



[nwnoggin.org](http://nwnoggin.org)

**NW Noggin: Neuroscience Outreach  
Group, Growing in Networks**

# Science, Art - and Inspiration

Kids are naturally interested in who they are and what they're made of, and why they feel and act the way they do. Vigorous, creative, scientific investigation improves our understanding of how things work, including our own brains, and effectively addresses pressing issues, benefiting people around the globe. NW Noggin aims to engage and inspire the next generation to advance art and neuroscience research...







## Building Brains

Training innovative new scientists is key to further advancement.

But not all of us have opportunities in education, outreach or research...

**Inequality - due to race, sex, age, region, campus, economics, gender identity, bias, history, mental status - and a tendency of some institutions to focus on serving those with access and resources - leaves many exceptional young people at a disadvantage.**

**We volunteer to include us all**





Outreach works  
when you *go places*,  
& meet other people  
where *they are*.





Social media posts, or a “scitalk” conference aimed at academics, or bringing select community members to campus for an afternoon by chartered bus will only get you so far – and costly programs aimed at those with money and means won’t address issues of inequality regarding access and representation.





## Making connections

NW Noggin is a robust, creative, volunteer-driven nonprofit that brings together scientists, artists, and students of all ages to share their expertise and resources, enthuse young people about science and art, and inform and excite the general public about ongoing, taxpayer-supported brain research...





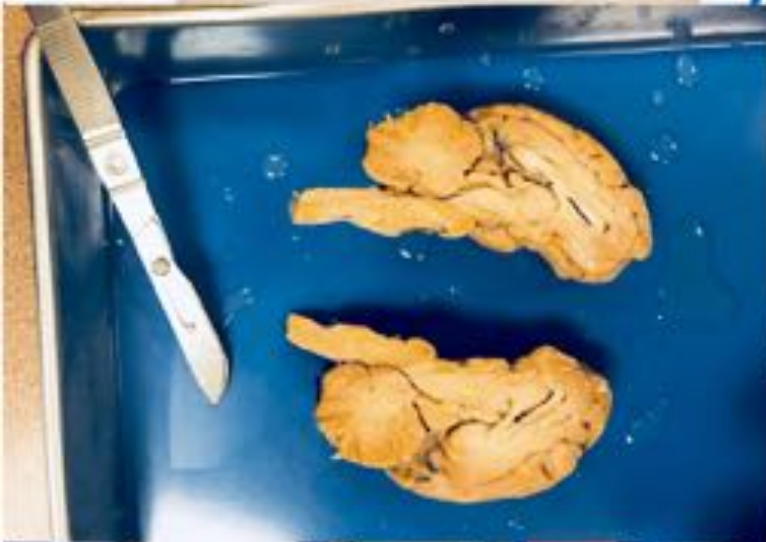
*“Those who are happiest are those who do the most for others” – Booker T. Washington*

Since 2012, we’ve worked with more than 20,000 academic priority students in public schools throughout Portland and Vancouver, San Diego, and Washington DC, and in rural areas of the Pacific Northwest!







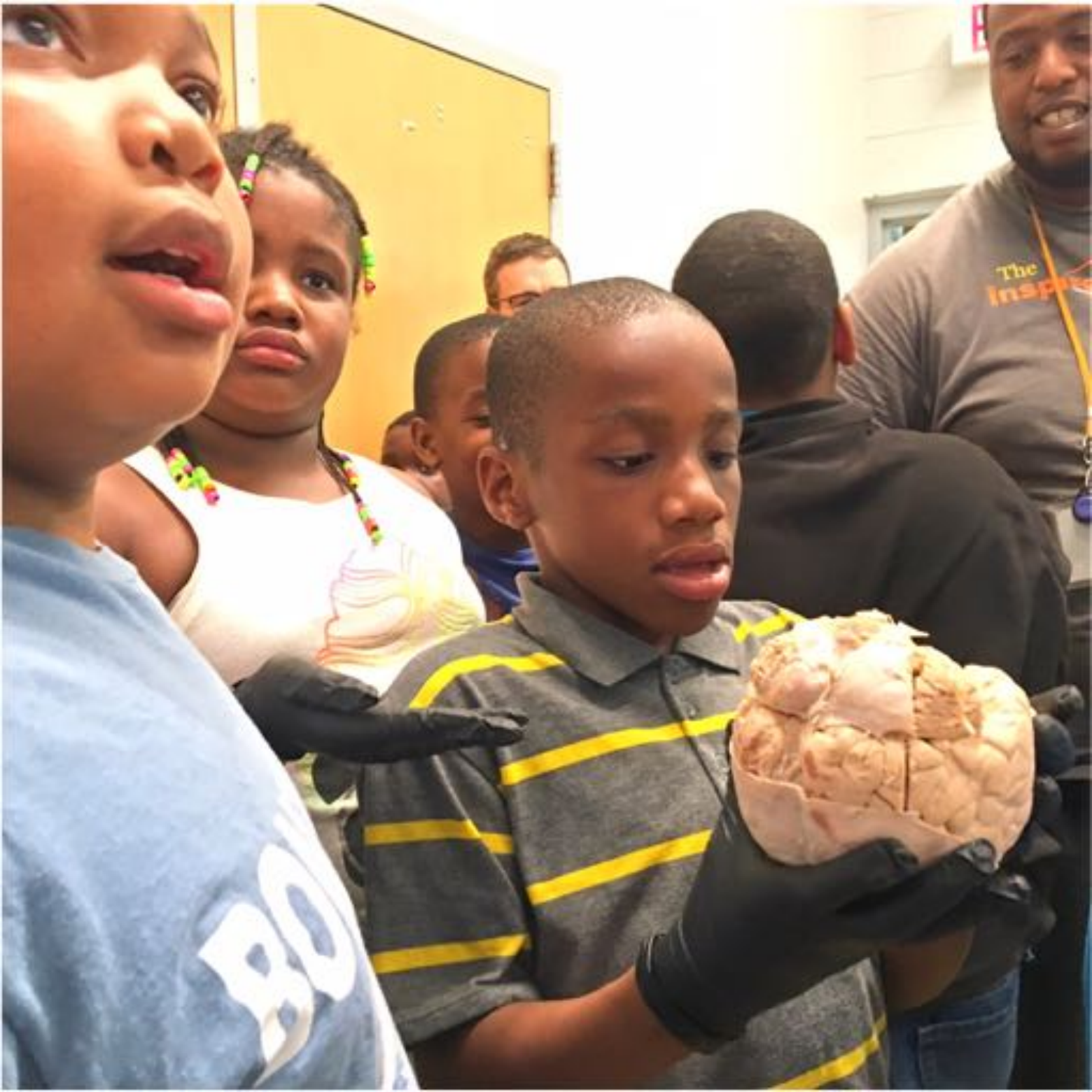


Our graduate and undergraduate art and neuroscience volunteers are developing experts in science communication, teaching in K-12 schools, but also in theaters, museums, symphonies, homeless youth centers, tribal communities, rural towns, Congress, breweries, and even bike shop pubs!













**Essential to training  
new scientists is the  
inclusion of art...**

*"He was appalled  
by the examination  
system...he could not  
imagine a greater  
deterrent to the  
natural wish to learn  
than this pattern  
of cramming in  
information and  
disgorging it on  
demand."*

**-Ursula Le Guin**









## **Arts integration makes learning relevant.**

**It allows open ended exploration of scientific concepts, and offers teachers a broader palette from which they can differentiate their lessons.**

**This cross-disciplinary collaboration is valuable for artists, too, who often explore and contribute to work in other fields.**

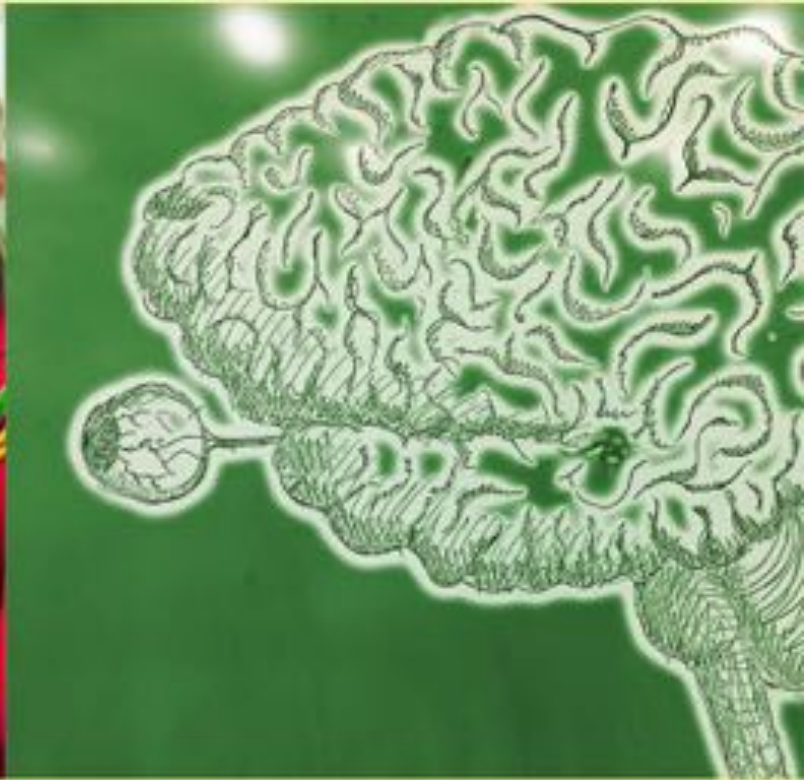








**NOGGIN**



We start by integrating graduate students into undergraduate neuroscience courses at Portland State University during the academic year. Undergraduates learn about neurons, networks, and techniques, pore over peer-reviewed articles, and gain fluency in the language of the discipline before working with graduates from PSU and OHSU.

This informs our undergraduates about currently funded research, and helps train our graduate students to teach and explain their work...





**Starting in 2015, we dramatically expanded outreach in schools and the broader community. Noggin volunteers regularly visit K-12 classrooms throughout the academic year, and arrange for free, public, collaborative presentations on brain research and art...**

















VELO CULT & NWNNOGIN  
PRESENT

## YOU CAN'T CONTROL ART: RACE, BIAS & BRAIN



Benjamin Nardos  
(OHSU) & Teresa  
Raiford (Don't Shoot  
Portland) create  
collage and discuss  
the neuroscience, art  
and advocacy  
surrounding race  
disparities in law  
enforcement, and how  
brain research and  
community history, art  
and education widen  
our field of vision and  
get more of us seen.

Join us  
Wednesday, January 24,  
6 - 8pm

©  
Velo Cult,  
1000 NW 40th St.











**An exciting aspect of NW Noggin is how everyone gains useful experience.**

**Undergrads benefit from graduates, and learn about graduate school and research. Both develop their own cross-disciplinary lessons and activities, and teach K-12 students, conveying scientific concepts in engaging ways...**

p:ear



NW Noggin

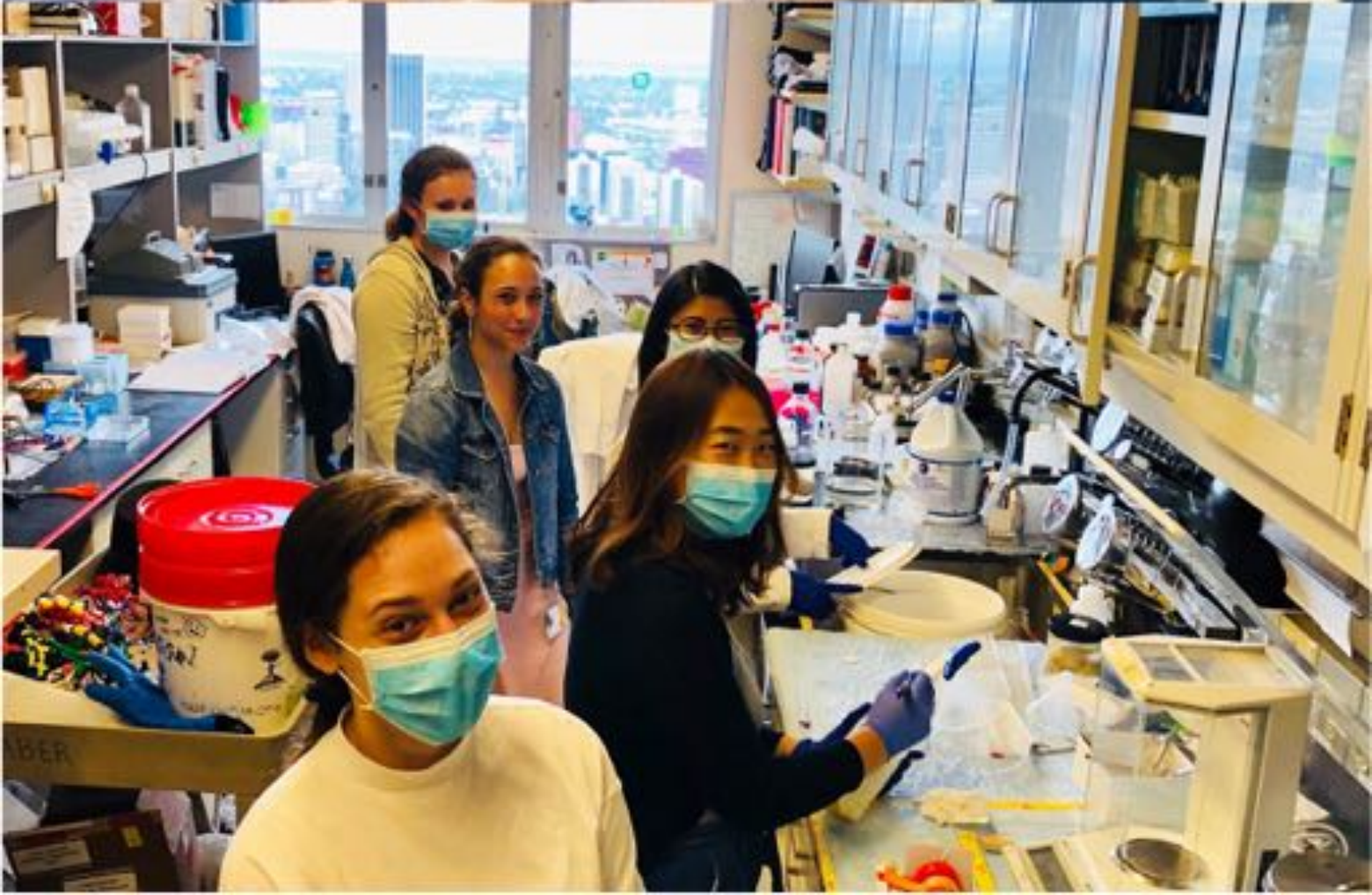
Homelessness and the Brain, October 19 at p:ear





# STEAM

Our art students contribute immensely by brainstorming effective, creative, hands on STEAM (STEM+Arts) projects to explore ideas in neuroscience, and by developing arts-integrated lessons that further student understanding of both science and art.









Our K-12 participants are motivated by these experiences, and discover how to further satisfy their interests by continuing their education through college and beyond...



We partner with many local and national institutions, including Portland State University, OHSU, Portland's innovative peer homeless youth center, the Portland Art Museum, Caldera Arts, Pacific Northwest College of Art (PNCA), Youth Engaged in Science (YES!), BioGift, Latino Network, Kúkátónón Children's African Dance Troupe, the Regional Arts & Culture Council, Society for Neuroscience, American Brain Coalition, Phillips Collection, the Oregon National Primate Research Center, March for Science, NIH BUILD EXITO, Schools Uniting Neighborhoods (SUN), and the House Neuroscience & STEAM caucuses in the U.S. Congress.





**PLEASE JOIN US! *More details at [nwnoggin.org](http://nwnoggin.org)***

NW Noggin is a locally sourced, 501(c)(3) nonprofit. Your tax-deductible contribution supports the purchase of art & science supplies for innovative outreach, and helps send volunteers from local universities to classrooms and community events.



SUPPORT [nwnoggin.org](http://nwnoggin.org); EID 81-3885713

