Application for TI-2: Remote Sensing & Data Analysis

July 6-10, 2020, ARRL Headquarters - Newington, CT

Application Deadline is May 1, 2020

ARRL membership required!

Current ARRL membership is required to attend ARRL's TI-2. You can join or renew your membership online at www.arrl.org/join. Support the future of ham radio!

Section 1 - Personal Information

Be sure to include contact information that we can use to communicate with you during school and summer months (phone number, address, and email). Make sure the email address(es) you provide will accept emails from @arrl.org.

Name _____ Ham Radio Call Sign (required) _____

Home Mailing Address _____

City, State, Zip Code _____

Home Phone _____ Cell Phone _____

Home email address _____

School email address _____

Emergency Contact _____

Relationship _____ Phone _____

Section 2 - School or Institution Information

School District _____

Name of School _____

School Mailing Address 1 _____

School Mailing Address 2 _____

City, State, Zip _____

School Phone _____ School Federal Tax ID# _____

Total Number of Students in School (all grades) _____

Grade Level(s) in School: K 1 2 3 4 5 6 7 8 9 10 11 12 C

Grade Level(s) You Teach: K   1   2   3   4   5   6   7   8   9   10   11   12   C

Subject(s) Taught _____

Extracurricular Activities (Clubs, etc.) _____

Estimated Number of students involved in your STEM-related clubs and classes _____

School Demographic Information

School classification (choose one from each row)

Urban   Suburban   Rural   Other _____

Public   Parochial   Private   Other _____

Percentage of overall student population that is

Eligible for free or reduced-price lunches _____%

Eligible for Title 1 Services _____%

Receive Special Education services _____%

Section 3 - Essay / Video Questions

Reply to the following questions in written form or by addressing the questions in a video. Please limit the total length of the video to no more than six minutes. You'll find instructions for submitting the video at the end of this application form.

1. When and where did you attend ARRL's Introduction to Wireless Technology (TI-1)? Instructor's name?

2. Beyond the experience you have had with the BASIC Stamp in TI-1, what level of experience have you had with microcontrollers (i.e. Arduino, BASIC Stamp, Microbit, Picaxe, etc.)?

3. Describe in detail any ways you have used the content presented in the TI-1, directly or indirectly, to enhance your instruction. Feel free to include video of classroom activities or other documentation of instruction with students that resulted from your participation in the TI-1. The TI-2 instructor may reach out to you if clarification is needed.

4. What do you hope to learn from TI-2? How do you plan to use the content and training provided in the Remote Sensing Teachers Institute?

5. Where do you see yourself professionally in 3 years? in 5 years?

6. Have you ever applied for or hosted an ARISS radio contact?   Yes ❐ No ❐

Section 4 - Pre-Institute Survey

The purpose of this survey is to assess participants' familiarity with the material to be covered at the Teachers Institute so that we can adjust the curriculum and presentation of the content during the Teachers Institute to better meet your needs. Your honest and considered responses on this survey will help us provide the best possible learning experience for everyone. We will not base your selection for the Teachers Institute on these answers.

Please use the following rating scale to evaluate your ability to explain the topics below:

1 – little knowledge

2 – some very basic knowledge

3 – working knowledge

4 – some experience teaching this topic

5 – competent to teach in this area

	Describe Local and global climate patterns and those factors that influence them
	Define and calculate Buoyancy
	Graph and Interpret data sets in a spreadsheet application like Excel or Google Sheets (including using simple formulas for calculations)
	Find coordinates of locations in different formats (e.g. ddd.ddddd, ddd mm.mmm, ddd mm ss.s) or finding locations given the coordinates.
	Apply basic electronics and soldering skills (e.g. voltage divider circuit)
	Program Arduino
	Program Parallax Basic Stamp
	Use APRS
	Use an SDR
	Track and use Amateur Radio Satellites

ARRL The national association for AMATEUR RADIO®

Section 5 - Teachers Institute requirements and acknowledgment

Check the boxes to acknowledge your understanding and acceptance of the following Teachers Institute requirements.

❏ Each participant must bring a laptop computer that meets the following specifications:

Windows
Windows 8 or later operating system At least two available USB 2.0 or 3.0 ports*

Macintosh
macOS 10.7 or newer operating system
At least two available USB 2.0 or 3.0 ports*

Some newer laptops have only USB type-C ports. For these, you will need a USB type-C to USB 3 Type A adapter or hub.

Apple laptops running Windows 8 or newer under Boot Camp, Parallels Desktop, or VMWare Fusion are acceptable if they meet all other requirements. ***Laptops, netbooks, Chromebooks, and tablets running other operating systems are not acceptable.***

USB type-C   **USB 2.0**   **USB 3.0**   **USB type-C (left)**
USB 3.0 (right)

Make and model of laptop you will bring: _____

Operating System and Version: _____

❏ **Volt-Ohm Meter**. Bring a volt-ohm meter and probes. You should be familiar with the operation of the meter. The meter you received during TI-1 is more than adequate. Make sure it works (make sure the current fuse isn't blown) and that you have a good battery in it.

❏ **Parallax BOE-BOT®**. Bring the BOE-BOT robot you received during your TI-1. You will need the appropriate cables and software installed on your computer to program the bot (BASIC Stamp or Arduino). Review programming your Bot and ensure you have fresh batteries and that the theirs (the rubber on the wheels) are in good shape.

❏ **Scientific Calculator**. Bring a scientific calculator that you know how to operate. You are welcome to use the Windows calculator if you are familiar with it.

❑ Participants must be able to install programs and drivers on the computer. Many school computers have security features that make them unusable during the Teachers Institute. If you are going to use a school computer, make sure you have FULL access to the computer, and that you test the accessibility before coming to the Institute.

❑ Participants are expected to pay for travel, hotel and meal expenses and will submit an expense reimbursement form at the conclusion of the Teachers Institute. Receipts are required for hotel and travel expenses. Expect approximately 2 weeks to process your reimbursement.

❑ Reimbursable expenses include up to $600 for travel, lodging for up to 5 nights for in-state participants and 6 nights for out-of-state participants at an ARRL designated hotel, and $35 per diem for meals (no meal receipts required). To receive full reimbursement, participant must attend all 5 days of Institute classroom activities.

❑ Participants traveling from out of state should arrive the day before the Institute, and should schedule departure after 6 pm on the final day of the Institute or the day after the Institute. Early departures on the last day of the Institute to meet flight schedules are not acceptable, as important material is covered right up to the end of the final day. Participants who live within a 4 hour commute to the classroom are expected to provide their own transportation and will be reimbursed for mileage and 5 nights of hotel accommodations. Participants who live less than a 30 minute drive from the classroom are expected to commute daily and will be reimbursed for mileage. Accommodations for additional days or at locations other than the designated hotel are the responsibility of the participant.

❑ Participants are expected to attend Teachers Institute sessions from 8 a.m. to 4 p.m. each day. Attendance at optional evening activities, if any, is encouraged but not required.

❑ Each participant must complete a workshop evaluation at the conclusion of the workshop. Participants may be asked to provide feedback in the future about the training and resources provided during the Institute, and their effectiveness in student learning.

❑ Approved expenses and instructional resources provided by the Teachers Institute are paid for by donations to the ARRL Education & Technology Program Fund, and do not come from ARRL membership dues.

❑ The Teachers Institute is a professional development activity and therefore children would not be appropriate at the Teachers Institute. There are no accommodations for child care.

Section 6 – Signatures

I have read the above requirements and will follow the ARRL Teachers Institute Travel and Reimbursement Guidelines and Procedures.

_____   _____
Applicant's Name (print)   *Administrator's Name (print)*

_____   _____
Applicant's Signature   *Administrator's Signature*

Section 7 - Payment Information

Your application cannot be reviewed until you have submitted the $100 enrollment fee. Should you not be selected to participate in this year's Teachers Institute, you will be refunded the $100 enrollment fee by June 1st. If you are selected, enrollment fees cannot be refunded after June 1st.

To submit your enrollment fee online, please go here: https://www.arrl.org/teachers-institute-payment
Or you can mail a check to:
ARRL Education & Technology Program
Attn: Ally Flynn
225 Main Street
Newington, CT 06111-1494
Note: If you are not currently an ARRL member, you may also mail an additional $49 with your application or simply apply online here: http://www.arrl.org/membership

Section 8 - Submitting your application

Refer to the application checklist to be sure you submit all required items. All components of your completed application and enrollment fee must be received at ARRL by the application deadline of **May 1, 2020**. To submit video as part of your application, refer to the instructions in **Section 10**.

By Mail - Print your completed and signed application (Pages 1-6), and send it with the cover letter to:
ARRL Education & Technology Program
Attn: Ally Flynn
225 Main Street
Newington, CT 06111-1494

FAX - You may fax the signed application, survey, and cover letter to (860) 594-0259. Please include a fax cover sheet addressed to **Attn: Ally Flynn**.

Email - scan and send your cover letter, signed application, and completed survey electronically to Ally Flynn at **aflynn@arrl.org**. Please include your name in the document title. For example: "JSmith TI-2 application". We prefer documents in PDF format.

Section 9 - Admission decision announcements

We will make every effort to advise you of our decision on your application and your session assignment by May 15. We will contact you at the email address you have provided. If you have not heard from us by that date, please feel free to contact us via email. Once selections are made, you will be emailed a direct link to reserve your accommodations at the designated hotel. We suggest you make travel arrangements as soon as you're are notified. Please direct questions regarding your application for the Teachers Institute to aflynn@arrl.org or call Ally Flynn at (888) 277-5289 x367 or (860) 594-0367.

Section 10 - Instructions for Submitting Video

You may post your video to YouTube, Dropbox or Google Drive, then share the link in an email to Ally Flynn at aflynn@arrl.org along with your application and cover letter.

via YouTube
- If you're not familiar with posting video to YouTube, here's where you'll find an explanation of the YouTube upload process: https://support.google.com/youtube/answer/57407?hl=en
- YouTube does not allow you to use your webcam directly to make a video, but there are alternatives: https://support.google.com/youtube/answer/57409?hl=en
- If you do not want your video to be public, you may post your video as "unlisted". Here's how: https://support.google.com/youtube/answer/157177?hl=en

Send the link to your YouTube video in an email to Ally Flynn at aflynn@arrl.org along with your application and cover letter. Please indicate in the subject line "Teachers Institute Video Application" and your first and last name.

Section 11 - Completing and signing your PDF form

Acrobat DC (Mac or Windows) - Open this document in Acrobat Reader or Acrobat DC. In the Tools Panel, choose Fill & Sign. Click in the first empty field and enter the requested information. Use **tab** to move to the next field. To add signatures to a field, click the Sign button at the top of the window, choose the signature, and move it to the appropriate location on the form.

Preview (Mac) - Open the document in Preview, click in the first empty field and enter the requested information. Use **tab** to move to the next field. To add signatures to a field, choose **Tools > Annotate > Signature** and choose (or create) your signature.

Please include the following to complete your application:

☐ Cover letter on school letterhead stating your desire to attend, signed by you and a school administrator.

☐ Completed application form, including essays or video, self-assessment survey, and signatures. (Pages 1–6 of this document)

☐ Check or online credit card payment for the $100 enrollment fee, payable to the ARRL Education & Technology Program. If you are not accepted, the enrollment fee will be refunded.

☐ OPTIONAL - Check or online credit card payment for $49 for ARRL membership.