**Blue Waters Petascale Semester Curriculum v1.0**

**Unit 11: Domain Science: Astrophysical Fluid Dynamics**

**Lesson 2: Scientific Visualization**

**Sample Assessment**

*Developed by* *Marc Gagné and Roman Voronov for the Shodor Education Foundation, Inc.*



*Except where otherwise noted, this work by The Shodor Education Foundation, Inc. is licensed under CC BY-NC 4.0. To view a copy of this license, visit*[*https://creativecommons.org/licenses/by-nc/4.0*](https://creativecommons.org/licenses/by-nc/4.0)

*Browse and search the full curriculum at*[*http://shodor.org/petascale/materials/semester-curriculum*](http://shodor.org/petascale/materials/semester-curriculum)

*We welcome your improvements! You can submit your proposed changes to this material and the rest of the curriculum in our GitHub repository at*[*https://github.com/shodor-education/petascale-semester-curriculum*](https://github.com/shodor-education/petascale-semester-curriculum)

*We want to hear from you! Please let us know your experiences using this material by sending email to* [*petascale@shodor.org*](mailto:petascale@shodor.org)

11.2.4 VisIt Aneurysm Tutorial Activity Sheet

As you are completing the VisIt Aneurysm Tutorial, complete this step-by-step form. Save and submit the form at the conclusion of this week's activity.

4.2.3. How many zones (elements) make up the mesh?

4.2.3. How many nodes (vertices) make up the mesh?

4.2.3 On average, how many vertices are shared per element?

4.3.2. How many heart beats does this dataset cover?

4.3.2. Estimate the number of beats per minute of the simulated heart (each cycle is 0.005 seconds).

4.7.3. Calculating the flux on the slice. Get the numerical value of the flux by querying for the Weighted Variable Sum.