MAY 1st and 2nd 2020

VIRTUAL COMPUTER SESSION VIA ZOOM
RADIO MERIT BADGE SESSION
SCOUT' S REQUIREMENT CHECK LIST

Scout's Name: _____

* MAKE SURE YOU CHECK OFF THE REQUIREMENTS FOR YOURSELF (PLACE A CHECK MARK ./ IN THE BOX REPRESENTING YOUR NUMBER)

** INSTRUCTOR WILL INITIAL SUCCESSFUL COMPLETION OF REQUIREMENT

REQUIREMENTS:

1. Explain what radio is: Then discuss
   A. The difference between broadcast radio and hobby radio
   B. The differences between broadcasting and two-way radio
   C. Radio Station call signs and how they are used in broadcast radio amateur radio
   D. The phonetic alphabet and how it is used to communicate clearly

D		6	D	INSTRUCTOR 'S
D	2	7	D	INITIALS
D	3	8	D	
D	4	9	D	_____
D	5	10	D	

2. Do the following:

   A. Sketch a diagram showing how the radio waves travel locally and around the world. Explain how the broadcast radio stations WWV and WWVH can be used to help determine what you will hear when you listen to

shortwave radio

B. Explain the differences between DX and a local station. Discuss what the FCC does and how it is different from the ITU

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3. Do the following:

A. Draw a chaii of the electromatic spectrum covering 100 kHz to 1,000 MHZ

B Label the MF. HF, VHF, UHF and microwave portions of the spectrum on you diagram.

C. Locate on your chart at least eight radio services, such as AM and FM commercial broadcast, citizens band (CB), television, amateur radio (at least four amateur radio bands), and pubic service (police and fire).

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4. Explain how radio waves carry information. Include **in** your explanation: transceiver, transmitter. receiver. amplifier. and antenna.

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5. Do the following:

A. Explain the differences between a block diagram and a schematic diagram

B. Draw a block diagram for a radio station that includes a

transceiver, amplifier, microphone, antenna and feed line.

C. Explain the differences between an open circuit, a closed circuit and a short circuit.

0. Draw eight schematic symbols. Explain what three of the represented parts do. Find three electrical components to match to three of these symbols

D		6	D	INSTRUCTOR'S
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6. Explain the safety precautions for working with radio gear, including the concept of grounding for direct current circuits, power outlets, and antenna systems.

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7. Visit a radio installation (an amateur radio station, broadcast station, or public service communications center). Discuss how it was used, what types of licenses are required to operate and maintain the equipment, and the purpose of the station.

D		6	D	INSTRUCTOR 'S
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D	4	9	D	_____
D	5	IO	O	

8. Find out about three career opportunities in radio. Pick one and find out the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

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D	4	9	O	_____
D	5	10	D	

D		6	D	INSTRUCTOR'S
D	2	7	D	INITIALS
D	3	8	D	
D	4	9	D	_____
D	5	10	D	

(5) Explain how you would make an emergency call on voice or Morse code.

D		6	D	INSTRUCTOR'S
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(6) Explain the differences between handheld transceivers and home "base" transceivers. Explain the uses of mobile amateur radio transceivers and amateur radio repeaters.

D		6	D	INSTRUCTOR'S
D	2	7	D	INITIALS
D	3	8	D	
D	4	9	D	_____
D	5	10	D	

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Questions: