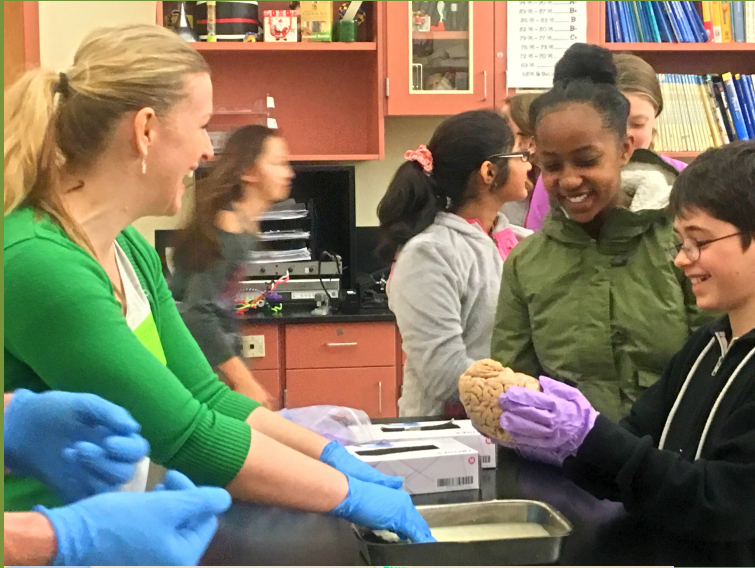
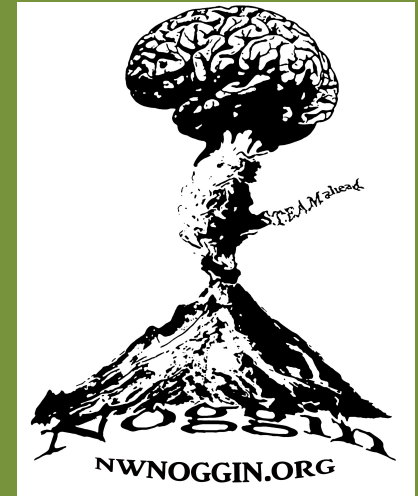


nwnoggin.org



Why art - and brains..?

- Motivation and engagement
- Exploration, creativity, and discovery
- Personal relevance of STEAM material
- Internships, jobs and careers



Who is involved?



- *Academic priority* K-12 students
 - Portland/Vancouver/Beaverton/Hillsboro Public Schools
- Art and neuroscience undergraduates
 - Portland State University, Pacific Northwest College of Art, Washington State University Vancouver
- Art and neuroscience graduate students
 - Oregon Health & Science University, PSU, PNCA, WSUV
- Working artists and scientists

Human
development 😊



Where do we go?

- K-12 public schools
- Universities
- Retirement homes
- Body donation labs
- Hospitals
- Science museums
- Art museums
- Conferences
- Homeless shelters
- Bike shops, pubs
- *Over 12,000!*

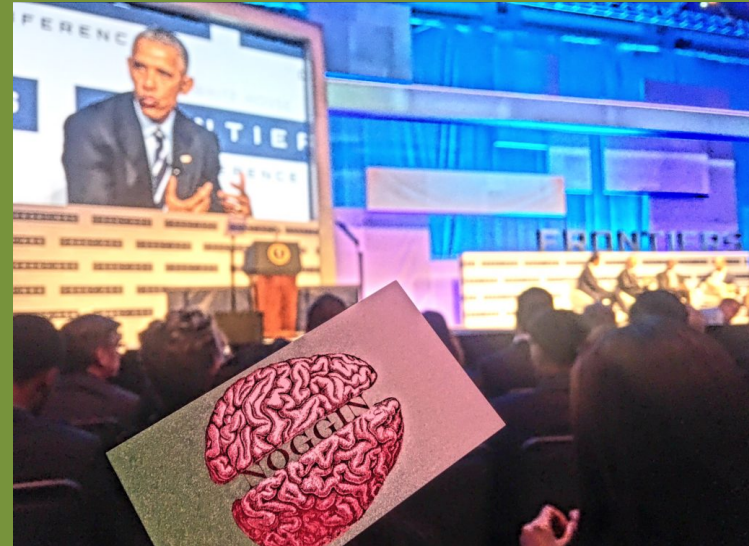
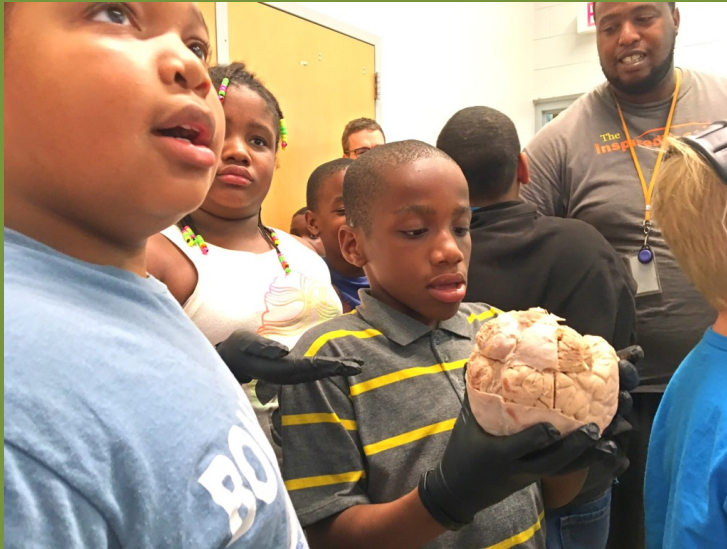


Research should inform policy



- April 27, 2016 Using Our Brains and Art to Inspire a Future Generation of Scientists (Co-hosted by Congressional Neuroscience Caucus & STEAM Caucus)
- Dr. Bill Griesar, Neuroscience Coordinator, NW NOGGIN
- Jeff Leake, Arts Coordinator, NW NOGGIN
- Earl Blumenauer (D-OR), Congressional Neuroscience Caucus Chair
- Suzanne Bonamici (D-OR), Congressional Science, Technology, Education, Arts, Mathematics (STEAM) Caucus Chair

Innovative arts + brains



- The Obama White House Frontiers Conference brought together some of the world's leading innovators in Pittsburgh to discuss how investing in science and technology frontiers will help improve lives, and keep America and Americans on the cutting edge of innovation...
- Bill Griesar and Jeff Leake from NW Noggin were among the 500 innovators invited by the White House Office of Science & Technology Policy to attend this inspiring event in fall, 2016.

Velo Cult: March for Science



WEDNESDAY (3/29)

MAKE YOUR OWN NEURONS!

**NWNOGGIN AND VELO CULT
PRESENT**

March For Science at Velo Cult

**Support research, education, and
outreach by making colorful pipe
cleaner neurons for the march for
science on April 22nd**

**Enjoy an evening of science and art while
learning about the cells that make us who
we are**

March 29th 6-8 pm at Velo Cult

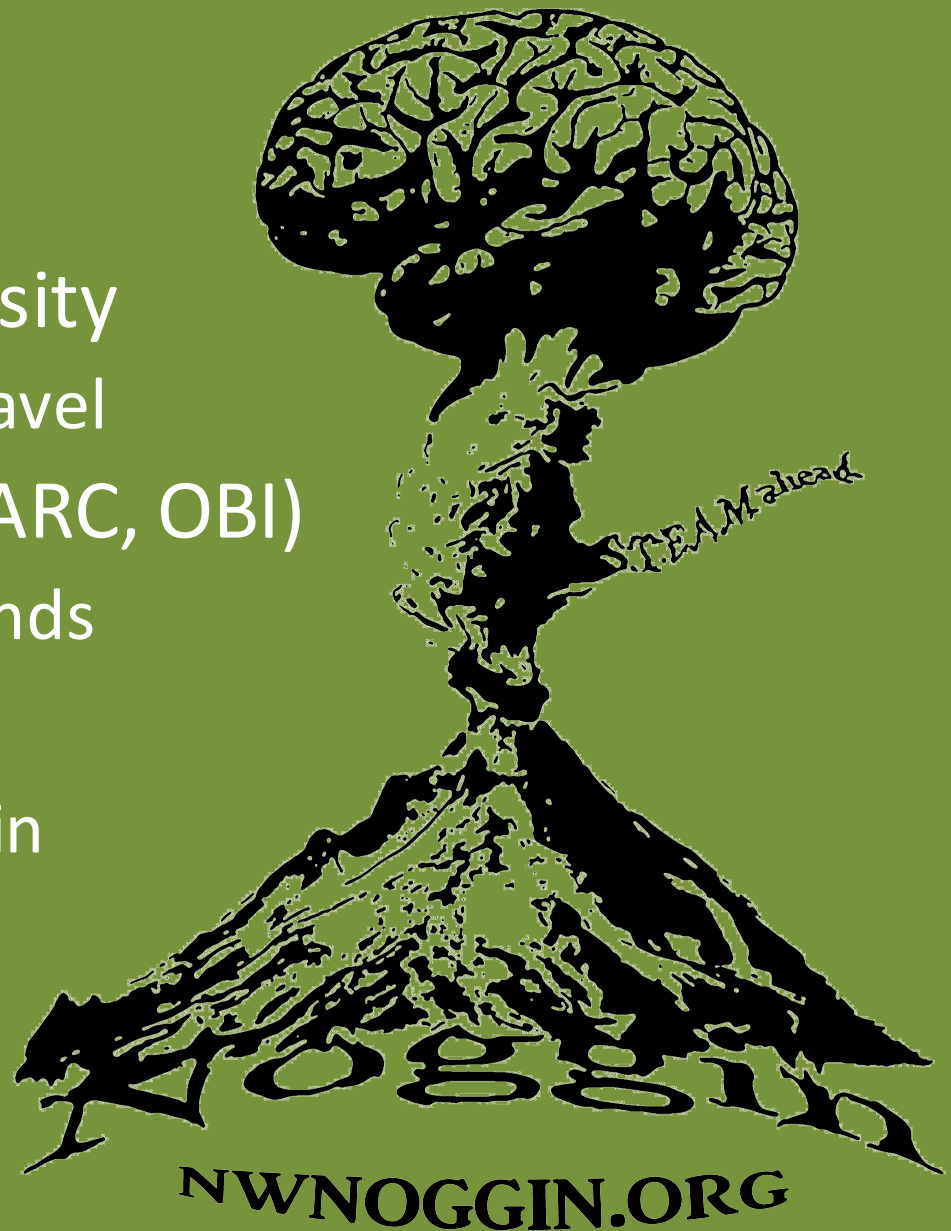


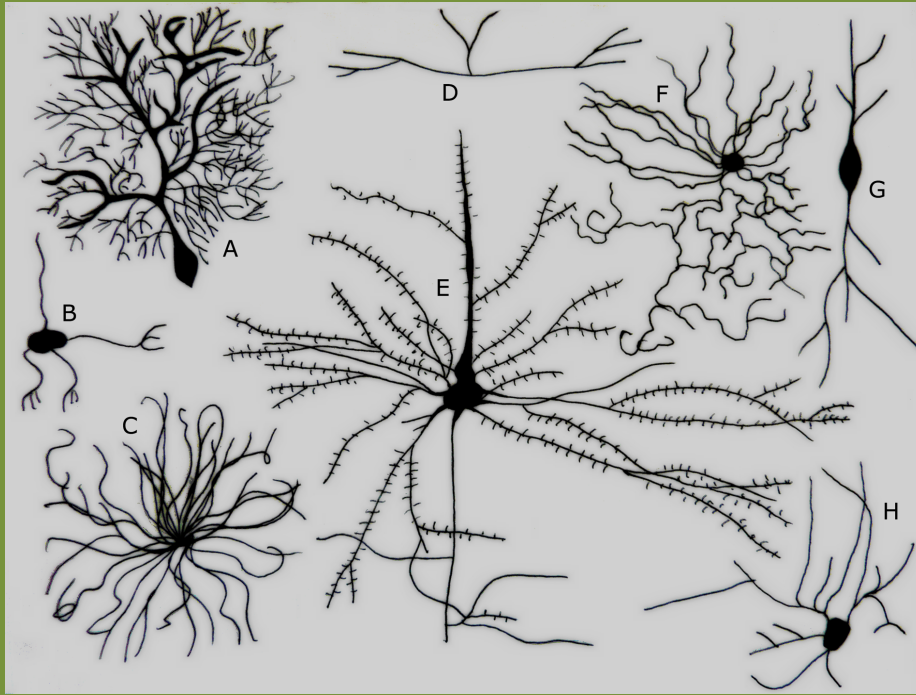
VELO CULT
1969 NE 42ND AVE
PORTLAND OREGON 97213
503.922.2012
WWW.VELOCULT.COM

For more information go to
nwnoggin.org

Support

- Portland State University
 - Positions, supplies, travel
- OHSU (Beh. Neuro, PARC, OBI)
 - Supplies, travel, stipends
- BioGift Anatomical
 - Brains, gloves, formalin
- Donations, grants
- WSU Vancouver
 - ?





Different Types of Neurons A. Purkinje cell B. Granule cell C. Motor neuron D. Tripolar neuron E. Pyramidal Cell F. Chandelier cell G. Spindle neuron H. Stellate cell

Making a pipe cleaner neuron...

1. Start with a good amount of (colorful) pipe cleaners, I have 20 here.



2. Create the soma or cell body by linking several pipe cleaner hoops together.



3. Attach dendrites to your soma by wrapping them around the soma pipe cleaners.



4. Attach axon terminals to the other end of your axon.



5. Wrap myelin around your axon.



6. Create a nucleus for your soma by wrapping two pipe cleaners around each other. Attach your nucleus inside your soma. You have a neuron!

