

## Northern KY Matrix

<b>American Heritage</b> Sessions: B <i>See prework</i>	<b>Archery</b> Sessions: A-B	<b>Architecture</b> Sessions: C <i>See prework</i>
<b>Art</b> Sessions: B	<b>Automotive Maintenance</b> Sessions: C <i>See prework</i>	<b>Aviation</b> Sessions: A-B <i>See prework</i> <i>Scouts 13 and over</i> Additional fee
<b>Chemistry</b> Sessions: C-D <i>See prework</i>	<b>Chess</b> Sessions: A-B, C-D <i>See prework</i>	<b>Citizenship in the Community*</b> Sessions: C <i>See prework</i>
<b>Citizenship in the Nation*</b> Sessions: A-B, C-D <i>See prework</i>	<b>Citizenship in the World*</b> Sessions: A-B, C-D <i>See prework</i>	<b>Coin and Stamp Collecting</b> Sessions: A <i>See prework</i>
<b>Collections</b> Sessions: D <i>See prework</i>	<b>Communication*</b> Sessions: A-B, C-D <i>See prework</i>	<b>Cooking*</b> Sessions: A-B, C-D <i>See prework</i>
<b>Crime Prevention and Fingerprinting</b> Sessions: A,B <i>See prework</i>	<b>Digital Technology</b> Sessions: A,B <i>See prework</i> CyberChip required	<b>Disabilities Awareness</b> Sessions: D <i>See prework</i> <i>Class on 3/9 only.</i>
<b>Dog Care</b> Sessions: A-B <i>See prework- start immediately, Scouts 13 years old and up</i>	<b>Electricity</b> Sessions: C <i>See prework</i>	<b>Emergency Preparedness</b> Sessions: A-C <i>See prework</i>
<b>Energy</b> Sessions: A <i>See prework</i>	<b>Entrepreneurship</b> Sessions: C <i>See prework</i> <i>Class on 3/9/18 only, will be completed entirely as long as prework is completed, prework emailed by counselor.</i>	<b>Environmental Science</b> Sessions: A-B <i>Scouts 14 years old and up</i> <i>Pework emailed by counselor</i>
<b>Family Life*</b> Sessions: A-B <i>See prework</i> Start 90 days prior	<b>Fire Safety</b> Sessions: A, B, C <i>See prework</i>	<b>First Aid*</b> Sessions: D <i>See prework</i>

<b>Genealogy</b> Sessions: A,B <i>See prework</i>	<b>Geocaching</b> Sessions: C, D <i>See prework</i>	<b>Geology</b> Sessions: C, D <i>See prework</i>
<b>Home Repair</b> Sessions: B	<b>Inventing</b> Sessions: A-B <i>See prework</i>	<b>Law</b> Sessions: C, D <i>See prework</i>
<b>Leatherworking</b> Sessions: A-B <i>Class on 3/9/18 only.</i>	<b>Medicine</b> Sessions: A <i>See prework</i>	<b>Music</b> Sessions: A, B <i>See prework-Additional fee</i>
<b>Orienteering</b> Sessions: C-D	<b>Painting</b> Sessions: A <i>See prework</i> <i>Additional Fee</i>	<b>Personal Fitness*</b> Sessions: B <i>See prework- start 3 months before MBC.</i>
<b>Personal Management*</b> Sessions: A-B, C-D <i>See prework</i> <i>Scouts 13 and over</i>	<b>Pets</b> Sessions: C, D <i>See prework</i>	<b>Photography</b> Sessions: A,C, D <i>See prework-cell phone &amp; tablets will not meet the requirements</i>
<b>Plumbing</b> Sessions: D	<b>Public Health</b> Sessions: C <i>See prework</i>	<b>Public Speaking</b> Sessions: B, C, D Limit 8 Scouts <i>See prework</i>
<b>Radio</b> Sessions: A-B <i>See prework</i>	<b>Reading</b> Sessions: A <i>See prework</i>	<b>Reptile and Amphibian</b> Sessions: C <i>See prework</i>
<b>Robotics</b> Sessions: C-D <i>See prework-Additional fee</i>	<b>Safety</b> Sessions: D <i>See prework</i>	<b>Salesmanship</b> Sessions: D <i>Pework will be emailed by counselor</i>
<b>Scholarship</b> Sessions: B <i>See prework</i>	<b>Scouting Heritage</b> Sessions: B <i>See prework</i>	<b>Signs, Signals and Codes</b> Sessions: A
<b>Space Exploration</b> Sessions: C-D <i>See prework</i>	<b>Sustainability*</b> Sessions: B <i>See prework</i>	<b>Swimming*</b> Sessions: C-D <i>Must be able to swim well as this is not an instructional course.</i>
<b>Textiles</b> Sessions: D <i>See prework-Additional Fee</i>	<b>Theater</b> Sessions: A-B <i>Additional Fee</i>	<b>Traffic Safety</b> Sessions: C <i>See prework</i>
<b>Trailblazer Class</b> Sessions: A, B <i>See prework</i>		

<b>Veterinary Medicine</b> Sessions: B <i>See prework</i>	<b>Weather</b> Sessions: C-D <i>See prework</i>	<b>Wilderness Survival</b> Sessions: A-B, C-D <i>See prework</i>
<b>Wood Carving</b> Sessions: A-B <i>See prework- additional fee</i>		

This document contains the required Merit Badge prework and class fees for  
**Northern Kentucky Merit Badge Challenge 2019**

FOR UP TO DATE INFORMATION FROM NKY MBC LIKE US ON FACEBOOK-  
NKY MERIT BADGE CHALLENGE- DBC

Prework: The Prework is to be completed *BEFORE* the first day of Merit Badge Challenge. Specific items are listed by merit badge that the Scout needs to complete and bring the first Saturday. Some are time dependent and need to be started upon receipt of this document.

ALL MERIT BADGE CLASSES REQUIRE READING THE MERIT BADGE PAMPHLET BEFORE CLASS.

#### **Impact of Plagiarism:**

Scouts are highly encouraged to use the Internet as an aid to earn merit badges (with parental permission).

This information should then be written by the Scout in his own words. Direct copying can result in the counselor returning the work as unacceptable.

**Fees:** Some merit badges have fees for supplies or materials and are noted throughout this document. Merit badge class fees are to be paid to the counselor on the first day of class.

#### **Merit Badge Prerequisites, Fees, and Age/Maturity Requirements**

Merit Badges are in alphabetical order.

#### **AMERICAN HERITAGE**

**Prework:** Requirement #2a: Select two individuals from American history, one a political leader (a president, senator, etc.) and the other a private citizen (a writer, religious leader, etc.). Find out about each person's accomplishments and compare the contributions each has made to America's heritage.

#### **ARCHITECTURE**

**Prework:** Requirement #1b- Select an architectural achievement that has had a major impact on society. Using resources such as the Internet (with your parent's permission), books, and magazines, find out how this achievement has influenced the world today. Tell your counselor what you learned.

Complete requirement #4 and **bring to class on the first Saturday**. Measure your bedroom. Make an accurately scaled drawing of the floor plan indicating walls, doors, windows, and furniture. Neatly label your drawing, including name, Troop number and date. (Drawing scale: 1/4" = 1 foot). ***Hint: Refer to and use the symbols found in the Architecture Merit Badge pamphlet.***

Northern Kentucky Merit Badge Challenge 2019 Prework

## **ARCHERY**

**Prework:** There will be a fee for an arrow kit (TBD) and creation of an arrow will be homework between the first and second class dates. You must read the Merit Badge Pamphlet before class.

## **AUTOMOTIVE MAINTENANCE**

**Prework:** Complete Requirement #12. Find out about three career opportunities in the automotive industry. Pick one and find out about the education, training, and experience required for this profession. Discuss this with your counselor, and explain why this profession might interest you.

## **AVIATION**

**Prework:** Complete Requirement #1a:

- Define “aircraft.”
- Describe some kinds and uses of aircraft today.
- Explain the operation of a piston engine.
- Explain the operation of a turboprop engine.
- Explain the operation of a jet engine.

At least 5 different kinds of aircraft need to be described. Illustrations, drawings, images and/or photo’s may be copied and used, but each aircraft needs to be described using your own words. Illustrations, drawings, images, and/or photos may be copied and used for engine descriptions as well, but each engine needs to be described using your own words.

## **CHEMISTRY**

**Prework:** Complete Requirement #5. List the four classical divisions of chemistry. Briefly describe each one, and tell how it applies to your everyday life.

## **CHESS**

Note: SCOUTS NEED TO BE EXPERIENCED AT PLAYING CHESS TO COMPLETE THIS BADGE.

**Prework:** Complete Req. #1: Discuss with your merit badge counselor the history of the game of chess. Explain why it is considered a game of planning and strategy.

Complete Req. #2: Discuss with your merit badge counselor the following:

- a. The benefits of playing chess, including developing critical thinking skills, concentration skills, and decision-making skills, and how these skills can help you in other areas of your life.
- b. Sportsmanship and chess etiquette.

## **CITIZENSHIP IN THE COMMUNITY**

**Prework:** Complete Requirement #5. With the approval of your counselor and a parent, watch a movie that shows how the actions of one individual or group of individuals can have a positive effect on a community. Discuss with your counselor what you learned from the movie about what it means to be a valuable and concerned member of the community. Suggestions: October Sky, Remember the Titans, Follow me, Boys, Mr. Holland’s Opus.

Complete Req. # 8 Develop a public presentation (such as a video, slide show, speech, digital presentation, or photo exhibit) about important and unique aspects of your community. Include information about the history, cultures, and ethnic groups of your community; its best features

and popular places where people gather; and the challenges it faces. Stage your presentation in front of your merit badge counselor or a group, such as your patrol or a class at school.

### **CITIZENSHIP IN THE NATION**

**Prework:** Complete Requirement #8: Name your two U.S. Senators and the member of Congress from your Congressional District. Write a letter to one of these elected officials on a national issue, sharing your view with him or her. Show your letter and any response to your counselor. **Bring list of elected officials and a copy of the letter to first class meeting. (It is suggested that a parent read your letter before mailing.)**

Complete Req. #2: Do TWO of the following: a) Visit a place that is listed as a National Historic Landmark or that is on the National Register of Historic Places. Tell your counselor what you learned about the landmark or site and what you found interesting about it. b).Tour your state capitol building or the U.S. Capitol. Tell your counselor what you learned about the capitol, its function, and the history. c).Tour a federal facility. Explain to your counselor what you saw there and what you learned about its function in the local community and how it serves this nation. d) Choose a national monument that interests you. Using books, brochures, the Internet (with your parent's permission), and other resources, find out more about the monument. Tell your counselor what you learned, and explain why the monument is important to this country's citizens.

**Bring the names of the places, the dates you went, what you saw there and why it is important to the first Saturday class. Make sure your name and troop number are on the paper.**

### **CITIZENSHIP IN THE WORLD**

**Prework:** Complete Req. #7. Do TWO of the following (with your parent's permission) and share with your counselor what you have learned: a) Visit the Web site of the U.S. State Department. Learn more about an issue you find interesting that is discussed on this Web site. b) Visit the Web site of an international news organization or foreign government, OR examine a foreign newspaper available at your local library, bookstore, or newsstand. Find a news story about a human right realized in the United States that is not recognized in another country. c) Visit with a student or Scout from another country and discuss the typical values, holidays, ethnic foods, and traditions practiced or enjoyed there. d) Attend a world Scout jamboree. e) Participate in or attend an international event in your area, such as an ethnic festival, concert, or play.

### **COIN COLLECTING**

**Prework:** Complete Requirements #2a–f in written form and #5a and #5b in written form. Please be sure to include your name, Troop, and District on your paper. Bring to class on the first Saturday.

Begin Requirements #6, #7, and #9.

For Requirement #8, do the following:

- a) Identify the people depicted on the following denominations of current U.S. paper money: \$1, \$2, \$5, \$10, \$20, \$50, and \$100. b) Explain “legal tender.”
- c) Describe the role the Federal Reserve System plays in the distribution of currency.

## **COLLECTIONS**

**Prework:** Requirement #1: Prepare a short written report for your counselor, giving a detailed description of your collection, including a short history. Be sure to include why you chose that particular type of collecting and what you enjoy and have learned from your collection.

Note: Collections used for Stamp Collection and Coin Collecting are excluded from eligibility for this merit badge.

## **COMMUNICATION**

**Prework:** Requirement #5: Attend a public meeting (city council, school board, debate) approved by your counselor where several points of view are given on a single issue. Practice active listening skills and take careful notes of each point of view. Present an objective report that includes all points of view that were expressed, and share this with your counselor.

Complete Requirement #8: Plan a troop or crew court of honor, campfire program, or interfaith worship service. Have the patrol leaders' council approve it, then write the script and prepare the program. Serve as master of ceremonies.

## **COOKING**

**Prework:** The requirements for this merit badge have been updated and require considerable effort to complete requirements outside on campouts. Scouts should review the merit badge pamphlet and the requirements carefully.

\*Note: The meals prepared for Cooking merit badge requirements 5, 6, and 7 will count only toward fulfilling those requirements and will not count toward rank advancement. Meals prepared for rank advancement may not count toward the Cooking merit badge. You must not repeat any menus for meals actually prepared or cooked in requirements 5, 6, and 7.

Requirement #1, #2, #3, #4 Research these requirements!

Requirement #5: Using the MyPlate food guide or the current USDA nutrition model, plan a menu for three full days of meals (three breakfasts, three lunches, and three dinners) plus one dessert. Your menu should include enough to feed yourself and at least one adult, keeping in mind any special needs (such as food allergies) of those to be served. List the equipment and utensils needed to prepare and serve these meals.

Requirement #6: Using the MyPlate food guide or the current USDA nutrition model, plan a menu for your patrol or a similar size group of up to eight youth, including you) for a camping trip. Include five meals AND at least one snack OR one dessert. List the equipment and utensils needed to prepare and serve these meals.

Requirement #7: Using the MyPlate food guide or the current USDA nutrition model, plan a menu for trail hiking or backpacking that includes one breakfast, one lunch, one dinner, and one snack. These meals must not require refrigeration and are to be consumed by three to five people (including you). List the equipment and utensils needed to prepare and serve these meals. Then do the following: You may do this before first session or between first and second. You do not need to do a backpacking trip to complete this. Take a short hike with your leaders or parents. Take pictures and bring me your documentation.

b. Share and discuss your meal plan and shopping list with your counselor. Your plan must include how to repackage foods for your hike or backpacking trip to eliminate as much bulk, weight, and garbage as possible.

Requirement #8: Find out about three career opportunities in cooking. Select 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. Research this requirement.

## **COIN AND STAMP COLLECTING**

### **Coin Collecting Prework:**

Complete Requirements #2a–f in written form (20 words per item) and #5a and #5b in written form (50 words each for #5a and #5b). Please be sure to include your name, Troop, and District on your paper. Bring to class on the first Saturday.

Begin Requirements #6, #7, and #9.

For Requirement #8, do the following:

a) Identify the people depicted on the following denominations of current U.S. paper money: \$1, \$2, \$5, \$10, \$20, \$50, and \$100. b) Explain “legal tender.” c) Describe the role the Federal Reserve System plays in the distribution of currency.

### **Stamp Collecting Prework:**

Requirement #1: Do the following: a. Discuss how you can better understand people, places, institution, history, and geography as a result of stamp collecting. b. Briefly describe some aspects of the history, growth, and development of the United States postal system. How is it different from postal systems in other countries?

Report for Requirement #1a should be 100 words in length or more and report for #1b should be at least 200 words in length, both preferably typed. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.

## **CRIME PREVENTION & FINGERPRINTING**

**Crime Prevention Prework: Requirement #2:** Prepare a journal from various sources that address crime and crime prevention efforts in your community. **Requirement #7:** Do **ONE** of the following: (a) Assist in the planning and organization of a crime prevention program in your community such as Neighborhood Watch, Community Watch, or Crime Stoppers. Explain how this program can benefit your neighborhood. **OR** (b) With your parent’s and counselor’s approval, visit a jail or detention facility or a criminal court hearing. Discuss your experience with your counselor.

**Finger Printing Prework:** None

## **DIGITAL TECHNOLOGY**

**Prework:** Complete Requirement #1 and bring your current, up-to-date Cyber Chip card to class on the 1<sup>st</sup> Saturday.

Complete Requirement #2a: Give a brief report on the history of the changes in digital technology over time. (In your report) discuss with your counselor how digital technology in your lifetime compares with that of your parents’, grandparents’, or other adult’s lifetime.

Complete Requirement #2b: Describe the kinds of computers or devices you imagine might be available when you are an adult.

Requirement #6: Choose three of the project options, copy files to a backup device and share the finished projects with the counselor by the second Saturday.

## **DOG CARE**

### **Scouts age 13 and older**

**Prework:** Complete Req # 4. For **two** months, keep and care for your dog.\* Maintain a log of your activities during this period that includes these items: feeding schedule, types of food used, amount fed, exercise periods, training schedule, a weekly body weight record, grooming and bathing schedules, veterinary care, if necessary, and costs. Also include a brief description of the type of housing/shelter arrangements you have for your dog.

Requirement # 8. Visit a veterinary hospital or an animal shelter and give a report about your visit to your counselor.

Requirement #9. Know the laws and ordinances involving dogs that are in force in your community.

## **ELECTRICITY**

**Prework:** Complete Requirement #8: On a floor plan of a room in your house, make a wiring diagram of lights, switches and outlets. Show which fuse or circuit breaker protects each one.

Use the information in the Electricity Merit Badge pamphlet. ***Bring diagram to class on the first Saturday.***

Be prepared to explain the following electrical terms: volt, ampere, watt, ohm, resistance, potential difference, rectifier, rheostat, conductor, ground, circuit, and short circuit. ***Hint: Study the merit badge book, pages 28 thru 31.***

Complete Req. #9a: Do the following: a. Read an electric meter and, using your family's electric bill, determine the energy cost from the meter readings.

## **EMERGENCY PREPAREDNESS**

**Prework:** Complete Requirement #1: Earn the First Aid Merit Badge. Bring proof such as copy of First Aid merit badge blue card or signed note from Scout leader.

Complete Requirement #8b: Prepare and ***bring to the first class*** the following:

- Prepare a personal emergency service pack for a mobilization call.
- Prepare a family kit (suitcase or waterproof box) for use by your family in case of an emergency evacuation.

Contents of both are listed in the Emergency Preparedness Merit Badge pamphlet.

A single empty water container may be substituted for the actual water in the kit brought to class.

## ENERGY

**Prework:** Complete Requirement #1a: Find an article on the use of conservation of energy. Discuss with your counselor what in the article was interesting to you, the questions it raises, and what ideals it addresses that you do not understand.

Complete Req #4: Conduct an energy audit of your home. Keep a 14-day log that records what you and your family did to reduce energy use. Include the following in your report and, after the 14-day period, discuss what you have learned with your counselor. a. List the types of energy used in your home such as electricity, wood, oil, liquid petroleum, and natural gas, and tell how each is delivered and measured, and the current cost; OR record the transportation fuel used, miles driven, miles per gallon, and trips using your family car or another vehicle. b. Describe ways you and your family can use energy resources more wisely. In preparing your discussion, consider the energy required for the things you do and use on a daily basis (cooking, showering, using lights, driving, watching TV, and using the computer). Explain how you can change your energy use through reuse and recycling.

## ENTREPRENEURSHIP

**Prework:** Prework will be emailed by the counselor; **this class will be on 3/9/19 only.**

## ENVIROMENTAL SCIENCE

**For Scouts 14 and over**

**Prework:** Prework will be emailed by counselor.

## FAMILY LIFE

**Prework:** Start on Requirement #3 **immediately**: Prepare a list of your regular home duties or chores (*at least five*) and do them for **90 days**. Keep a record of how often you do each of them. Suggest using table in Family Life Merit Badge pamphlet. **Note: Do not include such items as sports, practicing, homework, etc. as duties.**

Also Requirements 4, 5, 6

Note: This merit badge covers mature subject matter, i.e., premarital sex, abstinence, becoming a parent, etc. It is recommended for Scouts age 14 and over.

## FIRE SAFETY

**Prework:** Read the Home Safety pages in the Fire Safety Merit Badge pamphlet.

Complete the following portion of Requirement #6: Conduct a home safety survey with the help of an adult. Use of forms in the merit badge pamphlet is suggested.

Complete Requirement #6a: Draw a home fire escape plan, create a home fire drill schedule, and conduct a home fire drill. See example in merit badge pamphlet.

Bring both the survey and escape plan to class on the first Saturday.

## FIRST AID

**Prework:** The following requirements must be completed prior to beginning class:

- Be First Class or above in rank or have completed and signed off all the first aid requirements for Tenderfoot, 2<sup>nd</sup> Class, and 1st Class ranks. **Bring your Boy Scout Handbook to class as proof.**
- The First Aid Merit Badge pamphlet must be read prior to the first Saturday of class.
- Requirement #2d: Prepare a first-aid kit for your home. Use list in found in Merit Badge pamphlet. ***Bring to class on the first Saturday.***

Northern Kentucky Merit Badge Challenge 2019 Prework

## **GENEALOGY**

**Prework:** Requirement #4b: Obtain at least one genealogical document showing proof of some information on your pedigree chart or family group records. This document may be located in your home, a courthouse, an archive or library, etc.

Bring at least one genealogical document (copy preferred) showing proof of some information that will be on your family chart, e.g. birth certificate, marriage certificate, death certificate; to class on the first Saturday.

Also bring to the class on the first Saturday a list of your family (parents, siblings, grandparents, aunts, uncles, etc.) including known dates of birth, marriage, and death.

## **GEOCACHING**

**Prework:** Complete Requirement #7: With your parent's permission\*, go to [www.Geocaching.com](http://www.Geocaching.com). Type in your zip code to locate public geocaches in your area. Share the posted information about three of those geocaches with your counselor. Then, pick one of the three and find the cache. \*To fulfill this requirement, you will need to set up a free user account with [www.Geocaching.com](http://www.Geocaching.com). Ask your parent for permission and help before you do so.

Complete Requirement #9: Plan a geo-hunt for a youth group such as your troop or a neighboring pack, at school, or your place of worship. Choose a theme, set up a course with at least four waypoints, teach the players how to use a GPS unit, and play the game. Tell your counselor about your experience, and share the materials you used and developed for this event.

*Each Scout should have a GPS Device to bring to class.*

## **GEOLOGY**

**Prework:** Complete Requirement #2: Pick three resources that can be extracted or mined from Earth for commercial use. Discuss with your counselor how each product is discovered and processed.

Complete Requirement 4b: Find out about three career opportunities available in geology. Pick one and find out the education, training, and experience required for the profession. Discuss this with your counselor, and explain why this profession might interest you

Discussion should be a report, preferably typed. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.

## **INVENTING**

**Prework:** Review the entire Inventing Merit Badge pamphlet.

Complete Requirement #2a: Interview an inventor.

Preparation for Requirement #5: Bring a piece of camp equipment with ideas of how to improve it. This requirement will be discussed in Session Two. However, it is important to prepare for the discussion before Merit Badge Challenge starts.

Preparation for Requirement #6: Think of an item to invent that would solve a problem for family, troop, Charter organization, community or special interest group. Keep notebook to record progress on Requirements #6a, #6b, and #6c.

Complete Requirement #6a: Interview potential users of invention; determine needs. Describe the invention and how it would help solve a problem; include a sketch. ***Must be done by Session Two.***

Complete Requirement #8a or #8b: Participate in club or team to build useful item or visit invention or inventor museum.

### **LAW:**

**Prework:** Must have read the Law MB Book prior to first class.

### **LEATHERWORK**

**Prework:** None; **this class will be on 3/9/19 only.**

### **MEDICINE**

**Prework:** Complete Requirement #2: Explain the Hippocratic Oath to your counselor, and compare the original version to a more modern one. Discuss to whom those subscribing to the original version of the oath owe the greatest allegiance.

Complete Req. #7a: Visit a physician's office, preferably one who delivers "primary care." (This may be that of your counselor.) Discuss the components of a medical history and physical examination (an official BSA health form may be used to guide this discussion), and become familiar with the instruments used. If this cannot be arranged, demonstrate to your counselor that you understand the components of a medical history and physical, and discuss the instruments involved.

### **MUSIC**

**Prework:** Important note regarding Requirement #1: The playing and sight-reading skills needed for this performance suggest at least two years of experience playing with your school band, orchestra, or ensemble or singing with a choral group. The Scout may also have gained this experience by studying with a private music teacher. The Scout must choose a piece, which the counselor approves, to play or sing in class. The Scout must demonstrate good technique, phrasing, tone, rhythm and dynamics which may not be evident in those just beginning to play an instrument. PLEASE NOTE: THE SCOUT MUST BE ABLE TO READ MUSIC. Also note: Music MB is not a tutoring class. The scout must demonstrate proficiency.

### **ORIENTEERING**

**Prework:** None

### **PAINTING**

**Prework:** There will be a small fee of \$2.00 per Scout for paint and materials.

### **PERSONAL FITNESS**

**Prework:** Complete Req #1a and b, #7 and #8; email plan for #7 to [dixiembc@gmail.com](mailto:dixiembc@gmail.com) to get counselor approval prior to starting, this should be done **3 months** prior to merit badge challenge (December 23 deadline).

## **PERSONAL MANAGEMENT**

**Prework:** *Immediately* start Requirement #2a: Prepare a budget reflecting your expected income (allowance, gifts, wages, etc.), expenses, and savings. Track your actual income, expenses, and savings for **13 consecutive weeks**. (*It is suggested you use the forms provided in the Personal Management Merit Badge pamphlet.*)

**Note:** Budget must be prepared BEFORE tracking actual income and expenses.

## **PETS**

**Prework:** Complete Req # 1 Present evidence that you have cared for a pet for four months. Get approval before you start. (Work done for other merit badges cannot be used for this requirement.)

Complete Req #2: Write in 200 words or more about the care, feeding, and housing of your pet. Tell some interesting facts about it. Tell why you have this kind of pet. Give local laws, if any, relating to the pet you keep.

## **PHOTOGRAPHY**

**Note:** Bring digital camera to first class. (NO camera phones/tablets.)

**Prework:** This merit badge requires the Scout to provide photographs of their own, specifically made for completion of the requirements; access to a digital camera with versatile controls is strongly recommended.

Complete Requirement 1b. Bring a picture of your current and up-to-date Cyber Chip card.

Complete Requirement 3: Discuss with your counselor the differences between a film camera and a digital camera. Describe how computer software allows you to make adjustments to a digital photograph after it is taken.

Discussion should be typed. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.

## **PLUMBING:**

**Prework:** None

## **PUBLIC HEALTH**

**Prework:** Complete Req # 7A or 7b: With your parent's and counselor's approval, do ONE of the following: a) Visit your city, county, or state public health agency.  
b) Familiarize yourself with your city, county, or state health agency's website.

## **PUBLIC SPEAKING**

**Prework:** Requirement #1: Give a three- to five-minute introduction of yourself to an audience such as your troop, class at school, or some other group. ***Be prepared to give an impromptu talk of at least 2 minutes at the first session, as well as give a 3-5 minute introductory talk about yourself. This is a requirement!***

**Scouts must have read the Public Speaking Merit Badge pamphlet and bring it to class on the first Saturday.**

## **RADIO**

**Prework:** Scouts must read the Radio Merit Badge pamphlet and bring it to class on the first Saturday. Note: This merit badge is not difficult but can be a challenge to first year Scouts. Please use discretion when recommending this badge to your Scouts.

Complete Requirement #3: Do the following:

a. Draw a chart of the electromagnetic spectrum covering 100 kilohertz (kHz) to 1000 megahertz (MHz). b. Label the MF, HF, VHF, UHF, and microwave portions of the spectrum on your 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 ham radio bands), and public service (police and fire).

Report, excluding drawing and photos, should be written (typed preferred) and be a minimum of 100 words. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.

## **READING**

**Prework:** Begin Requirement #1b: With the assistance of your merit badge counselor or a librarian, select six books of four different types (such as poetry, drama/plays, fiction, non-fiction, biographies, etc.). Ask your librarian or counselor about award-winning books that are recommended for readers your age and include at least one of those titles.

## **REPTILE AND AMPHIBIANS**

**Prework:** Complete Requirement # 8A or 8B, Complete two of Requirement #9

## **ROBOTICS**

**Important note:** The Robotics Merit Badge requires the ability to logically program your robot. Counselors recommend previous exposure to programming to be successful with this badge. *While assistance will be given, counselors will not be teaching programming skills.* Cost: \$5 to cover replacement of materials in robotics kit.

**Prework:** Complete Requirement #1: **Safety.** Do the following:

a. Explain the most likely hazards you may encounter while working with robots and what you should do to anticipate, mitigate and prevent, and respond to these hazards. Describe the appropriate safety gear and clothing that should be used when working with robotics.  
b. Discuss first aid and prevention for the types of injuries that could occur while participating in robotics activities and competitions, including cuts, eye injuries, and burns (chemical or heat).

Complete Requirements #2a and #2b. **Robotics Industry.** Discuss the following:

a. The kinds of things robots can do and how robots are best used today.  
b. The similarities and differences between remote-control vehicles, telerobots, and autonomous robots.

Complete Requirement #3: **General Knowledge.** Discuss with your counselor three of the five major fields of robotics (human-robot interface, mobility, manipulation, programming, sensors)

and their importance to robotics development. Discuss either the three fields as they relate to a single robot system OR talk about each field in general. Find pictures or at least one video to aid in your discussion.

Complete Requirement #7: **Careers.** Name three career opportunities in robotics. 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.

Bring completed requirements in written form to class the first Saturday. Each discussion topic should be in your own words, typed, and a minimum of 200 words. Be sure to include your name, Troop, and District on the first page.

### **SAFETY:**

**Prework:** Read the section of the Safety Merit Badge pamphlet on "safety in your home." Use the check list in the book (or other similar list) to COMPLETE the following:

Complete Requirement #2a: Using a safety checklist approved by your counselor, make an inspection of your home. Explain the hazards found and how they can be corrected.

Be prepared to discuss the hazards found and methods to correct them. Bring completed checklist and hazard discussion to class the first Saturday.

### **SCHOLARSHIP**

**Prework:** Complete Requirement #1: Do **ONE** of the following:

- a. Show that your school grades have been an average of B or higher (80 percent or higher) for one term or semester.
- b. Show that for one term or semester you have improved your school grades over the previous period.

Complete Requirement #3: Get a note from the principal\* of your school that during the past year your behavior, leadership, and service have been satisfactory. (*\*Or from another school person named by the principal.*)

### **SCOUTING HERITAGE**

**Prework:** Complete Requirement #5: Learn about the history of your Troop or Scouting in your area. Interview at least two people (one from the past and one from the present) associated with your troop. These individuals could be adult Troop leaders, Scouts, troop committee members, or representatives of your troop's chartered organization. Find out when your Troop was originally chartered. Create a report of your findings on the history of your troop, and present it to your patrol or troop at a court of honor, and then add it to your troop's library. This presentation could be in the form of an oral/written report, an exhibit, a scrapbook, or a computer presentation such as a slide show. Bring your presentation to class on the first Saturday, along with a note from your Scoutmaster indicating that you have made your presentation to your troop or patrol.

Complete Requirement #8: Interview at least three people (different from those you interviewed for Requirement #5) over the age of 40 who were Scouts. Find out about their Scouting

experiences. Ask about the impact that Scouting has had on their lives. Share what you learned with your counselor.

## **SIGNS, SIGNALS AND CODES:**

**Prework:** None

## **SPACE EXPLORATION**

**Prework:** Complete Requirement #5: Do **TWO** of the following:

- a. Discuss with your counselor an unmanned space exploration mission and an early manned mission. Tell about each mission's major discoveries, its importance, and what we learned from it about the planets, moons, or regions of space explored. (***Report should be typed and a minimum of 300 words. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.***)
- b. Using magazine photographs, news clippings, and electronic articles (such as the Internet), make a scrapbook about a current planetary mission. (***Item should be a minimum of 6 pages. Be sure to include your name, Troop, and District on the first page. Bring to class on the first Saturday.***)
- c. Design an unmanned mission to another planet or moon that will return samples of its surface to Earth. Name the planet or moon your spacecraft will visit. Show how your design will cope with the conditions of the planet's or moon's environment. (***Report, excluding drawing and photos, should be written (typed preferred)***)

Scouts must have read the Space Exploration Merit Badge pamphlet and bring it to class. Classroom discussion will be centered on what you read in the book.

*\*There is a \$20 fee to cover the cost of rockets and supplies.*

## **SUSTAINABILITY**

**Prework:** Complete Requirement #1: Before starting work on any other requirements for this merit badge, write in your own words the meaning of sustainability. Explain how you think conservation and stewardship of our natural resources relate to sustainability. Have a family meeting, and ask family members to write down what they think sustainability means. Be sure to take notes. You will need this information again for Requirement #5.

## **SWIMMING**

**Prework:** *Must* be able to swim and swim well, this is NOT an instructional MB course

## **TEXTILES**

**Prework:** \$5 fee payable to the counselor in class on the first Saturday to cover materials. Bring 2 skeins of yarn to class on the first Saturday. Color of your choice.

## **THEATER**

**Prework:** TBD. Additional fee \$3.00

## **TRAFFIC SAFETY**

**Prework:** Complete Requirement #1a: Describe the top 10 mistakes new drivers frequently make. Name the two items you are required by law to carry with you whenever you operate a motor vehicle. Report should be at least 150 words, and preferably typed. Be sure to include name, Troop, and District on the front page. Bring to class on the first Saturday.

## **TRAILBLAZER CLASS**

**Scouts should bring their Scouts, BSA Book. This is for new scouts who have just joined a Troop and will teach them some initial scout skills- much like the trailblazer class at Summer camp.**

## **VETERINARY MEDICINE**

**Prework:** Complete Requirement #6. Do either 6A or 6B; **this class will be on 3/9/19 only.**

## **WEATHER**

**Prework:** Requirement #9: Do ONE of the following:

a. Make one of the following instruments: wind vane, anemometer, rain gauge, and hygrometer. Keep a daily weather log for one week using information from this instrument as well as from other sources such as local radio and television stations or NOAA Weather Radio. The following information should be recorded at the same time every day: wind direction and speed, temperature, precipitation, and types of clouds. Be sure to make a note of any morning dew or frost. In the log, also list the weather forecasts from radio or television at the same time each day and show how the weather really turned out.

Bring log and weather instrument to class on the first Saturday.

b. Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural Extension service office, or university meteorology instructor. Find out what type of weather is most dangerous or damaging to your community. Determine how severe weather and flood warnings reach the homes in your community.

Obtain a signed note on the stationery of the office visited that you completed this requirement and bring to the first class on Saturday.

Start Requirement #10a or 10b by completing the outline mentioned in this requirement. Bring a copy of the written outline to the first meeting for approval by the Counselor.

Complete Requirements #1-#5: These requirements must be completed before Scouts can participate in an off-site lab of about 4 hours where Scouts will perform welding in a shop environment. The off-site lab is required to complete the merit badge.

## **WILDERNESS SURVIVAL**

**Prework:** Complete Requirement #5. Bring to class with you. Complete Requirement #8 by the second class.

## **WOOD CARVING**

Cost: \$15.00 for carving knife

**Prework:** BRING TOTIN' CHIP CARD EACH SATURDAY.

Read the Wood Carving Merit Badge pamphlet before the first session.

**Note:** Recommended age 13 Sufficient hand strength and manual dexterity is required to be successful with this merit badge.

**ADULT TRAININGS WILL BE AVAILABLE AT NKY MBC!**