



Electronics Assignment Checklist

Area Competency C. ELECTRONICS

<u>Task</u>	<u>Task/Skill</u>	<u>Started</u>	<u>Completed</u>
1.	Electronics	<u>mm/dd/yy</u>	<u>mm/dd/yy</u>
		(/ /)	(/ /)

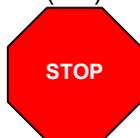
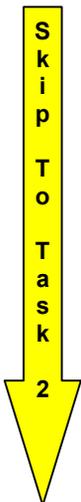
After you play the Introduction Video, print out the Electronics Study Guide and Assignment Checklist. This section of the Electronics module contains the management and assessment tools that cover the entire module. Start at sub-task "a" and proceed through this portion of the checklist. **Once you've completed the Pre-Test go directly to Task 2 – Electronics Foundation.** This and the remaining sections form the instructional *meat* of the Electronics module. These tasks contain the content and exercises that you'll be tested over so study these lessons carefully.

Once you complete all of the lessons and exercises return to this section and review the Electronics Guide. This guide is an updated version of the on-screen content that you've studied during the lessons. After the review, have your supervisor review your notebook. Only then should you take the module exam. You're required to pass the module exam before you go on to the next module. Once you pass, you will be awarded a Level I Certificate in Computer Service and Support.



<u>Sub</u>	<u>Init</u>	<u>Time</u>	<u>Type of Task</u>	<u>Task Description</u>
a.	()	1 Min	Computer Aided Inst. Source: CSS Course - Electronics	Introduction
b.	()	1 Min	Computer Aided Inst. Source: CSS Course – Electronics	Instructions
c.	()	1 Min	Exercise Source: CSS Course - Electronics	Assignment Checklist
d.	()	5 Min	Pre-Test Source: CSS Course – Electronics	Electronics

e.	()	15 Min	Exercise Source: CSS Course – Electronics	Review
f.	()	5 Min	Performance Test	Notebook Review
g.	()		Notes Source: CSS Course - Electronics	Study Guide
h.	()	20 Min	Exam Source: CSS Course – Electronics	Electronics
i.	()		Certification Source: CSS Course – Electronics	CSS Level I Certificate



 Lastname, First

 Student Number

 Period

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.

<u>Task</u>	<u>Task/Skill</u>	<u>Started</u> <u>Mm/dd/yy</u> (/ /)	<u>Completed</u> <u>mm/dd/yy</u> (/ /)
-------------	-------------------	--	--

2. Electronics Foundation

Once you've completed this section, you should be able to apply Ohm's and Kirchoff's laws to a variety of simply resistor circuits. Using a scientific calculator, you should be able to apply the calculator's "exponent function" and "engineering mode" to represent the very large and very small numbers that are commonly used in electricity and electronics. You will also convert the terms giga, mega, kilo, milli, and micro to their engineering notation equivalents while using them in common electronic formulas. The enrichment activities are optional.



<u>Sub</u>	<u>Init</u>	<u>Time</u>	<u>Type of Task</u>	<u>Task Description</u>
a.	()	10 Min	Reading Assignment	Getting Started with the Scientific Calculator Source: The Scientific Calculator Unit: Getting Started with a Scientific Calculator
	()	15 Min	Exercise	Arithmetic Operations Source: The Scientific Calculator Unit: Exercise 1
	()	15 Min	Exercise	Parentheses Source: The Scientific Calculator Unit: Exercise 2
	()	15 Min	Exercise	Scientific and Engineering Notation Source: The Scientific Calculator Unit: Exercise 3
	()	15 Min	Exercise	Scientific Calculator Test Source: The Scientific Calculator Unit: Exercise 4
b.	()	5 Min	Reading Assignment	Electronics Formulas Source: Electronics Formulas Unit: Electronics Formulas
	()	10 Min	Computer Aided Inst.	Ohm's Law (Enrichment) Source: Electronics Discovery CAI Software - EKI Unit: MC3006 Page: The Laws Min. Score: 80%
	()	10 Min	Exercise	Ohm's Law Source: Electronics Formulas Unit: Exercise 1
	()	10 Min	Exercise	Kirchoff's Law Source: Electronics Formulas Unit: Exercise 2
	()	10 Min	Exercise	Resistance Circuits Source: Electronics Formulas Unit: Exercise 3

 Lastname, First

 Student Number

 Period

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.

- () **10 Min** **Exercise** **Engineering Notation**
Source: Electronics Formulas
Unit: Exercise 4

- () **20 Min** **Exercise** **Number Systems Used in Electronics**
Source: Electronics Formulas
Unit: Exercise 5

<u>Task</u>	<u>Task/Skill</u>	<u>Started</u>	<u>Completed</u>
		<u>mm/dd/yy</u>	<u>mm/dd/yy</u>
3. Electronics Skills		(/ /)	(/ /)

Once you've completed these lessons you will be able to test a variety of electronic components. You will gain addition digital multimeter skills as you check for the proper operation of batteries, switches, wires, resistors, potentiometers, speakers, diodes, transistors, thyristors (SCR), and the 555 Timer IC. Once the components have been tested, you'll demonstrate proper soldering techniques as you prepare your Electronics Parts Kit for use. You will prepare wires and then solder them to terminal devices such as swithices, speakers, and potentiometers.

<u>Sub</u>	<u>Init</u>	<u>Time</u>	<u>Type of Task</u>	<u>Task Description</u>
a.	()	10 Min	Exercise	Mr. Circuit I - Inventory Sheet Source: Electronics Discovery Guide - EKI (Mr. Circuit I) Unit: INTRO Page: 2
b.	()	15 Min	Reading Assignment	Component Testing Source: Component Testing Unit: Component Testing
	()	10 Min	Exercise	Testing Passive Devices Source: Component Testing Unit: Exercise 2
	()	10 Min	Exercise	Testing Active Devices Source: Component Testing Unit: Exercise 3
	()	15 Min	Exercise	Testing Integrated Circuits Source: Component Testing Unit: Exercise 4
c.	()	5 Min	Reading Assignment	Basic Soldering Source: Basic Soldering Unit: Basic Soldering
	()	15 Min	Exercise	Vocabulary and Theory Source: Basic Soldering Unit: Exercise 1
	()	15 Min	Exercise	Care and Use of Soldering Irons Source: Basic Soldering Unit: Exercise 2

Lastname, First	Student Number	Period
-----------------	----------------	--------

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.

- () 15 Min **Exercise** **Preparing and Soldering Wires**
Source: Basic Soldering
Unit: Exercise 3

- () 15 Min **Exercise** **Desoldering**
Source: Basic Soldering
Unit: Exercise 4

- () 15 Min **Exercise** **Soldering Wires To Terminals**
Source: Basic Soldering
Unit: Exercise 5

<u>Task</u>	<u>Task/Skill</u>	<u>Started</u>	<u>Completed</u>
4. Passive Devices		mm/dd/yy	mm/dd/yy
		(/ /)	(/ /)

The student will demonstrate their knowledge of passive electronic devices by constructing electrical circuits comprised of resistor, potentiometer, photocell, capacitor, and speaker devices on a solderless circuit board. They will demonstrate their skill by completing computer aided instruction lessons and obtaining a perfect score on associated quizzes. The enrichment activities are optional.

<u>Sub</u>	<u>Init</u>	<u>Time</u>	<u>Type of Task</u>	<u>Task Description</u>
a.	()	10 Min	Reading Assignment	Introduction Page Source: Electronics Discovery Guide - EKI (Mr. Circuit I) Unit: INTRO Page: 3
b.	()	5 Min	Reading Assignment	Basic Electronic Theory Source: Electronics Discovery Guide - EKI (Mr. Circuit I) Unit: LESSON 1 Page: 7
c.	()	10 Min	Computer Aided Inst.	Basic Electronic Theory Source: Electronics Discovery CAI Software - EKI Unit: EDL1 Page: Min. Score: 80%
d.	()	5 Min	Reading Assignment	Resistor Color Code Source: Electronics Discovery Guide - EKI (Mr. Circuit I) Unit: LESSON 2 Page: 7 AND 8
e.	()	10 Min	Computer Aided Inst.	Resistor Color Code Source: Electronics Discovery CAI Software - EKI Unit: EDL2 Page: Min. Score: 80%
f.	()	10 Min	Computer Aided Inst.	Using Solderless Circuit Boards Source: Electronics Discovery CAI Software - EKI Unit: EDL3 Page: Min. Score: 80%
g.	()	10 Min	Exercise	Using Solderless Circuit Boards Source: Electronics Discovery Guide - EKI (Mr. Circuit I) Unit: LESSON 3 Page: 8 AND 9

Lastname, First	Student Number	Period
-----------------	----------------	--------

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.

- h. () 10 Min **Computer Aided Inst.** **How a Resistor Works**
Source: Electronics Discovery CAI Software - EKI
Unit: LPA01 **Page:** **Min. Score:** 80%

- i. () 10 Min **Exercise** **How a Resistor Works**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 1 **Page:** 10 AND 11

- j. () 10 Min **Computer Aided Inst.** **How a Potentiometer Works**
Source: Electronics Discovery CAI Software - EKI
Unit: LPA02 **Page:** **Min. Score:** 80%

- k. () 10 Min **Exercise** **How a Potentiometer Works**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 2 **Page:** 12 AND 13

- l. () 10 Min **Computer Aided Inst.** **How a Photocell Works (Enrichment)**
Source: Electronics Discovery CAI Software – EKI
Unit: LPA03 **Page:** **Min. Score:** 80%

- m. () 10 Min **Exercise** **How a Photocell Works (Enrichment)**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 3 **Page:** 14 AND 15

- n. () 10 Min **Computer Aided Inst.** **How a Capacitor Works**
Source: Electronics Discovery CAI Software - EKI
Unit: LPA04 **Page:** **Min. Score:** 80%

- o. () 10 Min **Exercise** **How a Capacitor Works**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 4 **Page:** 16 AND 17

- p. () 10 Min **Computer Aided Inst.** **How a Speaker Works (Enrichment)**
Source: Electronics Discovery CAI Software - EKI
Unit: LPA05 **Page:** **Min. Score:** 80%

- q. () 10 Min **Exercise** **How a Speaker Works (Enrichment)**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 5 **Page:** 18 AND 19

<u>Task</u>	<u>Task/Skill</u>	<u>Started</u>	<u>Completed</u>
		<u>mm/dd/yy</u>	<u>mm/dd/yy</u>
5. Active Devices		(/ /)	(/ /)

The student will demonstrate their knowledge of active devices by constructing circuits comprised of diode, NPN transistor, and PNP transistor devices. They will demonstrate their skill completing computer aided instruction lessons and obtaining a perfect score on associated quizzes.

<u>Sub</u>	<u>Unit</u>	<u>Time</u>	<u>Type of Task</u>	<u>Task Description</u>
a.	()	10 Min	Computer Aided Inst.	How a Diode Works
Source: Electronics Discovery CAI Software - EKI				
Unit: LPA06 Page: Min. Score: 80%				

Lastname, First	Student Number	Period
-----------------	----------------	--------

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.

- b. () 10 Min **Exercise** **Continuity Tester**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 19 **Page:** 46 AND 47
- c. () 10 Min **Computer Aided Inst.** **Audio Generator**
Source: Electronics Discovery CAI Software - EKI
Unit: PPA20 **Page:** **Min. Score:** 80%
- d. () 10 Min **Exercise** **Audio Generator**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 20 **Page:** 48 AND 49
- e. () 10 Min **Computer Aided Inst.** **Electronic Police Siren**
Source: Electronics Discovery CAI Software - EKI
Unit: PPA21 **Page:** **Min. Score:** 80%
- f. () 10 Min **Exercise** **Electronic Police Siren**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 21 **Page:** 50 AND 51
- g. () 10 Min **Computer Aided Inst.** **Electronic Canary (Enrichment)**
Source: Electronics Discovery CAI Software - EKI
Unit: PPA28 **Page:** **Min. Score:** 80%
- h. () 10 Min **Exercise** **Electronic Canary (Enrichment)**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 28 **Page:** 64 AND 65
- i. () 10 Min **Computer Aided Inst.** **Space Machine Gun (Enrichment)**
Source: Electronics Discovery CAI Software - EKI
Unit: PPA29 **Page:** **Min. Score:** 80%
- j. () 10 Min **Exercise** **Space Machine Gun (Enrichment)**
Source: Electronics Discovery Guide - EKI (Mr. Circuit I)
Unit: EXP 29 **Page:** 66 AND 67



Lastname, First

Student Number

Period

Subtasks are to be initialled by the instructor as they are completed. Indicate the task start and completion dates. Submit this form when each task is done.