You should make sure you go through the exercises and the slides before giving this lesson.

Other points:

1. Slides 1-8 are “optional”. While I think they are useful for many science students, as they tend to need to understand the algorithm from a physical standpoint. If the N-Body lessons in the OpenMP and MPI, these slides could potentially be skipped or provided as background to be read before coming to class.
2. This module is aimed at walking the student through a case where OpenACC is used to accelerate a simple N-Body code. There are a series of slides where we go through possible modifications. As such we recommend pauses for discussion (and oral assessment) between slides
    a. 11 & 12
    b. 14 & 15
3. The discussion of manually specifying #pragmas to replace the “#pragma acc kernels” on slides 17-20 could be given as an assignment, or you could step through the content. If it is given as an assignment these slides should obviously be omitted and the codes N-body-OpenACC3.cpp and N-body-OpenACC4.cpp should not be given to students. Of particular note is that the code presented in slides 17-20 did not perform better than the simple code presented in the earlier slides.

Common pitfalls:

None known at this time, but it is to be expected that Computer science students may have a harder time following what the code is calculating, while science students will have a harder time with some of the subtle parts of C++ -- such as the use of the keyword restricted.