Abstract Submitted
for the PHYSTC22 Meeting of
The American Physical Society

Second Law of Thermodynamics using spiral learning conceptualization of a Conservation of Energy technique ANNE TABOR-MORRIS, Georgian Court University — Student learning which spirals back to the Laws of Conservation of Energy and Conservation of Mass can reinforce concepts as well as learning strategies. Explored here from a teaching practitioner point of view is the Second Law of Thermodynamics which incorporates equational elements involving specific heat capacity and latent heat – specifically defining upfront that the total is zero and then analyzing 'energy in' vs. 'energy out' from each component in that closed system. Latent heat is especially scrutinized as it often causes difficulties. This is considered in light of my past focuses on Kirchhoff's two Laws of Electricity and also Bernoulli's Law and the Continuity Equation. Revisiting the Conservation Laws also underscores their broad importance and can assist in student recall, as well as encouraging application to other situations as appropriate. Ways and means of testing of conceptual understanding is also underscored in this presentation.

Anne Tabor-Morris
Georgian Court University

Date submitted: 21 Jan 2022 Electronic form version 1.4