CASE STUDY: LESSON PLAN (EXAMPLE)

Teacher: Arnie Duncan

Case Study: Jeff Judd

Lesson Topic: Sailing

Lesson Title: Tacking a Sailboat

Grade Level: Adult

Lesson Author: Adapted from Tom Lochhaas – How to Tack a Sailboat:  
http://sailing.about.com/od/learntosail/a/tackhowto.htm

Length of Lesson: 1 full day

Materials Needed: 3 stools, 1 broom, 1 line, small sailboat, an ocean!, and  mild winds (10-15 knots)

STANDARDS

Demonstrate basic seamanship and sailing skills. (This standard was created by the teacher)

OBJECTIVES

At the end of this lesson, the Case Study will tack (turn) a sailboat safely while sailing in mild winds. (This objective was created by the teacher)

RATIONALE:

I think this objective is very important because to become a good sailor a person has to be able to turn a boat quickly and efficiently to get to a desired destination. Tacking a sailboat (bringing the front end of a sailboat through the wind) is one of the most basic ways of getting to a destination because the boat is already heading into the wind. Being able to tack the sailboat effectively means that the boat’s speed can be maintained and you can get to where you are going faster. For example, a slow and inefficient tack can bring the boat to a standstill. Being able to tack effectively also means that any danger is minimized because all persons on board are aware of the maneuver and that unexpected events don’t occur. For example, a tack that is too abrupt may spin the boat in directions not intended and this may cause people on board to fall down and hurt themselves. The techniques for tacking are also fundamental for more difficult maneuvers such as jibing and heave to. Finally, effective tacks display good seamanship because it requires that the sailor gets the gear and items necessary for the tack are prepared and ready to go. Learning how to tack well is learning how to sail well.
ASSESSMENTS

The action verb in the objective is “tack”, which requires the Case Study to “do” something that involves several possible answers, and thus, the assessment that matches is a performance assessment because that assessment involves “doing” and “open responses”.

Assessment Task:

While sailing in mild winds, you will tack to port and tack to starboard safely. In your tacking, you will be expected to accurately evaluate conditions before the tack, communicate clearly to your crew, and complete the maneuver smoothly and safely.

Assessment Task Rubric:

<table>
<thead>
<tr>
<th>Criteria “Tack”</th>
<th>Exceeds Proficiency (4) (100-90%)</th>
<th>Meets Proficiency (3) (89-70%)</th>
<th>Developing Proficiency (2) (69-60%)</th>
<th>Below Proficiency (1) (59% or below)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing to Tack</td>
<td>Conditions for tacking are adequately evaluated before maneuver (gear, lines, wind, crew, new point of sail).</td>
<td>Conditions for tacking are mostly adequately evaluated before maneuver (gear, lines, wind, crew, new point of sail)</td>
<td>Conditions for tacking are somewhat adequately evaluated before maneuver (gear, lines, wind, crew, new point of sail)</td>
<td>Conditions for tacking are not adequately evaluated before maneuver (gear, lines, wind, crew, new point of sail)</td>
<td></td>
</tr>
<tr>
<td>Initiating Tack</td>
<td>Initiation of tacking is clearly communicated to crew. Crew are given adequate time to prepare for tacking.</td>
<td>Initiation of tacking is clearly communicated to crew. Crew are given mostly adequate time to prepare for tacking.</td>
<td>Initiation of tacking is somewhat clearly communicated to crew. Crew are given some adequate time to prepare for tacking.</td>
<td>Initiation of tacking is not clearly communicated to crew. Crew are not given adequate time to prepare for tacking.</td>
<td></td>
</tr>
<tr>
<td>Tacking Maneuver</td>
<td>Tacking maneuver is smooth and efficient. Little loss of boat speed results from tack and new point of line is maintained.</td>
<td>Tacking maneuver is mostly smooth and efficient. Some loss of boat speed results from tack and new point of line is maintained.</td>
<td>Tacking maneuver is somewhat smooth and efficient. Loss of boat speed results from tack and new point of line is somewhat maintained.</td>
<td>Tacking maneuver is not smooth and efficient. Loss of boat speed results from tack and new point of line is not maintained.</td>
<td></td>
</tr>
<tr>
<td>Port and Starboard Tacking</td>
<td>Tacking maneuver on either port or starboard is equally proficient as determined by above criteria.</td>
<td>Tacking maneuver on either port or starboard is mostly equally proficient as determined by above criteria.</td>
<td>Tacking maneuver on either port or starboard is somewhat equally proficient as determined by above criteria. One type of tack is easier to demonstrate than other.</td>
<td>Tacking maneuver on either port or starboard is not equally proficient as determined by above criteria. Only one type of tacking can be done.</td>
<td></td>
</tr>
</tbody>
</table>

Total | | | | | |
INSTRUCTION

An instructional strategy that “matches” the performance assessment is “hands-on” and to have the Case Study actually perform the steps involved in tacking a sailboat.

I. ANTICIPATORY SET – Land Drill (2 hours)

1. Teacher and Case Study meet in a room where teacher has set up 3 stools, 1 broom, and 1 line to represent the arrangement of a sailboat that is ready to tack.

2. Teacher begins by asking Case Study to explain how the Hōkūle‘a sailing canoe makes turns in the ocean and what Native Hawaiians knew about the ocean and wind.

3. After a brief discussion, teacher then asks Case Study to read through steps of the land drill to himself/herself or to state step using picture as a guide.

4. Teacher then asks Case Study to describe steps of land drill or draw pictures.

5. Teacher evaluates level of Case Study’s conception of tacking, and then takes the Case Study through each step that the Case Study is not proficient at and slowly reads over the steps with the Case Study. Teacher does this several times.

6. Teacher then has Case Study demonstrate the land drill by himself/herself first. Again, teacher evaluates proficiency of Case Study’s land drill ability.

7. Teacher then takes the Case Study through each step and models each step and holds corresponding cards with the commands written out. Teacher has Case Study perform each step until Case Study can do the step with ease.

8. Teacher then models to the Case Study the entire drill. Teacher then has Case Study perform entire drill. Teacher provides feedback.

9. Case Study practices drill over and over until entire drill can be done with ease.

II. MAIN ACTIVITY – Tacking the Sailboat (5 hours)

1. After completing the land drill, the teacher has the Case Study practice the land drill on the actual sailboat while the sailboat is docked to the pier.

2. Teacher then provides feedback on Case Study’s technique.

3. Practice on sailboat continues until Case Study demonstrates ease of tacking maneuver.
for both starboard and port tacks.

4. Teacher takes sailboat out into the open ocean. Winds should be mild (10-15 knots).
5. In open water, teacher models how to do a port tack.
6. Teacher asks Case Study to describe steps in the port tack just shown. Teacher then demonstrates a starboard tack and again asks the Case Study to describe the steps involved.
7. Teacher asks Case Study if he/she is ready to perform the maneuver.
8. If Case Study is ready, then Case Study performs a port tack.
9. After port tack, teacher asks Case Study to evaluate his/her performance. Short discussion follows.
10. Case Study then performs a starboard tack. Again discussion of evaluation is done.
11. Case Study then repeats performance until ease of maneuver is demonstrated at the “meets proficiency” level of the rubric.
12. If Case Study cannot demonstrate proficiency, then teacher asks Case Study to recognize aspects to work on.
13. Teacher then ends lesson by bringing boat back to dock.

III. CLOSURE – Performance of Evaluation and Independent Practice

1. At the dock, the teacher and Case Study use the rubric to discuss overall performance of each criteria.
2. Case Study writes down aspects of the tacking maneuver that is not at proficient. If the Case Study reaches proficiency, then the main activity is repeated in moderate winds (15-20 knots).
3. Teacher tells Case Study to practice the land drill for at least a half-hour and focus on aspects that are not proficient.

ACCOMMODATIONS

I. SPECIAL NEEDS (includes Gifted & Talented)

- To accommodate for a Case Study requiring extra guidance (including gifted and talented), my instruction provides numerous opportunities to demonstrate the learning objective and continuous feedback throughout on progress made. Providing these opportunities lets any student, whether cognitively challenged or gifted, to reach the learning objective at his/her own pace. If the Case Study struggles in the land drill, then extra time is provided until the Case Study masters the steps for tacking the boat. If the Case Study quickly demonstrates the procedures, then s/he can move onto the next task which is tacking in stronger winds. With continuous feedback based on clear criteria allows the Case Study to always know what needs to be improved.

II. ENGLISH LANGUAGE LEARNERS (ELL)

- To accommodate for an ELL Case Study, my instruction includes modeling (both teacher and Case Study) with accompanying pictures. If the Case Study is unable to read the drill steps in the text, then I would have him/her draw out the steps first to demonstrate
understanding. The Case Study would also have to use basic English words to communicate to the crew for the tacking maneuver and those words would be written on cards and held up to remind the Case Study to say the words as the action occurs.

III. CULTURE & DIVERSITY (SES, Race/ethnicity, LGBT)

- To accommodate for a Case Study with various cultural background, my instruction makes a brief connection to the Hōkūle’a sailing canoe and the importance of knowing wind and ocean conditions to move between the Hawaiian islands. If my Case Study did not relate to the Hōkūle’a, then I would ask about sailing from Case Study’s background or have the Case Study do a brief internet search on sailing cultures.

 ADDITIONAL LESSON PLANS (IF NEEDED)

- **Lesson #2:** Case Study repeats land drill in front of teacher, both on land, and on the boat. Case Study practices on open ocean until he/she demonstrates proficiency for both port and starboard tacking maneuver. Feedback based on rubric criterion is given by teacher.

- **Lesson #3:** Case Study practices on ocean tacking maneuver, but focuses on maintain course and speed on the maneuver to avoid losing boat speed. Feedback based on rubric criterion is given by teacher.

- **Lesson #4:** Final Exam: Case study demonstrates port and starboard tacking maneuver and is graded by the teacher using the rubric criterion. Case study receives a final grade for performance using rubric criteria.