

ATTENTION LEADERS, PARENTS, AND SCOUTS

This document contains the Required Merit Badge Prework and Class Fees for the Merit Badge Challenge 2013 for all locations.

(Bethel, Fairfield, Dixie Heights, and Sycamore)

Please Note:

Not all merit badges shown below are offered at each event. Requirements reflect those found in the 2012 BSA Requirement Book, and are to be used for the MBC 2013.

Checklist for Parent & Scout regardless of merit badges to be taken:

1. Scout dress uniform is to be worn all Saturdays.
2. Scouts are expected to arrive on time and stay until dismissed by the counselor.
3. Bring current merit badge book for each merit badge taken.
4. On the first Saturday the Scout needs to bring the following:
 - Self addressed stamped envelope for each merit badge
 - Signed and filled out blue merit badge card for each merit badge
 - Completed Prework and Fees (see below)
5. Parent: After the first Saturday class, verify or observe your Scout writing the Counselor contact information in his Merit Badge Book.

Prework: The Prework is to be completed *BEFORE* the first day of the 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.

Impact of Plagiarism: Scouts are highly encouraged to use the Internet as an aid to earning merit badges. This information should then be written in the Scout's own words. Direct copying can result in the counselor returning the work as unacceptable.

Fees: Some merit badges have fees associated for supplies and are noted below.

Questions or issues with prework, contact Steven Fitzsimmons 859-384-1204 or fitzi@insightbb.com

The following new Merit Badge was released in 2012:

Search and Rescue

The following *new* Merit Badge was released in 2011:

Chess

The following *new* Merit Badge pamphlets were released in 2011:

- Chess
- Robotics

Revised

The following *existing* Merit Badge pamphlets were revised in 2011:

- Archery
- Astronomy
- Horsemanship
- Music
- Nuclear Science
- Sports

Merit Badges offered at the Merit Badge Challenge 2013, but not at all locations.

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.

Report should be a minimum of 250 words in length or more, preferably typed. Be sure to include Scout's name, unit, and District on the first page. Bring to class on first Saturday.

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 #5 and bring to class on 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.)

ART:

Prework: Complete the following requirement and bring to class on first Saturday. Use Art merit badge book as a guide. Be sure to record name, Troop, and District on all documents. See examples in Merit Badge pamphlet.

Requirement #1: Tell a story with a picture or pictures or using a 3-D rendering.

ASTRONOMY: New Requirements as of 2011

Prework: Read the appropriate pages in the current Astronomy merit badge booklet. Then complete Requirement #5, #6 a & #6b:

Describe the composition of the sun, its relationship to other stars and some effects of its radiation on the Earth's weather. Define sun-spots and describe some of the effects they may have on solar radiation. Report should be at least a total of 200 words in length, preferably typed. Front page needs to include Scout's name, Troop, and District. Bring to class on first Saturday. Refer to Merit Badge pamphlet.

AVIATION:

Scout will have the opportunity to fly in a small aircraft in the early spring. Fee: \$3.00 for model kit.

Prework: Complete Requirement #1 (a).

- 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 the Scout's own words. Illustrations, drawings, images and/or photo's may be copied and used for engine descriptions as well, but each engine needs to be described using the Scout's own words. All written descriptions for each kind of aircraft and each type of engine must total at least 100 words in length.

Paper should be preferably typed with cover page including Scout's name, Troop number, and District. Bring to class on first Saturday.

BUGLING:

This is a merit badge for a more experienced player. You need to have developed above average articulation skills. If you can't triple tongue you won't pass as this merit badge as this articulation is required in several of the calls. You also must also have sufficient stamina and playing range. If you can't easily play the "G" above the treble staff, you won't pass. These skills are typically not demonstrated in Jr. High players.

Scouts need to bring bugle, coronet, or trumpet to first meeting.

Requirement #6: (Start now). Serve as bugler in your troop for 3 months. Bring signed note from Scoutmaster when completed.

Requirement #3: (Practice the following calls) First Call, Reveille, Mess, To the Colors, Officers, Drill, Assembly, Recall, Fatigue, Church, Fire, Swimming, Retreat, Call to Quarters, Taps.

CHEMISTRY:

Cost: \$5.00 (Bethel and Dixie Heights High School)

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

Description should total at least 100 words in length, preferably typed. Be sure to include name and Troop number on first page. Bring both requirements to class on first Saturday.

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.

Report for Req. #1 and for Req. #2 (#2a and #2b combined) should be 200 words in length or more, preferably typed. Be sure to include Scout's name and unit and at the top of the page. Bring to class on first Saturday.

CINEMATOGRAPHY:

Prework: Complete Requirement #3(b) Explain to your counselor the elements of the zoom lens and three important parts.

Description should total at least 100 words in length, preferably typed with a labeled sketch of the zoom lens. Be sure to include name and Troop number on first page. Bring both requirements to class on first Saturday.

CITIZENSHIP IN THE COMMUNITY

Prework: Complete Requirement #3.a: Attend a city or town council or school board meeting, or a municipal, county or state court session.

For Requirement #3.b, prepare a short written report for your counselor. Choose one of the issues discussed at the meeting where a difference of opinions was expressed, and explain in your report why you agree with one opinion more than you do another one.

Complete Requirement #4.a: Choose an issue that is important to the citizens of your community; find out which branch of local government is responsible for this issue.

Complete Requirement #4.b: Interview one person from the branch of government you identified in requirement 4a. Ask what is being done about this issue and how young people can help.

For Requirement #4.c: Prepare a short written report for your counselor discussing what you learned in your interview.

Complete Requirement #5: Watch a movie that shows how the actions of one individual or group of individuals can have a positive effect on a community.

Prepare a short written report for your counselor discussing what you learned from the movie about what it means to be a valuable and concerned member of the community.

The short written reports above, preferably typed, should be in your own words, and at least 250 words in length. Bring to class on first Saturday. Be sure to include your name, Troop, and District on the cover page.

CITIZENSHIP IN THE NATION:

Prework: Complete Requirement #8: Name your two US 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.)

CITIZENSHIP IN THE WORLD:

Prework: Complete Requirement #4c and bring to class on first Saturday:

Requirement #4c: Select TWO of the following organizations and describe their role in the world.

1. The United Nations
2. The World Court
3. World Organization of the Scout Movement
4. The World Health Organization
5. Amnesty International
6. The International Committee of the Red Cross
7. CARE

Descriptions should total at least 200 words in length, preferably typed. Be sure to include name and Troop number on first page. Bring to class on first Saturday.

***Counselor may send World Event for Scout to research for class room discussions.

COIN COLLECTING:

Prework: Complete Requirements #2a –f in written form (20 words per items) and #5a-c in written form (50 words each for #5b and #5c). Please be sure to include your name and Troop number on your paper. Bring to class on first Saturday.

Begin Requirement: # 6, #7, and #9

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:

Pre-work: 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.

The short written report, preferably typed, should be at least 200 words in length. Bring to class on first Saturday. Be sure to include your name, Troop, and District on the cover page.

Stamp and coin collecting are excluded from eligibility for this merit badge.

COMMUNICATIONS:

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.

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 first Saturday.

Bethel & Fairfield High School Counselor Request: It is suggested the Scout also start Requirement #8 (Plan and conduct a Court of Honor) prior to the first session.

COMPUTERS:

Prework: Complete Requirement #2: Explain how the invention of the computer has affected society, science, and technology. In your explanation, give a short history of the computer.

Report should be 200 words in length or more, preferably typed. Be sure to include Scout's name, unit, and District on the first page. Bring to class on first Saturday.

Prework-Fairfield: Complete Requirement 6g: Using a digital camera, take a picture of a troop activity. Transfer the picture file to a computer and use photographic software to make it small enough to send easily as an e-mail attachment. Then, using a computer connected to the Internet (with your parent's permission), send an e-mail to someone you know. In your message, include the photograph as an attachment. Verify that the person received your e-mail and was able to view the attachment.

Bring a printed copy of the email sent with the attached picture and the reply email confirming that the person was able to view the attachment.

PLEASE NOTE: Per BSA policy all electronic communications between youth and adult, such as email, must be copied to another authorized adult other than the intended recipient. For more information on this policy go here: <http://www.scouting.org/sitecore/content/Home/Marketing/Resources/SocialMedia.aspx> **Any communications to the Merit Badge Counselor that do not follow this policy will be ignored and promptly deleted.** This also means that if you choose an adult BSA leader as your friend for requirement 6g, you will need to copy that email to another adult as well.

The Computers Merit Badge course syllabus for 2013 for the Fairfield High School location may be downloaded prior to class here: https://server.tarnyinc.com/Computers_syllabus_MBC2013.pdf

COOKING:

Prework: At the time of printing of this document the cost for this badge was not known for Dixie Heights.

CRIME PREVENTION:

Prework: Requirement#2: Prepare a notebook of newspaper and other clippings that address crime and crime prevention efforts in your community.

A minimum of 10 pages is suggested. Be sure to put your name, Troop, and District on this and the other reports for this merit badge. Bring to class on first Saturday.

DENTISTRY:

Prework: Complete Requirement #2a: Tell or write about what causes dental decay and gum disease. Tell what each of the following does: bacterial plaque, sugars, and acid.

Report should be at least 150 words in length, preferably typed. Be sure to put name, Troop, and District on front page. Bring to class on first Saturday.

DISABILITIES AWARENESS:

Prework: Complete Requirement #7: Name five professions that provide services to people with disabilities. Pick one that interests you and find out the education, training, and experience required for this profession. Discuss what you learn with your counselor, and tell why this profession interests you.

Report should be at least 150 words in length, preferably typed. Be sure to put name, Troop, and District on front page. Bring to class on first Saturday.

DOG CARE:

Prework: Start on requirement #4 immediately: 60 Day Prior

Refer to Merit Badge pamphlet. Report should be signed by a parent with name, Troop, and District on the front page.

DRAFTING:

Prework: None

ELECTRICITY:

Prework: Requirement #2: Complete an electrical home safety inspection, using the checklist found in the merit badge pamphlet (p.43-45) or a checklist approved by your counselor.

Requirement #8: On a floor plan of a room in your home, make a wiring diagram of the lights, switches, and outlets. Show which circuit breaker protects each one.

Requirement #10: Be prepared to explain or write definitions for the following terms - volt, ampere, watt, ohm, resistance, potential difference, rectifier, rheostat, conductor, ground, circuit, and short circuit. Hint: study merit badge pamphlet pages 22, 24-27, and 31.

Use the Electricity Merit Badge pamphlet, and bring it to class.

ELECTRONICS:

Cost: At the time of printing of this document the cost for this badge was not known for Dixie Heights.

Prework: **Scouts will purchase/secure the Electronics Merit Badge Book in advance and have it available at all classes.**

1. Scouts will purchase/secure the following miniature electronics tools: Needle nose pliers, side cutting pliers, straight blade screwdriver, Phillips head screwdriver, and wire stripper.
2. Additionally, the Scouts will purchase/secure: solder wicking, small spool of #18 or #20 wire, and 15 watt electronics soldering iron, small roll of 60/40 rosin core solder.
3. Complete Requirement #6: Find out about three career opportunities in electronics that interest you. Discuss with and explain to your counselor what training and education are needed for each position. Report should be a minimum of 200 words, preferably typed. Be sure to include Scout's name, Troop, and District on the first page. Bring to class on first Saturday.

EMERGENCY PREPAREDNESS:

Prework: Complete Requirements #1 and #8c.

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.

Requirement #8c: 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 Prep merit badge book.) Bring the required number of empty water containers.

ENERGY:

Prework: Complete Requirement #1(a): 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.

Discussion should be a minimum of 100 words, preferably typed. Be sure to include Scout's name, Troop, and District on the first page. Bring to class on first Saturday.

ENGINEERING:

Prework: Requirement #2: Select an engineering achievement that has had a major impact on society. Use the resources available to you to research it. Tell your counselor about the engineer(s) who made it possible, the special obstacles they had to overcome, and how this achievement has influenced the world today.

Discussion should be a minimum of 200 words, preferably typed. Be sure to include Scout's name, Troop, and District on the first page. Bring to class on first Saturday.

ENTREPRENEURSHIP:

Prework: No Prework

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.

FINGERPRINTING:

Prework: None

FIRE SAFETY:

Prework: Read the Home Safety pages in the Fire Safety merit badge book. Then 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.

Also do 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 first Saturday.

FIRST AID:

Cost: \$5.00 (Bethel, Dixie Heights, Fairfield, and Sycamore)

Prework: Due to the fact that we hold class the entire morning, it is recommended the Scouts bring a small water bottle containing only water. Bring the M.B. book to class each day. In addition, the following requirements must be completed prior to beginning class:

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

GENEALOGY:

Prework: Req. #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 the first class.

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

GEOCACHING:

Prework: Req. # 7 With your parent's permission*, go to 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. Ask your parent for permission and help before you do so.

Req. # 9: Plan a geohunt 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.

Discussion should be a minimum of 150 words, preferably typed. Be sure to include Scout's name, Troop, and District on the first page. Bring to class on first Saturday.

Fairfield counselor requests for Requirement 5 that the Scout choose one of the options in Requirement 5 prior to coming to the first session since they will divide into groups according to the options.

INDIAN LORE:

Prework: Start Req. #2c: Make an authentic model of a dwelling used by any Indian tribe, group, or nation and bring to first class.

INVENTING:

Prework: Review the entire MB Pamphlet

2a. Interview an inventor. Write report.

5. Bring a piece of camp equipment with ideas of how to improve it. This requirement will be discussed in Session 2. However, it is important to prepare for the discussion before Merit Badge Challenge starts.

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 6a, 6b, 6c

6a Interview potential users of invention; determine needs. Describe invention and how it would help solve problem, including sketch. Must be done by session 2.

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

JOURNALISM:

Sycamore MBC only: scouts will go as a group to a TV station with counselor—Not as Prework.

Prework: Requirement #2 (Do either A or B): Scouts choose either print journalism or broadcast journalism and schedule with a local newspaper or magazine or radio or TV station to make a visit to learn about the business of Journalism. Specifically:

2A #2: Visit a newspaper or magazine office. Ask for a tour of the various divisions (editorial, business, and printing). During your tour, talk to an executive from the business side about management's relations with reporters, editors, and photographers and what makes a "good" newspaper or magazine.

2B #2: Visit a radio or television station. Ask for a tour of the various departments, concentrating on those related to news broadcasts. During your tour, talk to the station manager or the station management executive about station operations, particularly how management and the news staff work together, and what makes a "good" station. If possible, go with a reporter to cover a news event.

LAW:

Prework: Complete Requirement #3: Tell what civil law is; tell what criminal law is. Tell the main differences between them. Give examples of each.

Bring Requirement #3 completed to the first class. Report should be at least 150 words, preferably typed, and list 3 examples of each. Be sure to include your name and Troop on the first page.

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.

Report should be at least 200 words in length excluding the oaths, and preferably typed. Be sure to include name, Troop, and District on the front page. Bring to class on first Saturday.

MODEL DESIGN AND BUILDING:

Prework: Complete Requirement #2: Explain the uses for each of the following types of models: (1) architectural, (2) structural, (3) process, (4) mechanical, and (5) industrial. Do research into the different types of materials that could be used in making these models.

Report should be at least 200 words, and preferably typed. Be sure to include name, Troop, and district on the front page. Bring to class on first Saturday.

MUSIC:

Important note regarding requirement #1. The playing and site-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 (those with less than two years experience). Performances will take place in sessions 2 and 3.

Prework: Requirement #3: Do TWO of the following:

- a. Go to a classical or semi classical musical performance or listen to three hours of such programs on radio, television, compact discs, tapes, records, or videos. Report what you heard. Name the composers, artists, and conductors. Know the story of any program music or opera you heard. Discuss how you feel about the music. Report should be typed and at least 300 words. Scout's name, Troop and District should appear on the first page.
- b. Interview your parents and grandparents about music. Find out what the most popular music was when they were your age. Find out what their favorite music is now, and listen to three of their favorite tunes with them. How do their favorites sound to you? Had you ever heard any of them: Play three of your favorite songs for them, and explain to them why you like these songs. Ask them what they think about your favorite music. Report should be typed and at least 300 words. Scout's name, Troop and District should appear on the first page
- c. Serve for six months as a member of a school, church, Scout unit, or other local musical organization, or perform as a soloist in public six times. Bring note from Scout leader, parent, church leader, or teacher verifying the completion of this requirement.
- d. List five people who are important in the history of American music and explain to your counselor why they continue to be influential. Include at least one composer, one performer, one innovator, and one person born over 100 years ago. Report should be typed and at least 300 words. Scout's name, Troop and District should appear on the first page.

NUCLEAR SCIENCE:

Prework: Complete Requirement #1b: Describe the radiation hazard symbol and explain where it should be used. Tell why and how people must use radiation or radiation materials carefully.

Report should be at least 150 words, preferably typed. It is suggested a color sketch of the hazard symbol be included. Be sure to include name and Troop number on your report.

PAINTING:

Prework: None

PERSONAL MANAGEMENT:

Prework: Immediately start Req. #2a: Prepare a budget reflecting your expected income (allowance, gifts, wages, expenses, and savings. Track your actual income, expenses, and savings for 13 consecutive weeks. (It is suggested you use the forms provided in the merit badge pamphlet.)

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

PETS:

Prework: Immediately start Req. #1: Present evidence that you have cared for a pet for four months. Work done for other merit badges cannot be used for this requirement.

PHOTOGRAPHY:

All: Bring camera with 3 rolls of film, or 3 disposable cameras, or digital camera to first class. (NO camera phones.)

Prework: Complete Requirement 3: Discuss with your counselor the differences between a film camera and a digital camera. List a least five advantages and five disadvantages of using a digital camera versus a film camera.

Discussion should be a minimum of 150 words, preferably typed. Be sure to include Scout's name, Troop, and District on the first page. Bring to class on first Saturday.

PLUMBING

Prework: Complete the following requirements:

Requirement #2: Do the following (use info in plumbing merit badge book as a guide):

- a. Make a drawing and explain the way the hot- and cold- water supply system in your home or that of a neighbor works. Tell how you would make it safe from freezing (50 word minimum)
- b. Make a drawing and explain the drainage system of the plumbing in a house. Show and explain the use of drains and vents. (50 word minimum)

Requirement #8: Do the following (bring a signed note from adult verifying that the Scout has done this requirement)

- a. Replace a washer in a faucet.
- b. Clean out a sink or lavatory trap.

PUBLIC HEALTH:

Fairfield: Two field trips are associated with this merit badge for requirements #5a and 5b.

Prework: Complete Requirement #2 a and 2b: Do the following:

- a. Explain the meaning of *immunization*
- b. Name five diseases against which a young child should be immunized and two diseases against which you should be immunized periodically.

Bring completed requirement in written form to first class meeting. Be sure to include name and Troop number on the first page.

PUBLIC SPEAKING:

Prework: None, but be prepared to give an impromptu talk of at least 2 minutes at the first session.

PULP AND PAPER:

Cost: \$2.50 for papermaking kit (Fairfield and Sycamore):

There will be a field trip outside the regular MBC meeting times (Requirement #7).

Bethel: No cost and no field trip planned.

Prework: Requirement #6 (Bethel, Fairfield, and Sycamore): Make a list of 15 pulp or paper products in your home. Share samples of 10 such products. Bring list and products to first class on Saturday.

RADIO

Prework: 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 first Saturday.

RAILROADING:

Cost is \$10 to cover 1 kit and merit badge book (if you don't already have it) payable at first meeting. The cost is being partly subsidized by National Model Railroad Assn.

Prework: None

READING:

Prework: Start Requirements #1b, #1c, and #1d

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.

Requirement #1c. Find the books in the library catalog. With the counselor or a librarian's assistance, locate the books on the shelves.

Requirement #1d. Read each book. Keep a log of your reading that includes the title of the book, the pages and chapters read, the date you completed them, and your thoughts about what you have read so far. Discuss your reading with your counselor. Using your log as a reference, explain why you chose each book and tell whether you enjoyed it and what it means to you.

If possible start on Requirement #4.

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: \$10 to cover replacement of materials in robotics kit.

Prework: Complete the following requirements:

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).

Requirement #2. **Robotics Industry.** Do 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.

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.

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 first class meeting. Each discussion topic should be in your own words, typed, and a minimum of 200 words. Be sure to include name and Troop number on the first page.

SAFETY:

Prework: Read the section of the merit badge book on "safety in your home". Use the check list in the book (or other similar list) to COMPLETE the following:

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 first class.

SCHOLARSHIP:

Prework: Complete Requirements #1 and #3 and bring evidence to the first meeting:

Requirement #1: Do ONE of the following:

1. Show that you have had an average grade of 82 (B) or above for one term or semester.
2. Show that for one term or semester you have improved your school grades over the previous period.

Requirement #3: Get a note from the principal of your school* that during the past year your behavior, leadership, and service have been better than average.

* Or from another school person named by the principal.

SCOUTING HERITAGE:

Prework: Complete Requirements #5 and #8 and bring to the first meeting:

Requirement #5: Learn about the history of your unit 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 unit leaders, Scouts, troop committee members, or representatives of your troop's chartered organization. Find out when your unit 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 the first class, along with a note from your scoutmaster indicating that you have made your presentation to your troop or patrol.

Requirement #8: Interview at least three people (different from those you interviewed for Requirement #5) over the age of 50 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.

Prepare a written report of your findings of at least 500 words and bring it to the first meeting.

Requirement #4:

- a. Attend either a BSA national jamboree, OR world Scout jamboree, OR a national BSA high-adventure base. While there, keep a journal documenting your day-to-day experiences. Upon your return, report to your counselor what you did, saw, and learned. You may include photos, brochures, and other documents in your report.
- b. Write or visit the National Scouting Museum in Irving, Texas.* Obtain information about this facility. Give a short report on what you think the role of this museum is in the Scouting program.
 - If you visit the BSA's national traveling tour, Adventure Base 100, in 2010, you may use this experience to fulfill requirement 4b. Visit www.adventurebase100.org (with your parent's permission) for the schedule and for more information.

SCUBA:

Prework: At the time of printing of this document the cost for this badge was not known for Dixie Heights.

SEARCH AND RESCUE:

Prework- Bethel & Fairfield: Requirement #5

Go to WWW.FEMA.gov

<http://www.fema.gov/training-0>

1. Click on "NIMS Courses" (third item down under Training)
2. Scroll down under "Emergency Management Institute" and click on "IS-100b (ICS 100) Introduction to Incident Command System"
3. Click on "Download Final Exam Questions" (on the right under Take Final Exam) and print it off. (This will help you prepare in taking the final exam at the end of the course and use it as a study guide along with the course).
4. Click on "Interactive Web-based Course" (on the upper left under Take This Course) and start taking the course.
As you go through the course mark your exam. When you are finished with the course and before you do the final exam click on and download the student manual. Review and check your answers.
5. Now take your exam. Good Luck. Note: The finale exam is the same as the one you printed off

When completed, you will get an email confirming you have completed the course, scored at least 75% on exam. You will be able to print off your certificate off. Bring it to the first session at Merit Badge Challenge.

Questions contact: Tony Agoston

E-mail: aagoston@aol.com

tagoston@roadrunner.com

Cell phone: 513-377-1090 You may have to leave a message

SPACE EXPLORATION:

Prework: Requirement # 2 Design a collector's card, with a picture on the front and information on the back, about your favorite space pioneer. Share your card and discuss four other space pioneers with your counselor.

Complete Requirement #5 and bring to first class. Be sure to put name, unit, and District on all documents.

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 first Saturday.)
- b. Using magazine photographs, new 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 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) and be a minimum of 200 words. Be sure to include your name, Troop, and District on the first page. Bring to class on first Saturday.)

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

SURVEYING:

Prework: None

TRAFFIC SAFETY:

Prework: Complete Requirements #1a and bring evidence to the first meeting:

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 first Saturday.

VETERINARY MEDICINE:

Prework: None

WEATHER:

Prework:

Requirement #8: Do ONE of the following:

- a. Make one of the following instruments: wind vane, anemometer, rain gauge, hygrometer. Keep a daily weather log for 1 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 first class on Saturday.

Requirement #9: Start requirement #9(a) or 9(b) by completing the outline mentioned in this requirement. Bring a copy of the written outline to the first meeting for approval by the Counselor.

WOOD CARVING:

Cost: \$12.00 for carving knife (Dixie Heights)

Cost: \$15.00 for carving knife (Fairfield, Sycamore, and St. Thomas More)

Prework: Bring proof of Totin' Chip completion.

Counselors recommend reading the Wood Carving Merit Badge pamphlet before the first session. Counselors recommend sufficient hand strength and manual dexterity to be successful with this badge.

WOODWORK:

Prework: Complete Requirement #2 (a). Describe how timber is grown, harvested, and milled. Tell how lumber is cured, seasoned, graded, and sized.

Report should be at least 200 words in length, preferably typed. Be sure to include Scout's name, unit, and District on the first page. Bring to class on first Saturday.