Bridging the gap: Understanding neuroscience through symbiotic learning and community outreach

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Who, or what is NW Noggin, and what do we mean by "bridging the gap"

organization that uses hands-on, artistic techniques to teach neuroscience to the lay public.

 Noggin's artistic approach to neuroscience educa- participate. tion is the result of a collaboration between behavioral neuroscientist Dr. Bill Griesar, and accomplished artist Jeff Leake, who's combined skills and ideas shaped Noggin's innovative approach to neuroscience outreach and education.

 Ongoing outreach and community involvement is made possible by the collective efforts of scientists, artists, and students from Oregon and Washington State, who together form the growing network that is NW Noggin.

 NW Noggin is a non-profit neuroscience outreach
Outreach through NW Noggin facilitates collaboration between the community and institutions of higher learning, thus creating an all-inclusive approach to education that is beneficial to all who

> This approach to neuroscience education helps to narrow the separation between the scientific community and the lay public by allowing scientists an opportunity to learn how to better communicate with the public. This, in turn, provides free neuroscience education, outreach, and inspiration, where it is needed most.



Community impact and collaboration

 As an outreach organization, we understand
Noggin recently began a new collaborative must adopt educational approaches that are all-inclusive leaving no one behind. To do this, we must start in our own local communities by encouraging outreach and education for

 NW Noggin is currently involved in several community collaborations that are aimed at resources to educate families and youth accomplishing these goals, and we plan to continue making connections within the community to continue the progression of these • We are passionate about the work we do as

 We are currently collaborating with P:ear, a homeless youth center in Portland, Oregon, which aims to create a safe space for homeless youth where they can seek help, outreach. and learn skills to improve their lives.

alliance with another local non-profit known as the Latino Network, whose aim is to eliminate the lack of resources within the Latino community through the promotion of academic support, family involvement and early literacy. We hope to bring emphasis to the neurological and social benefits of being bilingual, and provide community leaders with the about neuroscience.

volunteers which fuels our drive to teach, and to learn scientific knowledge. We hope to incite that same sense of inspiration and empowerment within the community members we interact with throughout our NW Noggin



Role of art in NW Noggin outreach

everyone can understand.

• For instance, it can be very difficult to explain the scientist-artist collaboration. structure and function of a neuron to someone some pipe cleaners, and show people how to make one, then it can become quite easy.

 The pairing of art and neuroscience not only provides a platform for easier learning, but it also brings together the best of both worlds: encouraging innovation, creative thinking, and original ideas; all things that are required to be successful in both disciplines.

• NW Noggin's unique artistic approach to neurosci- • Many of the outreach events we conduct are the ence education is in large part what makes our result of collaboration between scientists and artoutreach so effective as it gives us the ability trans- ists, such as "Changing Brain Waves of Depresform complex neuroscience topics into things that sion," and "Drink Together, Stay Together: Alcohol's Effects on Social Relationships.'' Both were Velo Cult science lectures that were the result of

who has never seen one, but if you simply take • NW Noggin has also done outreach at art shows and galleries. For instance, we brought neuroscience outreach and brains to the "Art of Neuroscience" event in Portland, Oregon, which featured science-art installations by several artists who are both collaborators, as well as members of NW Noggin.



and the lay public requires accessibility and commu-

of our outreach efforts. This is why we bring neurosci-

audience, Noggin has hosted events in a variety of

parks and bicycle shops. It is in these places that we

find some of the most inquisitive audiences full of di-

verse individuals who are eager to learn, ask ques-

venues ranging from pubs and theatres, to public

ence education everywhere we can!

cators overall.

Outreach in academic settings

• A large part of Noggin's outreach is focused on ac- • In addition to visiting K-12 schools, NW Noggin also ademic priority in K-12 school, where we apply the collaborates with universities in an effort to broaden use hands-on, artistic techniques to teach students our outreach efforts, and involve the members of about neuroscience.

• In February of 2017, we visited Shahala Middle School and taught the students some basic information about brain cells and neuroanatomy by leading them through the construction of pipe cleaner neurons, and providing demonstrations with real

the scientific community with the public.

Outreach and events in

non-academic settings

Closing the gap between the scientific community
Noggin has become known for having science talks

nity involvement, both of which are an important part Pub, where we routinely gather over pints to share

• In an effort to make our outreach available to a wider • In March of 2017, Noggin hosted a table at the OHSU

tions, and challenge us to think critically, solidifying • Recently, Noggin also took part in the TEDx Mt

our knowledge, and making us better communi- Hood series where we were invited to bring brains

at our favorite local venue, Velo Cult Bike Shop and

knowledge with the local patrons, and learn about

Brain Fair, held at the Oregon Museum of Science

us an opportunity to interact, and share our knowl-

edge of neuroscience with the general public.

and neuroscience outreach to the guests who

attended. We were met with great enthusiasm

as people seemed to love that they could

learn about the brain, then hold the real

thing, and ask questions afterward.

and Industry (OMSI) in Portland, Oregon, which gave

advances in neuroscience research.

 This summer, we visited the Oregon Health and Science University (OHSU), and spent an afternoon with some of the students of SAIL, the Summer Academy to Inspire Learning, where we discussed topics ranging from adolescent brain development to implicit bias, and made artful gel prints to demonstrate the structural diversity of different types of neurons.



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