AKA SCIENCE

IMPACT NW

PROGRAM INFORMATION
2022-2023

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AKA Science is funded by our generous community partners.

AKA Science: Program Overview

Since 1996, AKA Science has been improving attitudes about science and increasing science knowledge for students in grades K-8 through fun, hands-on, inquiry-based after-school science programming.

We offer a rotating selection of science curriculum topics: Biology, Chemistry, Physics, Earth Science, Forensic Science, Engineering, and Environmental Science. Every topic comes in two versions: grades K-3 and grades 4-6.

AKA Science packages are filled with engaging, field-tested, NGSS aligned activities that encourage students to ask questions, experiment, build community, and explore the wonders of science together. Students get to take home much of what they create; reinforcing what they've learned and encouraging them to share their experiments with family and friends!

The AKA Science package:

- **Field-tested curriculum** structured as 8 one-hour lessons, with flexibility to extend or condense
- **A supply kit** containing all necessary materials for 12-15 students (except water and scissors, which each site provides)
- **Required training** of a Class Leader (CL) to facilitate the class. Each site recruits, screens, supervises, and compensates its CL. All new CLs are required to attend a 1.5-hour program orientation immediately followed by a 2-hour "topic-training" that reviews the specific activities they'll be teaching during that term. Returning CLs are not required to attend orientation more than once but are required to attend the topic-training portion UNLESS they've taught that particular AKA Science topic before.

AKA Science Participant Testimonials (2018-2019):

"I like that it is fun and helps me learn about science!" - 5th Grader

"Our teacher was kind, funny, and most of all, fun! All of the experiments were fun and I am really looking forward to the next class if I can get in! I loved AKA Science! It was AMAZING!" - 4th Grader

"I liked that we got to take cool stuff home so I could teach my brothers and sisters the stuff that I learned and show them what I made and let them play with it." - 4th Grader

"My kids got so excited when they walk in the room and see fun things spread out. Having so many tools and so many opportunities for them to touch things, work with things, move things around, grab things, visualize. It was incredible... It's a very tangible class which is imperative for kids this age."
- Rose City Park Class Leader

"AKA Science is always successful. Students are engaged and asking questions and showing genuine curiosity about the activities and subject matter. I love when I see students during the school day and they ask me what we are doing next in AKA Science... They are excited about learning and doing science!" - Anonymous Class Leader

AKA Science: Class Catalog

Course offerings (we offer two topics each year, rotating on a 4-year cycle):

1. **Biology: Call of the Wild!**
   Wake up to the call of the wild! Hitch a ride like a seed pod, dissect an owl pellet, and make yeast eat and breathe! From shark teeth to camel feet, from blubber to camouflage, living thing are full of surprises. Pollinate like a bee, eat like a frog, and unlock the science of DNA!

2. **Cool Chemistry: Fizz, Pop, WOW!**
   Want to get a reaction? Come join us as we explore the magical world of chemistry! Transform regular liquids into a bubbling lava lamp and make a container burst into the air! Whip up some instant snow, create fantastic flubber, and experiment with awesome acids and bases! You'll be amazed as we reveal solar reactions, get fizzy with elephant toothpaste, and uncover what makes chemistry so cool!

3. **Earth Science: Earth Rocks!**
   Let's get ready to rumble! Shake things up and watch the earth dance before your eyes! Catch the wind, create a mini tornado, and witness the power of plate tectonics. Discover hidden rock formations, pull pigment from stone, and make a volcano erupt!

4. **Easy Engineering: Building Bonanza!**
   All aboard as we engineer a whole world inside the classroom! Construct a bridge made out of popsicle sticks, build a tower that defies all odds, make a Ferris wheel spin, and get creative with a mechanical hand! You'll be racing DIY cars, designing rescue devices, learning life-saving knots, building an earthquake-proof structure, and building a flood-ready raft. Join the journey, use ordinary materials in genius ways, and discover how engineering turns ideas into reality!

5. **Environmental Science: Power to the Planet!** ***(COMING NEXT YEAR!!)***
   Help save the world with science! Test water for pollution, learn the secrets of soil, watch a seed grow, and become a backyard wildlife expert. We'll be turning trash into treasure, building homes for the future, cleaning up an oil spill, and harnessing the sun's energy. Learn environmental stewardship while innovating solutions to the problems our planet is facing!

6. **Forensic Science: Crack the Case!**
   Calling all junior detectives and budding investigators! Do you smell a clue? Join us for a science sleuth showdown as we dust for fingerprints, track down suspects, sniff out fakes, explore DNA, and uncover the truth! Investigate evidence--from powdered paint to mystery goo. Reveal secret messages, spot puzzling patterns, use chemistry to find answers, and hunt for clues as we work together to solve curious cases and mystifying mysteries!

7. **Fun Physics (I) - Color & Light: Lights Alive!**
   Light up your world with the science of color and light! Bend mirrors, make a kaleidoscope, and explore how things glow in the dark! Build a camera obscura, break light into rainbows, create your own sunset, and uncover the secrets of 3D!

8. **Fun Physics (II) - Forces & Motion: Incredible Inventors!**
   Catapults, coin tricks, and circuits--oh my! Power up for fun as you explore the world of gravity, energy, and motion. Make magic of magnets, build a drag racer, and make a boat paddle itself! Sink a diver in a bottle, send a balloon rocket zooming, and design a marble speed track!

AKA Science: Cost and Eligibility

Portland Children's Levy:

AKA Science is funded by Portland Children's Levy (PCL). PCL was passed by Portland voters in 2002 and renewed in 2008 and 2013, to make the needs of our community a higher priority. The Levy's mission is to prepare children for school, support their success in and out of the classroom, and reduce racial and ethnic disparities in children's well-being and school success. Programs are funded through a competitive application process. Supported programs must be cost effective and have a proven record of achieving positive results.

AKA Science Program Eligibility:

AKA Science packages are available, while supplies last, on a modified first-come, first-served basis. Registration takes place via an online Google Form emailed to all sites prior to term. Once the Form closes, we determine which sites are eligible to offer a class by giving priority to sites with:

- Returning Class Leaders
- New, but confirmed Class Leaders
- High Free & Reduced Lunch rate
- High percentage of students-of-color
- East County location

Most sites requesting a class in Winter and Spring terms are eligible. However, due to limited supplies in Summer and Fall terms, we often have a waitlist where the above criteria are applied. Eligible sites must ensure all program requirements are met each term, otherwise they may no longer be eligible for Levy-supported (FREE) AKA Science classes in the future.

AKA Science Program Cost:

AKA Science kits are valued at $550. Fortunately, with PCL's support, we can offer our grades 4-6 kits to sites for **FREE** to eligible Portland SUN and Boys & Girls Clubs (BGC) sites in exchange for sites providing enrollment, survey, and demographic data at the end of term. For SUN, BGC, and Title 1 sites outside of Portland, we discount grades 4-6 kits to $400.

Kits for grades K-3 are $550 but discounted to $400 for all SUN, BGC, and Title 1 schools.

Levy-Supported Classes: Program Requirements

AKA Science Program Deadlines & Requirements:

Requests & Deadlines

- **Request the class** by the e-mailed deadline each quarter.
- **Recruit, screen, select & supervise a Class Leader** to teach the class.
- **Provide Class Leader's contact info** by the emailed deadline.
- **If waitlisted, provide the information requested** by AKA Science staff by the emailed deadline.
- **At the end of each term, submit the data** below by the deadline.
- **Respond to data follow-ups** by the deadline.

Class Requirements

- **Offer at least 7 AKA Science class days, minimum of 50 minutes per day.**
- **Enroll a *minimum* of 12 and a *maximum* of 15 students.**
  - **Make sure the majority of students are in grades 4-6.**
  - **Ensure the "Take-Home Supply Advisory" goes home** to parents/ guardians on or before Class 1 (plus whenever a new student joins).
  - **Give Class Leader access to water & scissors,** a room with a sink (if possible), and prep time (before start of term and before each class if possible.)

Student Pre/Post Surveys

- **Make sure your Class Leader administers a Pre-Survey to each student** in Class 1, plus whenever a new student joins (up to Class 4).
- **Keep completed Pre-Surveys** on site in a safe place.
- **Make sure your Class Leader administers a Post-Survey to each student** in the 2nd-to-last class; do catch-ups the last day.
- **Make sure your Class Leader gives you all Pre/Post Surveys.**
- **Submit Pre/Post surveys** by the deadline (scan/e-mail, mail, deliver).

Generic Partner Report

- **Accept calendar invites** from AKA Science re: data deadlines.
- **After the last class, download "Generic Partner Report"** from ServicePoint to Microsoft Excel.
- **Delete all other activities** except AKA Science. **Fill in any missing data** in the required columns. Note that missing SSID's can be accessed via Synergy.
- **Update the class length** to reflect AKA Science time ONLY.
- **Submit the report by the deadline** as a an encrypted e-mail attachment.

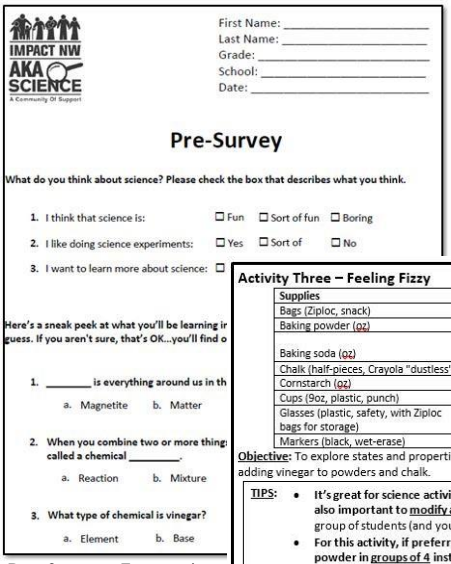
Data Due Dates (may fluctuate by 1-2 days on either side each calendar year):

- **Summer Term:** August 28
- **Fall Term:** January 3
- **Winter Term**: March 30
- **Spring Term:** June 10

Levy-Supported Classes: Survey Instructions

AKA Science Pre- and Post-Surveys:

- **Pre-surveys are administered by the Class Leader on the first day of class** (and on subsequent days as new students join, up to Class 4).
- **Post-surveys are administered on the second-to-last day of class**. If a student was absent on the second-to-last day of class, administer the Post-survey to that individual on the last day of class. If you know ahead of time that a student will be absent on both the second-to-last and last day of class, administer the Post-survey on their anticipated last day of class.
- **The knowledge-based survey questions are addressed throughout the curriculum** (look for the **black stars).** Class Leaders are encouraged to emphasize the starred terms throughout the course.
- **Collect Pre- and Post-Surveys immediately.** After a Site Manager or Class Leader administers Pre-Surveys, collect and submit them to AKA Science immediately to ensure Pre-Surveys are not lost between the start and end of term. Then, follow the same process for Post-Surveys and submit them by the end-of-term deadline.
- **Survey submission methods:**
  - **Scan and email (PREFERRED):** to Kathryn Sechrist at ksechrist@impactnw.org
  - **Mail**: 10055 E Burnside St, Portland, OR 97216
  - **Deliver in-person:** to the above address.



First Name: _____
Last Name: _____
Grade: _____
School: _____
Date: _____

Pre-Survey

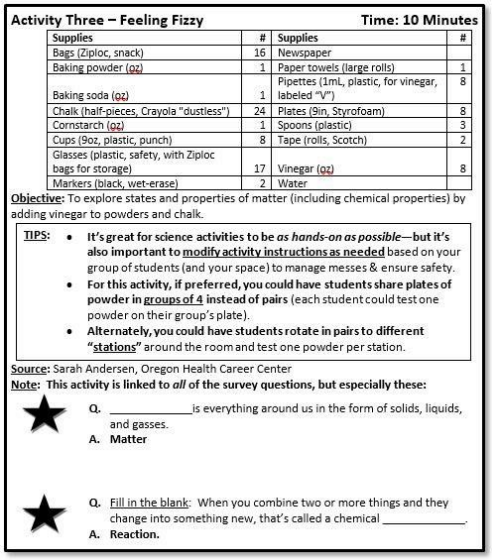
What do you think about science? Please check the box that describes what you think.

1. I think that science is: ☐ Fun ☐ Sort of fun ☐ Boring
2. I like doing science experiments: ☐ Yes ☐ Sort of ☐ No
3. I want to learn more about science: ☐

Here's a sneak peek at what you'll be learning ir guess. If you aren't sure, that's OK...you'll find o

1. _____ is everything around us in th
   a. Magnetite b. Matter
2. When you combine two or more thing called a chemical _____.
   a. Reaction b. Mixture
3. What type of chemical is vinegar?
   a. Element b. Base

Pre-Survey Example



Activity Three – Feeling Fizzy **Time: 10 Minutes**

Supplies	#	Supplies	#
Bags (Ziploc, snack)	16	Newspaper	
Baking powder (oz)	1	Paper towels (large rolls)	1
Baking soda (oz)	1	Pipettes (1mL, plastic, for vinegar, labeled "V")	8
Chalk (half-pieces, Crayola "dustless")	24	Plates (9in, Styrofoam)	8
Cornstarch (oz)	1	Spoons (plastic)	3
Cups (9oz, plastic, punch)	8	Tape (rolls, Scotch)	2
Glasses (plastic, safety, with Ziploc bags for storage)	17	Vinegar (oz)	8
Markers (black, wet-erase)	2	Water	

Objective: To explore states and properties of matter (including chemical properties) by adding vinegar to powders and chalk.

TIPS:
- **It's great for science activities to be *as hands-on as possible*—but it's also important to modify activity instructions as needed** based on your group of students (and your space) to manage messes & ensure safety.
- **For this activity, if preferred, you could have students share plates of powder in groups of 4 instead of pairs** (each student could test one powder on their group's plate).
- **Alternately, you could have students rotate in pairs to different "stations"** around the room and test one powder per station.

Source: Sarah Andersen, Oregon Health Career Center

Note: This activity is linked to *all* of the survey questions, but especially these:

★ Q. _____ is everything around us in the form of solids, liquids, and gasses.
A. **Matter**

★ Q. Fill in the blank: When you combine two or more things and they change into something new, that's called a chemical _____.
A. **Reaction.**

Black-Star Survey Questions Example

REMEMBER: ***Our ability to offer AKA Science for free DEPENDS on you providing us with completed surveys for every student in the class!***

Levy-Supported Classes: Generic Partner Report Instructions

1. Download the Generic Partner Report from ServicePoint to Microsoft Excel (see Figure A below). Use the "Youth Activities" tab to avoid sharing student data without a release.

2. Once you generate your Generic Partner Report spreadsheet, delete all activities besides AKA Science (see Figure B below). You may delete (i.e. clear contents of) unnecessary data from non-required columns; however please do not delete the columns themselves. If a student doesn't have a release of info, most of their data columns will say "no release." **Do not delete** them from the report! We still use their attendance data for grant-reporting purposes. For these students, enter in what you *can* access, such as their SSID, School Name, Grade, Zip Code, and Number of Sessions Attended. **Note:** All SSID's are available in **Synergy.**

3. Update the class length in the top left corner to reflect AKA Science class time only (e.g. the class length shouldn't include recess, snack, homework time, etc.)

4. Manually fill in any missing data as needed in the required columns before submitting the report.

The required columns are:

- SSID
- School Name
- First Name
- Last Name
- Date of Birth
- Age
- Grade
- Language
- Inclusive Identity (e.g. Race, Ethnicity)
- Gender
- Zip Code
- Number of Sessions Attended

Figure a. *Generic Partner Report file path*

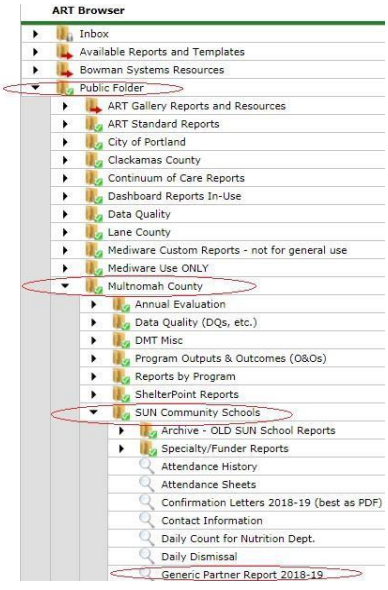
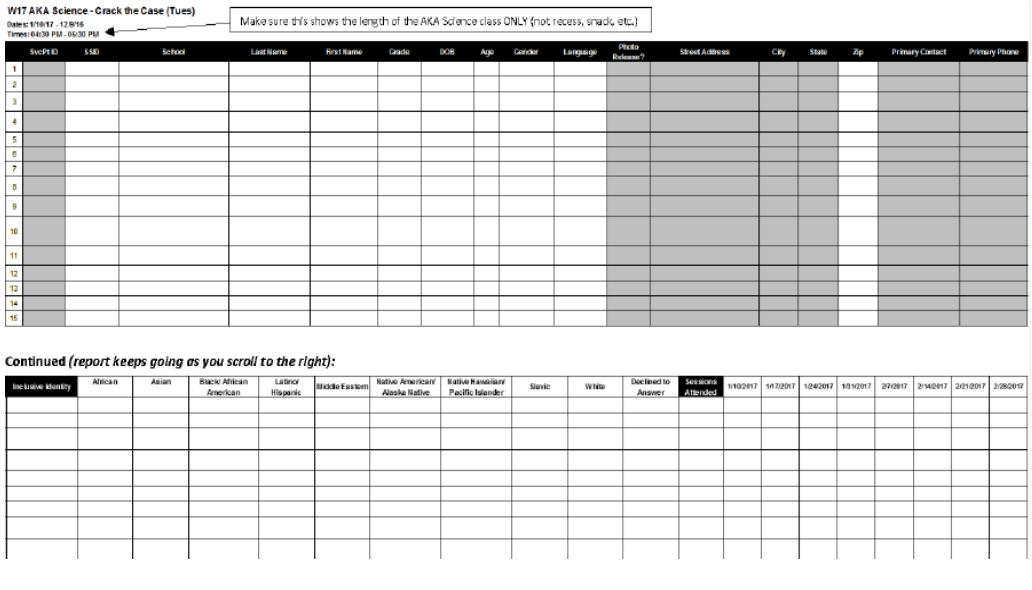


Figure b. *Generic Partner Report blank form*



REMEMBER: ***Please be sure all required data are entered in for each student BEFORE submitting!***

Levy-Supported Classes: Summary of Requirements

1. Meet enrollment requirements:

- ☐ Offer at least 7 class sessions that are at least 50 minutes long
- ☐ Enroll 12-15 students, the majority must be in grades 4-6
- ☐ *Take-Home Supply Advisory* goes home to parents/guardians on Day 1
- ☐ *Consent Form for Publicity* goes home to parents/guardians on Day 1

2. Administer & submit the Pre- and Post-Surveys

- ☐ Pre-Surveys administered by Class Leader on every student's first day of class
- ☐ Post-Surveys administered by Class Leader on every student's second-to-last day of class (and on last day of class only for those who were absent)
- ☐ Pre- and Post-Surveys submitted to Kathryn Sechrist by due date.

3. Submit a completed Generic Partner Report (GPR)

- ☐ Download the GPR via *ServicePoint*. Contact *ServicePoint* helpline immediately if you have any technical issues (servicepoint@multco.us or 503.970.4408)
- ☐ Delete all other activities besides AKA Science
- ☐ Update class-length to reflect AKA Science class time
- ☐ Fill in the required data for each student:
  - SSID (access *Synergy* to fill in any missing SSIDs)
  - School Name
  - Student First and Last Name
  - Date of Birth
  - Age
  - Grade
  - Language
  - Inclusive Identity (i.e. Race/Ethnicity)
  - Gender
  - Zip Code
  - Number of Sessions Attended
- ☐ Submit via an encrypted email
- ☐ Email GPR to Kathryn Sechrist at ksechrist@impactnw.org

4. Due dates for surveys and GPR submissions

- **Summer Term:** August 30 (+/-)
- **Fall Term:** January 3 (+/-)
- **Winter Term**: March 30 (+/-)
- **Spring Term:** June 10 (+/-)

Site Accountability Policy:

Required for Levy-supported classes

PURPOSE: The Portland Children's Levy (PCL) provides Impact NW with funding to offer AKA Science classes to selected SUN Community Schools and Boys & Girls Clubs. To ensure Impact NW continues to receive this funding, sites must adhere to the parameters set by PCL. PCL requirements are that sites must collect and report data on student demographics and administer pre- and post-surveys. The collected data informs the year-end report that Impact NW sends to PCL to prove AKA Science met all required outcomes.

You play a pivotal role in collecting and submitting data from your classroom each term! To ensure Impact NW can continue offering AKA Science to your school, we request that the following policy is strictly adhered to by all Class Leaders and Site Managers.

ACCOUNTABILITY POLICY: Each quarter, all AKA Science Class Leaders are required to administer, collect, and submit pre- and post-surveys by the set deadline. It is the Site Manager's responsibility to ensure their Class Leader completes this requirement. Each quarter, Site Managers are also required to download, complete, and submit the Generic Partner Report by the set deadline. Unless you inform the AKA Science Program Manager of an extenuating circumstance, failure to complete and submit these requirements will result in the following:

- **First time having late or incomplete data:** Site will become deprioritized on the next term's registration list.
- **Second time:** AKA Science staff will hold an informal counseling session with the Site Manager and SUN Program Manager. The counseling is not intended to be disciplinary, but rather to use a collaborative approach to discussing the concern with the goal of improving adherence to the program requirements.
- **Third time:** Site may still offer an AKA Science class, but the class fee ($550) for grades 4-6 kits will no longer be waived. Offering an AKA Science class at your site will be fee-based for the remainder of the program year.

Acknowledgment: By collecting your kit of supplies, you acknowledge that you have reviewed the AKA Science information packet, including all Levy-Supported Class Requirements and the Site Accountability Policy and agree to comply with all program agreements and discuss any questions or concerns with your Program Manager, or the AKA Science Program Manager. You are also agreeing to ensure that your Class Leader complies with all AKA Science program expectations.

If you do not understand the data collection requirements or feel that you may have trouble meeting the requirements by the requested deadline or otherwise, please contact the AKA Science AKA Science Program, Kathryn Sechrist at **ksechrist@impactnw.org** for help *at least two weeks* before the data deadline.

Please email AKA Science Program Manager, Kathryn Sechrist, at ksechrist@impactnw.org to acknowledge your review of the AKA Science Site Accountability Policy and agreement to these terms. Thank you!

COVID-19 ADDENDUM: In the case of virtual classes

As an addendum to the standard AKA Science program design, the program has a contingency plan for services provided during unusual circumstances such as the COVID-19 health emergency. All standard program agreements in this document will hold true, except for the following modifications:

AKA Science will:

- Provide virtual training for AKA Science Class Leaders (who have not attended orientation prior and/or have not been trained on that term's kit topic). In-person training will commence if it is allowable based on CDC and Multnomah County guidance and will be socially-distanced (6 feet apart) and masks mandatory for all participants for the duration of the training.

- Provide virtual learning kits in place of in-person kits. Virtual learning kits will contain a reduced number of class sessions (4 sessions) and will serve a reduced maximum number of students (10 students). Virtual kits will still contain all of the supplies (besides water) needed to complete the course. Virtual kits will be packaged by individual student (instead of class). Below is a description of a virtual learning kit that AKA Science may provide:

  "Are you ready for this STEM Sampler?! Dig into this four-topic, 8-class STEM sample platter! You'll explore the fascinating world of STEM, from Biology and Chemistry to Physics an Engineering. Dissect owl pellets and extract strawberry DNA, then create elephant toothpaste and fantastic flubber! Make water glow and build DIY lava lamps, then test your own cartesian diver and construct a mechanical hand! You'll do it all with this amazing selection of classic AKA Science activities, perfect for students who are just getting started with STEM or who are curious about all things science!"

- Provide virtual, pre-recorded instructions for the virtual kit so that the class may be taught online with or without a Class Leader and may provide some reference and additional instructional support to Class Leaders.

The afterschool program site (e.g. SUN, BGC) will:

- Collect virtual kits (packaged by individual student) while adhering to any safety protocols in place, and distribute kits safely to students.

- Class Leaders will attend virtual training (if they haven't already been oriented to the program or taught the kit topic prior to the current term).

- Site Managers will provide all standard required data (pre- and post-surveys, and demographics/ generic partner report), however data requirements may be modified or reduced based what is allowable by Portland Children's Levy. Data requirement modifications will be communicated to SUN CS Site Manager as soon as possible by email or phone, and agreement to these modifications or reductions can be made by verbal or email acknowledgement.

- If ServicePoint is unavailable or the overwhelming majority of students do not have current ROIs, Site Managers may be asked to complete an AKA Science program-provided template for student data reporting.

- Pre- and post-surveys may be accessible via online forms submitted by students (in which case Site Manager is not responsible for submission) or collected verbally by Class Leaders and submitted to AKA Science Program Manager via email text as opposed to scanning hard copies.