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Feb 2020

ASTEE Newsletter

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Message from the President

Dear fellow ASTEE members,

I am honored to serve as the 2020 President of this incredible organization. We have come so far in 10 years and I am excited to see where we will go from here! I want to thank our outgoing president Robyn Weimer for all that she did to bring about a very successful 10 year Anniversary as well as the rest of the board of directors and committee chairs, without whom we wouldn't get nearly enough

done. To bring you up to date, we are in the process of updating our website (a big thanks to Daniel Mabel for all his work on this) and will be offering a forum for discussions on trace materials. The hope is that this new format will aid many of you in your professional development, both in finding good resources and training opportunities, but also by forging connections with other trace professionals with diverse backgrounds and perspectives shaped by their own casework and research.

Recently I have been reading a book titled "The Art of Gathering" and it made me think about the role ASTEE plays in the trace community and why the receptions that we host at conferences are so important. As trace evidence is often a smaller discipline within a lab system, many of us build our own networks among the larger forensic community to seek out potential sources of information and training that can help each of us to continue to learn. For me, ASTEE is an organization that helps fill a significant gap in the forensic community. Individually, we may not have the experience or institutional knowledge in our own lab to cover the diverse forms of trace



Message from the President continued...

evidence we may be called upon to examine, as a result of retirements and attrition or the types of cases that are accepted; however ASTEE provides a link to the depth of knowledge and experience within the larger trace community.

The receptions ASTEE hosts at conferences are meant to bring our members together in a relaxed social way to help you meet other members and hopefully build your own personal network. Large conferences can be overwhelming minefields of information and social overload for the non-extroverts among us. My hope is that the receptions we host at AAFS, InterMicro, and the combined meetings offer a smaller gathering for our members to connect with like-minded individuals from other laboratory systems in a social venue so that you can build relationships with others who may have faced similar analytical problems under different circumstances. I'm not saying that all we talk about at the receptions is casework, but it is a great way to meet and get to know people who can become part of your professional network and share ideas. You may have had a case recently where you really wished some research had been done in a particular area. By reaching out to academics in our field you may be able to collaborate on research to solve that problem. I have often found that I come back from conferences more motivated to do good work and have gained so much by interacting with colleagues from other laboratory systems. These personal interactions refresh my ability to think and work productively. Online and remote learning plays its role, but interpersonal communication can promote the interagency transfer of knowledge and build networks that can aid all trace examiners as we progress throughout our careers and encounter new evidence. I am hoping that ASTEE is one nexus that can bring us together at larger conferences to interact on a social level and build a network for future interaction.

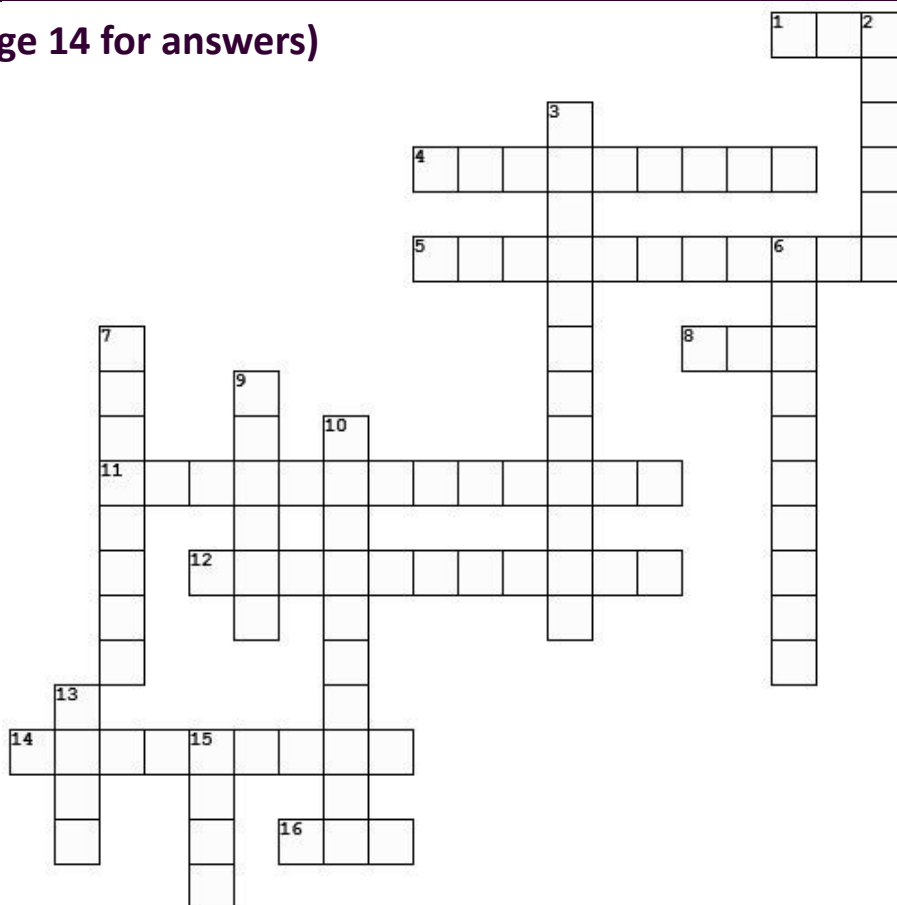
I mentioned one book that helped me focus in on what I believe is one purpose of ASTEE but I'd also like to start another topic on our forums: book recommendations. These can be any type of book that help us learn about a different aspect of some of the materials we analyze. Several years ago, I read a book called "A Perfect Red." I enjoyed this book as it dealt with the history of one specific natural dye (cochineal) and sent me down a path of learning more about other natural dyes, taking some courses to attempt dyeing textiles, and then putting together a workshop with Lee Bender to share what we had learned with other forensic scientists. We taught that workshop at two combined meetings – one ASTEE worked with MAFS and one with CAC. If you have some books that you'd like to recommend as fun reads or as sources that may aid other examiners in their continuing education I'd like to invite you to share them on our new forum page on the new and improved ASTEE website.

We are also working hard to offer in-person training through our sponsors and awards, as well as our education committee training opportunities and the workshops hosted through the combined meeting. I hope for many of you, ASTEE members can be resource for asking questions through the new forum on our website or to find out how to get additional training, and to learn about tips and tricks to do our jobs better. As the new website goes live (hopefully soon) please check it out and let us know what you think!

Sandy Koch

2020 ASTEE President

ASTEE Crossword (see page 14 for answers)



Across	Down
1. 2020 is the year of stepping out of your comfort zone. Your first choice? Karaoke! Your song of choice, "Don't Go Chasing Waterfalls," is sung by a group that shares their name with this fiber analysis technique.	2. It's a new year, and you've committed to becoming more financially conscious. As a result, you decide to use your wood-burning fireplace to help warm up your house. But then you wonder...would fire debris analysis show anything interesting? To find out, you collect some ashes in a can and place a strip composed of this element inside.
4. You've resolved to finally paint your house this year! You want to run a sample of your new paint through the GC-MS but have to remember... what technique is combined with the GC-MS (a gas based technique) to allow the analysis of a solid?	3. New year, time to get some new shades. The eye doctor recommends one that block glare, using the same technique as one of the most commonly used microscopes in Trace Evidence.
5. As part of your "New Year, New You" plan, you dye your hair for the first time. What type of line does this create when you put a strand of your hair under a microscope a month later?	6. Your New Year's Party was a smashing success full of fireworks, champagne, and good friends. While the fireworks may not have left behind any characteristic GSR particles, it's possible you're still covered with _____ GSR particles.
8. 2020 is the name, and safety is your game. Biohazard waste? Not a problem, because you don't throw it in the normal trash, you find the biohazard waste bins that are identified by this color.	7. In 2020, you vow to stop breaking your phone screen by always using a screen protector. You buy a highly-rated glass one off Amazon and wonder... what is this type of protective glass?
11. 2020 is a new decade. It's time to pick up all those broken, jagged pieces from the last ten years and fit them all back together to form a perfect _____ of the last 10 years of your life.	9. You make the resolution to publish a scientific article this year. But...what was the abbreviation for this association's journal again?
12. This year, you've vowed to make the dreaded dentist appointment you've been avoiding. When you have to get molds made of your teeth, you notice it's the same material you use to cast shoe and tire impressions. What material is this? (2 words)	10. Enough about your resolutions, your son has made the resolution to get an A in Chemistry this semester! But he needs your help – what weak acid is found in vinegar?
14. Your daughter has already broken her New Year's resolution last night to stop rear-ending people. She insists her lights were on, but you notice the filament in the shattered headlight is broken. You inform her that this broken filament is a result of an event known as _____, indicating her lights were off.	13. With the release of Disney+, it's time to relive your childhood this year. What kind of shoe would Woody from Toy Story leave an impression of? (Hint: "There's a snake in my _____!")
16. To start off the new year with a clean lab, you do your yearly inventory. What is this bad smelling chemical way in the back of the cabinet? How do you even dispose of it?! Better reference this important resource.	15. Southern states have made the resolution to give their residents the fever – cedar fever. However, the prevalence of this pollen in the environment could be helpful with this type of analysis.

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ASTEE at a Glance – Committee Updates

Awards Committee

Congratulations to our award winners!

- Kelsey Winters, 2019 Professional Development Award
- Dr. Candice Bridges, 2019 Research Grant Award
- Katherine Igowsky, 2020 Hooke College of Applied Sciences Training Award

The deadline for nominations for the 2020 Edmond Locard Award for Excellence in Trace Evidence is June 1.

Communications Committee

The new and improved ASTEE website is on its way! The process has been a long one (thank you for your continued patience), but we are excited about the changes ahead. The new website will allow members to: set up a recurring annual dues payment, easily change contact information, search for the contact information of other ASTEE members, apply for a membership upgrade online, purchase ASTEE products, access the ASTEE Forum to discuss all things trace evidence, and more. As always, if you have any ASTEE questions, comments, or concerns, please contact Katie Hafer or Daniel Mabel at asteetrace@gmail.com.

Education Committee

The Education Committee has two new members: Caitlin Hess and Kyle Mueller. Many, many thanks to Anastasia Brown and Jeffery Dake for their previous service! Welcome to Caitlin and Kyle!

We have several exciting webinars in the works for the spring/summer of 2020:

- Using the Paint Data Query Database - Tamara Hodgins and Andrew Ho (RCMP) - April 8, 2020 at 1 pm EST
- Footwear/tire impressions
- Low explosives analysis

These will be offered through RTI/FTCoE; announcements with topic and registration information will be distributed as they become available.

Our next joint conference is with NEAFS in Groton, CT in October 2020. We have scheduled a full day cosmetics workshop and are hoping to schedule at least one more half- or full-day workshop. Hope to see you there!

The webinar on mass spectrometry from Glen Jackson of West Virginia University has officially been cancelled and there are no plans for it to be rescheduled.

Be on the lookout for the education and training areas of the member forum on the new ASTEE website when it goes live. We will be posting journal articles, presentations, posters, etc. covering a wide variety of trace evidence topics to help keep you updated with what's going on in our community.

If you or your laboratory are interested in hosting a workshop, if you have ideas for potential webinars, or you can recommend someone who may be able to offer a workshop or webinar, please send an e-mail to astee.edu.committee@gmail.com.

ASTEE at a Glance – Committee Updates continued...

Publications Committee

Newsletter

The Publications Committee would like to thank Allison Myers (Forensic Scientist with the Texas DPS Crime Laboratory – Trace Evidence Section), for her contributions to the ASTEE Newsletter. Allison has created the awesome crossword puzzles you have seen in the latest ASTEE Newsletters! Please send any ideas for ASTEE Newsletter content, including *News You Can Use* topics, to Kiersten Coffin (Kiersten.Coffin@dps.texas.gov).

JASTEE

The Publications Committee – JASTEE would like to give a big welcome to Heidi Prough who joined recently as the journal formatter for JASTEE. Thank you to everyone else who volunteered!

An issue of JASTEE was released at the end of 2019 which includes some great articles, check them out! JASTEE has manuscripts in the works for the next issue but is always looking for additional submissions. Please send manuscripts to Journal Editor Jeremy Morris (Jeremiah.Morris@jocogov.org). Lastly, we have been working with Daniel Mabel, Chair of the Communications Committee, on transitioning to the new website design.

2020 Dues

The New Year is here, which means it's time to start thinking about dues! If submitted before March 31st, dues are \$25.00; after March 31st, they are \$30.00. We offer three methods by which to submit your payment:

- 1) Mail a check (made out to ASTEE) and the completed dues form found on page 13 to the address on the form;
- 2) Send a payment via PayPal to the ASTEE account at asteetrace@gmail.com (having a PayPal account of your own is necessary for this option), or;
- 3) Use the PayPal button found in the Membership section of our website, www.asteetrace.org, which allows you to use a credit card (it is not necessary to have a PayPal account of your own for this option).

If you use either of the PayPal methods, please also email or fax a copy of the completed dues form to ASTEE Treasurer Chad Schennum at chad.schennum@dfs.virginia.gov or 804-786-6305.

News You Can Use

The U.S. Department of Justice released a Report to Congress that "...details the results of a national needs assessment of forensic science service providers conducted in 2017-2018. This needs assessment focused on the services provided by forensic laboratories, medical examiner and coroner (ME/C) offices, and other forensic science service providers through the lens of the interconnected relationship between forensic laboratories and the criminal justice system. As forensic analyses have expanded and become more sensitive, and as practitioners have established more evidence-based policies and capabilities, the broad demand for forensics has grown. Forensic laboratories and ME/C offices are constantly working to address the needs of the field, balancing operational priorities to meet stakeholder requests while introducing innovative solutions to solve emerging criminal justice questions. This needs assessment compiled demonstrative evidence of how the field is adapting to advancements in technology, the volume and types of forensic evidence, and the evolving needs of the justice system." To read the full report go to: <https://www.justice.gov/olp/page/file/1228306/download>.

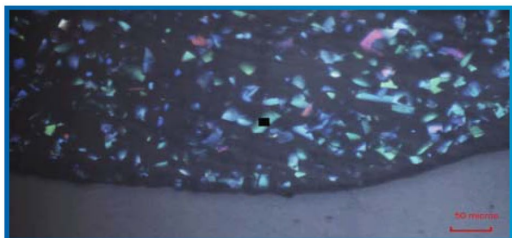
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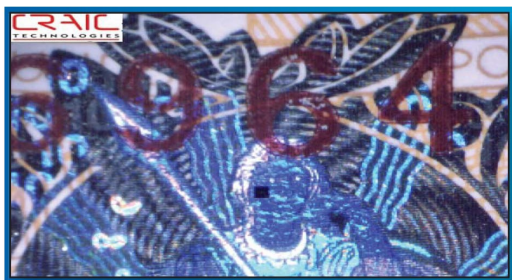
Fluorescence imaging of a nylon fiber with CRAIC's unique calibrated variable aperture.



Chromatflair paint sample using 10x magnification in reflectance, microscale shown is 50 microns.



Glass fragment with multiple probes for fast and accurate quantification measurements.



Foreign currency showing subtle variations of inks are detectable by CRAIC microspectrophotometers.

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Paint Evidence

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Glass Evidence

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Explosives

CRAIC Apollo™ Raman microspectroscopy and UV microscopy can be used to locate and identify explosives easily and accurately.

Drugs

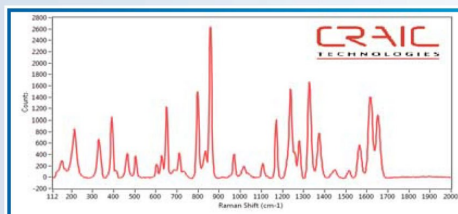
CRAIC Apollo™ Raman, UV and fluorescence microspectroscopy can be used for accurate identification of drugs of abuse.

DNA and Biological Evidence

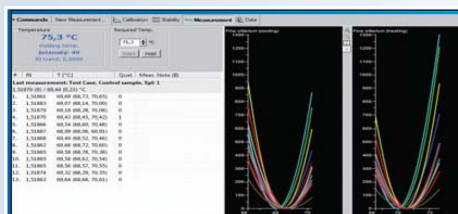
CRAIC UV microscopes can be used to identify usage of WMD materials from tissue samples. UV microscopy can also locate trace amounts of DNA and biological evidence.

Questioned Documents

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Raman Microspectra™ of Acetaminophen using the CRAIC Apollo-532™.



rIQ™ by CRAIC shows an illustrative interactive graphs of heating and cooling phase for each probe with zoom capability enables fast visual evaluation results.

CRAIC TECHNOLOGIES

May We Introduce You To...

May We Introduce You To... Angela Evans

Occupation: Forensic Criminalist III, Arkansas State Crime Laboratory

What Trace Evidence sub-discipline(s) are the focus of your work? Fire Debris, Gunshot Residue, and Hair Identification

Who has been a mentor to you and how have they helped you? I've had so many mentors over the years! Some that stand out are:

Dr. Hillary Glauser-Patton (Southwest Baptist University) – Hillary was hugely inspirational in fostering my interest in the sciences and encouraging me to view science through my faith in Jesus Christ.

Dr. Bjorn Olesen and Dr. Jim McGill (Southeast Missouri State University) – These two men mentored and encouraged me through my graduate thesis work and later as teaching colleagues at SEMO, before I began my career in Forensic Science.

Chantelle Taylor (Arkansas State Crime Laboratory) – Chantelle has been my mentor/trainer/encourager/friend in Trace Evidence since day one of my employment at the ASCL. She has taught me all the tricks of the trade, and ignited within me a passion for all aspects of Trace evidence.

What do you like to do in your down time? I like to spend my down time with my family, going on outings, playing games, or watching movies together.

What is the most interesting place you have been? Versailles, France – My sister participated in a study abroad program in Versailles, and during her time there, my family was able to visit for about a week. We also enjoyed time in Paris and London.



May We Introduce You To... Daniel Davison

Occupation: Forensic Scientist for Ohio BCI & Adjunct Instructor for BGSU

What Trace Evidence sub-discipline(s) are the focus of your work?

Footwear / Tire impression, paint, glass, fiber, break match, automobile lamp on/off determination, GSR and adhesive tape

What is your favorite quote? "I am sending you out like sheep among wolves. Therefore be as shrewd as snakes and as innocent as doves." - Jesus (I am assuming He meant this in part for court testimony although that isn't stated)

What is the top activity on your bucket list? I would like to buy a small RV and travel the country with my wife.

Tell us something that would surprise others about you. I was raised Quaker on a hog farm in Indiana about 5 miles away from James Dean's hometown of Fairmount.



May We Introduce You To...continued

May We Introduce You To... Mindy (Melinda) Raines

Occupation: Forensic Scientist Supervisor, Scottsdale Police Department, AZ

What Trace Evidence sub-discipline(s) are the focus of your work? Former hair, fiber, and ignitable liquid examiner. Our trace unit suffered the loss of the second examiner and due to a lack of submissions we no longer offer the services. We still have all our equipment and I hold on to the hope that some form of trace will come back some day. I still provide footwear analysis (which can go under a multitude of disciplines).

What is your favorite quote? "You can't go back and change the beginning, but you can start where you are and change the ending." - C.S. Lewis

What is the top activity on your bucket list? Camino de Santiago

What do you like to do in your down time? Hike when weather is nice in AZ; travel when it is hot in AZ



ASTEE Member Participation

The Organic Gunshot Residue Task Group of the Gunshot Residue Subcommittee of OSAC are seeking participants for a survey on Organic Gunshot Residue as well as laboratories that are interested in participating in a study on methodology for the analysis of organic gunshot residues. The call for participation is on the OSAC website and is being distributed through other organizations. They would like to include ASTEE members in the survey and study if anyone is interested in participating. Below you will find links for the survey and the formal invitation letter. If you have any additional questions, please contact Mary Keehan at mary.keehan@dfs.virginia.gov.

Survey link: https://wcupa.co1.qualtrics.com/jfe/form/SV_dcyRgijWDZ35tkx

Formal invitation letter link: <https://www.nist.gov/document/osac-ogsr-inter-lab-invitation-letter>

Important Dates

March 10-13	OSAC Meeting for Chemistry Scientific Area Committee
March 31	ASTEE Dues due
April 8	Using the Paint Data Query Database Webinar
June 1	Deadline for nominations for the 2020 Edmond Locard Award for Excellence in Trace Evidence
June 8-12	Inter/Micro 2020



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Questions?

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“I appreciate that the instructors are practicing scientists. I really enjoyed the times the instructors or other students told stories about their personal experiences because it helped put things in perspective for the real world.”

— M. Shannon, Miami-Dade Police Department

ASTEE Reception

The ASTEE reception at the 2020 AAFS meeting in Anaheim California was sponsored by CRAIC Technologies at Karl Strauss Brewing Company. A huge thank you to CRAIC Technologies for sponsoring the reception! And many thanks to the ASTEE Events Committee for coordinating this event!



ASTEE Reception continued...





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ASTEE Dues Form

Dear ASTEE member,

Please remit the sum of \$25.00 to ASTEE in payment of your membership dues for the 2020 calendar year by March 31, 2020. Please add a \$5.00 late fee for payment received after March 31, 2020. U.S. members remit checks and non-U.S. members remit International Money Orders payable to ASTEE.

Please send your payment to :

Chad Schennum—ASTEE Treasurer
Virginia Department of Forensic Science
700 North 5th Street
Richmond, Virginia 23219

If you prefer to use our online option, you can pay through the **asteetrace@gmail.com** account on PayPal or via the PayPal button in the Membership section of our website **www.asteetrace.org**.

If any of your contact information has changed, please complete the following and submit this form to Chad Schennum, either by mail with your payment, by email to the address at the bottom of the page, or by fax to 804-786-6305 once your payment is submitted.

Name _____

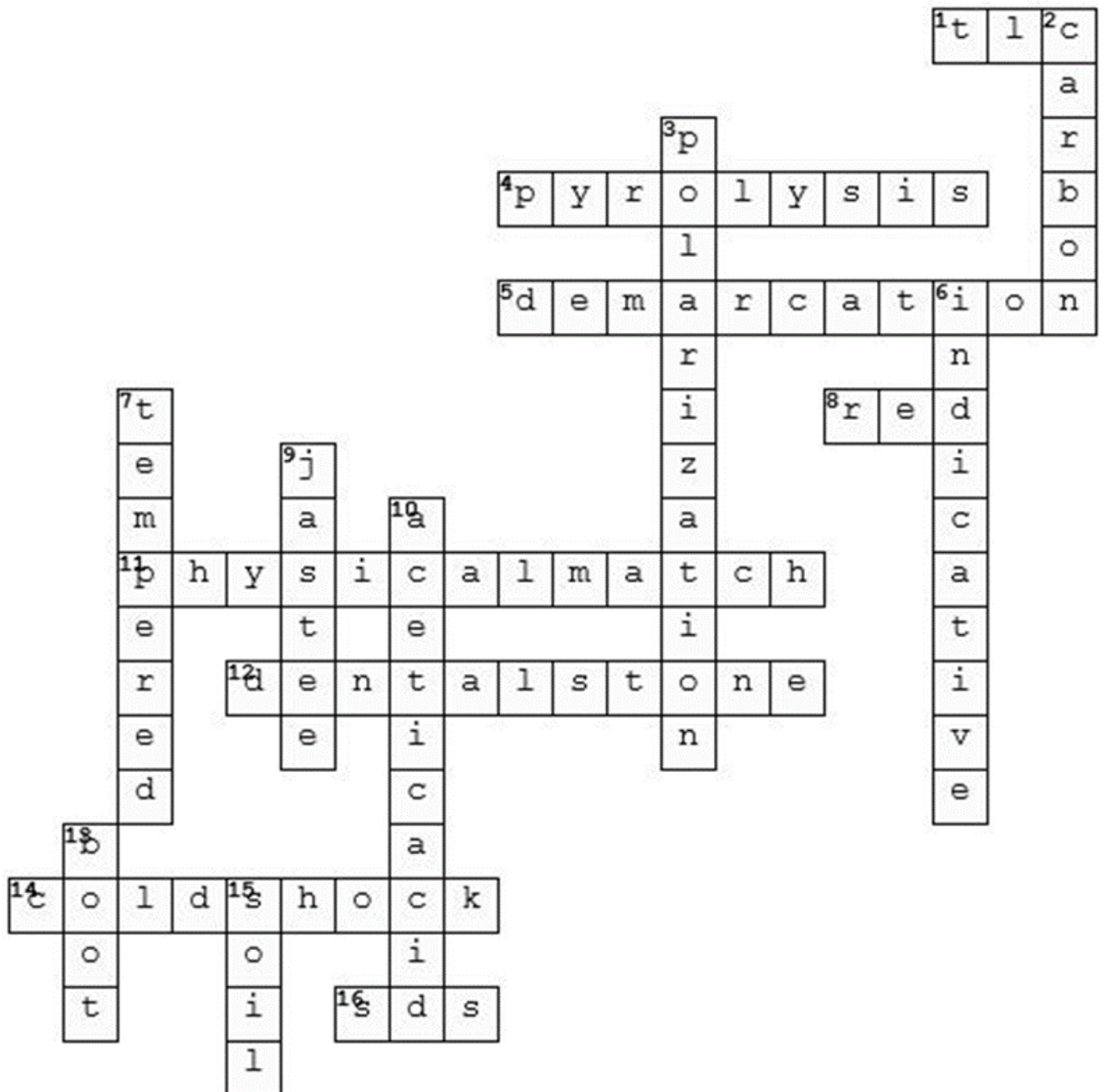
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ASTEE Crossword Answers





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