that building IRN.

Construction Technology – Core and Sustainable Construction

Subject Code: 178000

Students will learn principles in basic safety (10-hr OSHA), construction math, hand and power tool use and operation, blueprint reading, material handling, communication and employability skills. An emphasis will be placed on safe and green construction practices.

Carpentry and Masonry Technical Skills

Subject Code: 178001

This first course in the pathway will introduce to students the materials, methods, and equipment used in carpentry and masonry. Students will organize a project work sequence by interpreting plans and diagrams within a construction drawing set. They will layout and install basic wall, floor and roof applications. Students will perform introductory concrete applications including formwork, reinforcement, mixing, and finishing. Current advancements in technology, safety, applicable code requirements and correct practices are learned.

Mechanical, Electrical and Plumbing Systems

Subject Code: 178002

Students learn physical principles and fundamental skills across mechanical systems in construction. Students will select materials, assemble, and test basic electrical circuits. Students will select materials and assemble simple copper and plastic plumbing applications for both supply and drains. They will perform simple maintenance of electric motors, electric fixtures and plumbing fixtures. Students will be able to select and install basic ductwork components and learn the operation and maintenance of heating and cooling equipment.

Plan Reading and Estimating

Subject Code: 178019

Students learn blueprint reading as it relates to the architecture and construction. Students will use scaling, orthographic projections, dimensioning practices, symbols, notations, and abbreviations to perform area calculations and to interpret floor plan, section, and elevations and develop an estimate of material, time, personnel, and equipment needs, availability, and cost. Using construction plans, students will identify problems or shortcomings related to the layout and installation of materials for the project.

Principles of Wood Construction

Subject Code: 178030

Students will engage in the introductory skills utilized in working with various wood construction materials. They will learn to use basic measuring tools, hand tools and machines, common to the wood industry, to construct basic projects. Additionally, students will examine various wood construction materials and their properties. Throughout the course, students will learn components of site and personal safety.

Fundamentals of Architecture and Construction

Subject Code: 178040

In this first course in the career field, students will be introduced to the basic principles of architecture and construction. During this course, students will read and create construction drawings and use hand tools to create basic construction projects and models. Throughout the course, students will use hands-on skills and procedures in a laboratory setting. Additionally, students will investigate career opportunities in construction and architecture related fields.