GNN Submission Guide: Teaching Resources

Submission Checklist

(Items with an asterisk (*) indicate required fields)

NOTE: It is possible to save a partially completed submission, but we strongly recommend completing the submission in one session whenever possible.

☐ ***Brief, descriptive teaching resource title** (recommended limit: 100 characters)

Example: Meninges and Extra-Cerebral Haemorrhage Model

☐ ***Brief description of teaching resource to preview in the GNN database** → include a 1–2 sentence overview of the key teaching points and benefits of this resource to preview in the GNN database

Example: This resource is a physical model which is assembled in class and designed to be a fun and 'memorable' method to illustrate the anatomical relationship of the cranial meninges (i.e., dura mater, arachnoid mater, and pia mater) to each other, as well as their relationship to various types of bleeds outside the brain (i.e., epidural, subdural, and subarachnoid).

☐ ***Names of all authors / contributors** → NOTE: by submitting a teaching resource, you are confirming that all contributors are aware of and have agreed to it being shared

☐ ***Level of neuroanatomy content** → rank the level of difficulty of the content covered in the teaching resource

Options: basic, intermediate, advanced

☐ ***Average duration** → estimate the amount of time required to use the teaching resource (excluding time for preparation, setup, cleanup, etc.)

Example: 15 minutes

☐ ***Is the teaching resource adaptable for online learning** → indicate whether the teaching resource can be used in a virtual or hybrid learning environment

Options: yes, no, not sure; hasn't been tested

☐ ***Level of difficulty for implementation** → estimate how challenging it would be to implement your teaching resource in a new educational setting for the first time

Options: easy, moderate, or complex

☐ ***Activity type** → select the category/categories that best describe the teaching resource

Options: 3D model, e-module, game, illustration / animation / video, individual activity, laboratory session / lab manual, large group activity, lecture session / lesson plan, medical imaging, small group activity, tutorial, other

☐ **Learning objectives** → provide a short list of the specific learning objectives that accompany your teaching resource

Example:
1. *Describe the anatomical relationship of the cranial meninges to each other*
2. *Describe the relationships of the cranial meninges to various types of bleeds outside the brain (i.e., epidural, subdural, and subarachnoid)*

☐ ***Instructions for teaching resource** → provide a detailed description of the steps and/or instructions through which one would lead students when implementing the teaching resource

Example:
1. *The first condom should be rolled onto the banana (this condom will ultimately represent the cranial pia mater in the finished model).*
2. *Some red modeling clay is then placed around or external to the first condom (this will represent a subarachnoid haemorrhage → red to represent an arterial bleeding source).*
3. *A second condom is then rolled over the red modeling clay and first condom (this second condom will represent the cranial arachnoid mater). Assistance may be required from a second person to complete this step.*
4. *Some blue modeling clay is then placed around or external to the second condom (this will represent a subdural haemorrhage → blue to represent a venous bleeding source).*
5. *Some blue modeling clay is then placed around or external to the second condom (this will represent a subdural haemorrhage → blue to represent a venous bleeding source).*
6. *A third and final condom is then rolled over the blue modeling clay and previous components (this third condom will represent the cranial dura mater). Assistance may be required from a second person to complete this step.*
7. *All components are then carefully removed as a collective from the banana.*
8. *Some water is injected into the space between the first and second condoms (i.e. the subarachnoid space) to represent cerebrospinal fluid.*
9. *With a firm grip on the lip/neck of all three condoms, air is then carefully pumped into the first (central) condom to inflate the model as a single unit of 'concentrically-arranged layers'.*
10. *Once fully inflated, the neck of the model is tied off using a cable tie or piece of wool.*
11. *Some red modeling clay is then placed around or external to the outside condom (this will represent an epidural haemorrhage → again, with red representing an arterial bleeding source).*

*A quick video illustrating model assembly is included as a supplementary **video link**.*

☐ **Instructor preparation** → describe any set-up or preparatory work required to be completed by the instructor(s) to implement the teaching resource

Example: It is a good idea for the instructor to do a test run of model assembly prior to the teaching session.

☐ **Student preparation** → describe any preparatory work required to be completed by the students prior to implementing the teaching resource

Example: N/A for this particular teaching resource

☐ **Specific materials or software** → include a detailed, itemized list of any materials, tools, etc. required to implement the teaching resource

Example:
The activity will require the following items for assembly of a single model:
- *Banana (x1)*
- *Condoms, or balloons (more difficult) (x3)*
- *Modeling clay / PlayDoh / plasticine (red and blue)*
- *Water*
- *Syringe or transfer pipette*
- *Air pump*
- *Cable tie or wool*

☐ **Recommended set-up or room design for learning environment** → if applicable, describe any specific recommendations for setting up the classroom, lab, tutorial space, etc. for optimal implementation of the teaching resource

Example: N/A for this particular teaching resource

☐ **Additional notes** → add any additional information to consider when using the teaching resource, such as advice or tips for someone implementing the resource or setting up the activity for the first time

Example: This is quite a simple model, and can be used to introduce the cranial meninges and their relationship to each other - no prior knowledge or preparatory work is necessary.

The key aspect of this resource in terms of learning and retention is the actual assembly of the model, rather than the completed model itself, so the activity is designed as an in-class assembly activity using a variety of props (for example, this could be within 10 mins during a lecture on the meninges as a demonstration by the teacher), but alternatively, it can be completed as a fun and amusing group activity for students.

☐ **Supplementary material** → attach external links (including videos), image files (e.g., PNG, JPG, TIFF), and/or additional documents (PDF files only). Maximum file size: 8 MB

Example:
[Exemplar teaching resource ("Meninges and extra-cerebral haemorrhage model") includes 1 complementary video link that is referenced in the "instructions for teaching resource" section]
- *1 link to a YouTube video showing how to assemble the model*

List of Available Tags for Teaching Resources (in Alphabetical Order)

NOTE: A <u>minimum</u> of 1 tag must be selected, but there is no maximum

ANATOMICAL REGION AND SYSTEM
- Basal Nuclei
- Brainstem
- Cerebellum
- Cerebrum
- Cranial Nerves
- Diencephalon
- Meninges
- Spinal Nerves
- Spine and Spinal Cord
- Vascular Supply / Drainage
- Ventricles

PRESENTATION BY FUNCTIONAL SYSTEM
- Auditory
- Autonomic
- Cognitive
- Higher Cortical Function
- Limbic / Emotional
- Motor
- Olfactory and Gustatory
- Somatosensory
- Vestibular
- Visual

TARGET AUDIENCE
- Biomedical Science
- Chiropractic
- Dentistry
- General Public or Lay Audience
- Grade School or High School
- Graduate / Postgraduate
- Medicine
- Nursing
- Occupational Therapy
- Physician Assistant / Associate
- Physiotherapy / Physical Therapy
- Podiatry
- Speech and Language Pathology
- Undergraduate
- Veterinary

FAQs: Teaching Resource Submissions

Q: **Parts of my teaching resource do not fit under any of the section headings… where should I put them?**

A: Please use the "additional notes" field for any miscellaneous details that do not fit in any of the other sections in the submission form

Q: **Can I use abbreviations?**

A: Yes, but please define them where they first appear in the case

Q: **I am not familiar with writing learning objectives. Do you have any recommended resources?**

A: The Blooming Anatomy Tool (https://doi.org/10.1002/ase.1507) offers some guidelines for the anatomical sciences specifically

Q: **Can I include videos in my teaching resource?**

A: Yes, but they must be hosted externally and added as a link (e.g., YouTube, Vimeo). If you are uploading your own content to an external video hosting site, consider using unlisted or private settings if you do not want your video content showing up in public searches

Q: **Can I contact the GNN to help me with a submission?**

A: Absolutely! Please send any questions to globalneurontwk@gmail.com

Q: **What is the default Creative Commons (CC) license under which my submitted content will be distributed?**

A: The default Creative Commons license for all submissions is the Creative Commons Attribution-NonCommerical-ShareAlike 4.0 International License (CC BY-NC-SA 4.0)
- The "BY" means that anyone who uses the uploaded content must provide appropriate credit to you and the GNN and indicate if any changes have been made.
- The "NC" means that your content cannot be used for commercial purposes.
- The "SA" means that anyone who makes modifications or additions to your content must distribute it under the same CC license (e.g., they cannot claim a more restrictive copyright under their own name)

Q: **What if I have previously distributed this content under a different CC license, or I would like to choose a less restrictive CC license?**

A: There is a field on the submission form to indicate if you would like to use a different CC license, whether voluntarily or due to previous distribution. Please use the CC License Chooser for assistance: https://chooser-beta.creativecommons.org/

Q: **Can I contact the GNN to help me with a submission?**

A: Absolutely! Please send any questions to globalneurontwk@gmail.com

Submission Disclaimers
(from the Terms of Use for the Site & GNN Repository)

Intellectual Property Rights: The intellectual property rights of all submitted content uploaded in the GNN Repository will remain with the original property rights owner. When submitting content to the GNN Team for peer-review, the contributor must sign off on the submission form and certify the following:

- The contributor or the contributor's institution owns the copyright or has proper permission from the intellectual property rights owner to sublicense the content to GNN for publication on the Site and GNN Repository according to the terms of the Creative Commons Attribution-NonCommerical-ShareAlike 4.0 International License (CC BY-NC-SA 4.0 DEED), or a less restrictive CC license.
- The content does not violate or infringe any patent, copyright, trademark, trade secret, or other personal proprietary rights or privacy rights of any party.
- To the extent the content includes any protected health data or patient data, the contributor has obtained express permission from the data subject.

The contributor agrees to indemnify and hold GNN and AAA harmless from and against any claims arising out of a breach of the foregoing warranties. The AAA, the GNN Site, and the GNN Team shall not be liable for any copyright infringement or data privacy violation committed by contributors who fail to secure proper consent from the copyright owner or patient. If you believe that any content posted on this Site and in the GNN Repository do not have the appropriate copyright permission, please contact the GNN Team.

Creative Commons (CC) License:
Unless otherwise indicated, content uploaded by users in the GNN Repository are made available under an Attribution-NonCommercial-ShareAlike 4.0 Creative Commons License (CC BY-NC-SA 4.0) (https://creativecommons.org/licenses/by-nc-sa/4.0/). By downloading or using any content available on this Site and the GNN Repository, the user agrees to the restrictions as defined by the above CC license or other applicable license terms. All images and content downloaded from the GNN must be given proper credit to the GNN and the copyright holder, according to the applicable license terms. Please note that the GNN is not the copyright owner of any of the content. If you share content obtained through this Site and the GNN Repository (either modified or in its original form) with a third party, the same CC license applies to the recipient of the shared material.

Edits to Original Submissions during Peer Review:
Please note that the GNN editorial team reserves the right to make minor edits and/or changes to submitted clinical cases at their discretion in the interest of improving accuracy, clarity, and useability. Likewise, we reserve the right to modify submissions to meet the needs and expectations of creating a respectful, accessible, equitable, and inclusive learning environment.

Peer Review Process

In keeping with the spirit of this community of practice, each clinical case or teaching resource will be peer-reviewed before being published on the GNN website. In addition to maintaining the accuracy and consistency within the GNN repository, the peer-review process will ensure that appropriate ethical approvals and de-identification exist. Our simplified process also limits the administrative workload for contributors and peer reviewers.

Submissions to the GNN will be routed to the Editors-in-Chief (EICs), who will perform an initial quality control review. During this process, the EICs will ensure that materials address neuroanatomy content, are properly uploaded, all patient data has been de-identified, embedded files (e.g., images) are cited appropriately, external links functions, and copyright information is correct. Submissions that do not meet these criteria will be sent back immediately to the authors for revision before the peer review process is initiated.

Once quality checks are completed, EICs route submissions to Associate Editors (Basic Science, Pedagogy, Clinical Content), who will solicit reviewers for their respective content expertise areas. All submissions will have a minimum of two peer reviews, depending upon the submission type. Teaching resources will be routed for review for pedagogy and basic science content, with a clinical content review only solicited if deemed necessary by EICs. Clinical cases will be routed for clinical and basic science review, with a pedagogical review only solicited if deemed necessary by EICs.

Peer reviewers will use the GNN peer review form and a draft of the post as it would appear on the GNN website to complete their reviews. Therefore, peer reviewers do not need to login to the GNN or an additional site to accomplish their work. Peer reviewers will focus on evaluating submissions for completeness, accuracy, reliability/clarity, and level of complexity.

Once peer review is completed, Associate Editors will route decisions to the EICs, who will then contact the authors with editorial decisions (e.g., reject, no revisions, minor revisions, or major revisions). Depending upon the type(s) of revisions needed, authors may be required to resubmit the article. Alternatively, EICs may handle minor revisions directly with approval and guidance from the authors. The estimated time from submission to publication is 60 days, though it will vary depending on the submission type, peer review process, and availability of content experts.

Questions about editorial and peer review process? Contact the EICs at globalneurontwk@gmail.com. Please Include "EIC Peer Review Process" in the subject line.