

20 Week Metals Curriculum Outline  
Mr. Bliss, RCK High School

Week 1

Basic safety, safety quiz, classroom procedures, attendance, grading, cleanup, notebooks, locks

Week 2

Intro to metal work, metalworking careers, metal properties, finish safety

Week 3

Begin sheet metal project, overview of sheet metal work, hand tools, cutting tools

Week 4

Bending sheet metal, shrinking and stretching sheet metal, finish sheet metal project

Week 5

Lathe operations, cutting speeds, feed rates, products that are made with the lathe, lathe safety, begin lathe project

Week 6

Milling operations, cutting speeds and feed rates, products made on the mill, mill safety, begin mill project

Week 7

Forging and bending metal, how to operate forge, forge safety, temperature of metal/properties, begin forge project

Week 8

Power sawing, types of blades, cutting speeds, power sawing safety

Week 9

Measurement, micrometers, vernier calipers, basic measurement, students continue to work on projects

Week 10

Heat treatment of steel, properties of steel, temperatures needed to change properties, estimating temperatures, continue work on projects

Week 11

Torches, oxygen/acetylene, cutting with torch, torch safety

Week 12

Welding, amperage, properties of electricity, welding safety, introduce welding project

Week 13

Soldering and brazing, when to use each, flux, brazing joints, continue projects

Week 14

Steel production processes, iron ore, types of iron, blast furnace

Week 15

Steel alloys, metals other than steel and iron, properties of steel, uses, continue projects

Week 16

Working drawings and sketches, drawing views, types of lines, scales, why is sketching useful

Week 17

Stress, strain, and strengths of materials, advanced metal properties

Week 18

Review for final, continue projects

Week 19

Review for final continue working on projects, notebooks due

Week 20

All projects finished, final exam, final cleanup, metals career report due