# CERES Student User Manual

Understanding a topographic map requires making the connection between the printed map and the shape of the terrain around you. Contour lines and elevation numbers tell you what you should expect to see looking around you.

Becoming an expert at this skill depends on practice. CERES is a training protocol designed to give you sets and reps on this by showing you topographic maps and a simulation-based view of the ground and asking you to answer the question "Where am I?".

Each short scenario is based on something like the idea that you've been driven somewhere unknown in a vehicle to get told, "We're lost, can you figure out where we are with the map and compass? We're somewhere in this blue circle…".
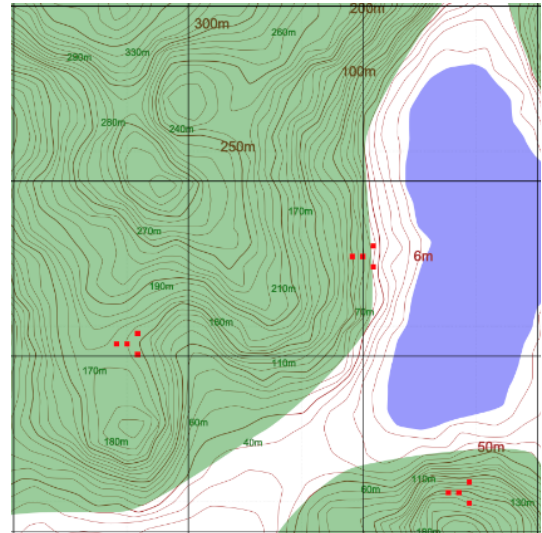
On the screen to the left is a map and on the right is a short video reflecting a brief look around. A compass underneath the video shows your heading as the video looks around. Your goal is to mark your location and heading on the map. Use the terrain features around you and the topography of the map contours to figure it out.

After you make your response, you will get feedback scored as distance from real location and also as a point score.

Then you will be given a new location and a new video to repeat the process. We expect each round to take a minute or less and the idea is to get a lot of repeated practice building this skill. You may find the task challenging initially, but we expect you will improve with practice.

If you are experienced with topographic maps, you might find the task easy at first. The difficulty will increase as you go. For example, the blue search circle will increase in size after good answers.

The terrains you will see do not have any buildings or roads on them. They do have water and colorful pylons of various sizes and colors around. You can use these as reference points to connect the surroundings in the video to the map locations. There will be fewer of these as the difficulty increases, requiring you to focus more on the contour lines to find where you are.

This is a research protocol to test the CERES training protocol. We are collecting and reviewing performance data. This will be used primarily to improve the app and training approach. Please provide feedback via that option on the "hamburger menu" at least once per training session.

Launching the app

Note that this is a redirect to the following link below that directly connects to our systems at reberlab.org
http://www.reberlab.org/file/show/Ceres2.html?group=ea4a31dcc1dd912d&prompt=assigned

We recommend that you run our app from a computer with good internet connection using the tinyurl above. You can also open this app on a phone or tablet but be aware that as the app downloads the video clips, it uses a lot of bandwidth and the performance of the app in low bandwidth conditions may not be great.

When launching the app, a pop up will appear asking you to enter your assigned ID (use the date and your initials for an ID if you were not assigned one). Once your ID has been entered, a set of instructions with a video will appear. After the instructions, you will begin on a map called "DemoWorld" where you will practice some trails. You will get a large amount of practice trails starting from easy. As you get better, the maps will get harder and harder.

The Task Interface

During the task, you will see a map on the left and a video on the right. The map is a topographic map of an unfamiliar location. The contour lines on the map are separated by 10m of elevation with thicker lines every 50m. The color squares are brightly colored pylons that are the only non-natural structures on the terrain. To the right is a short video showing movement in a first-person point of view from somewhere on the map. You cannot control the movement on the map, although you can replay/rewind the video (see below). There is a blue circle on the map and the video is movement from somewhere within that region. Your goal is to identify where in the circle you are from the terrain features and mark your location on the map.
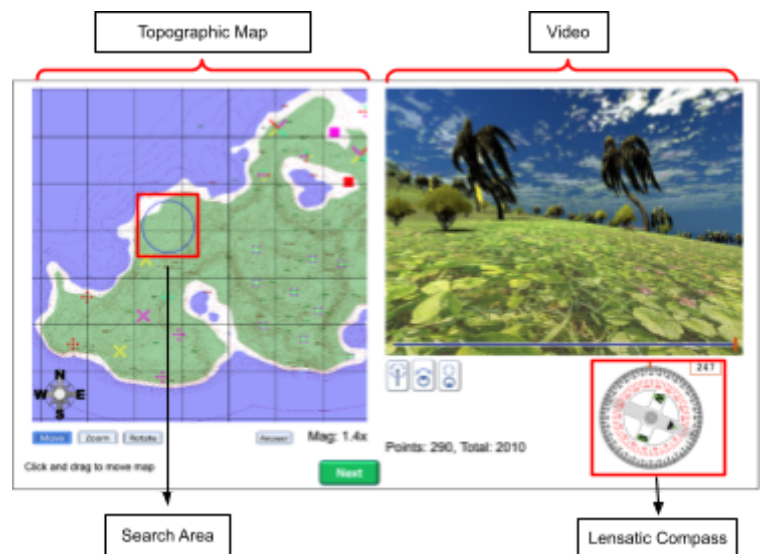
Control of the Map

Use the buttons below the map to "move," "zoom" and "rotate" the map to help figure out where you are. To access each mode, first click the button under the map, then click and drag the map:


Click here to adjust the map

Click here to select/submit your answer
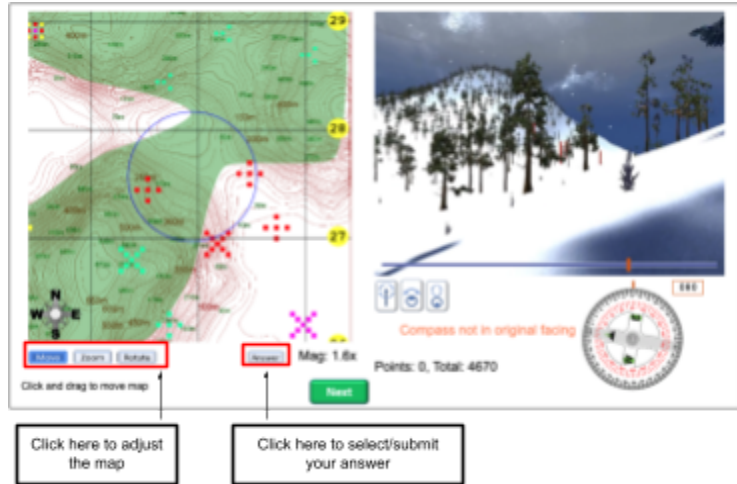
Move: Click and drag anywhere on the map and the map will move in the direction you are dragging.

Zoom: Click and drag from left to right to zoom in or click and drag from right to left to zoom out. You can zoom in up to 22.2x magnification.
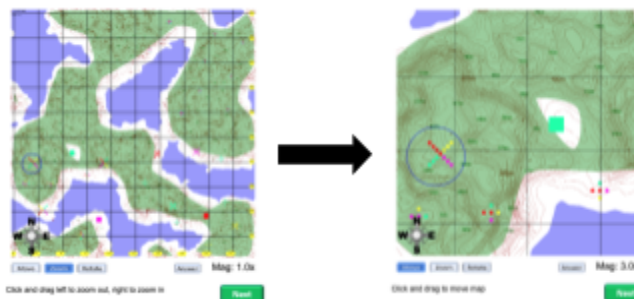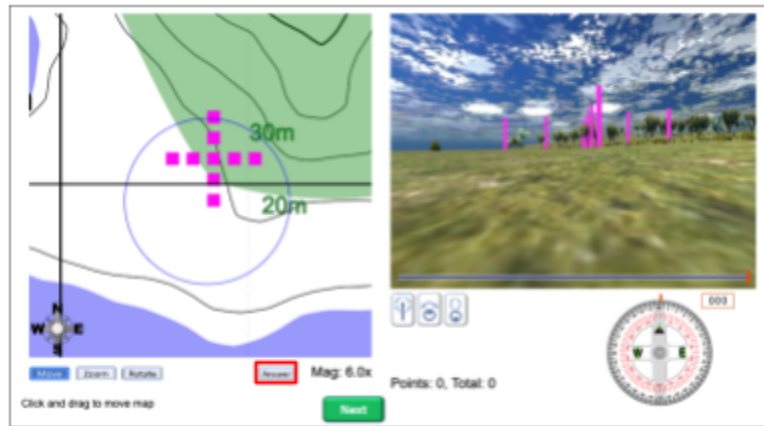

Rotate: Click and drag from left to right to turn the map counter-clockwise or click and drag from right to left to turn the map clockwise.
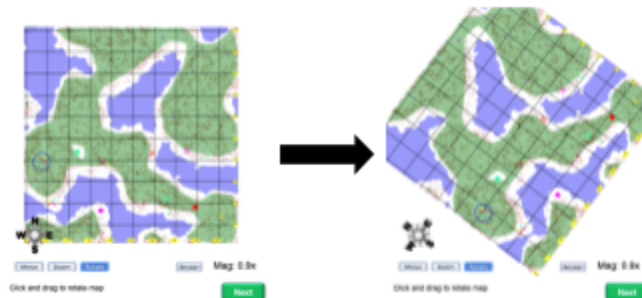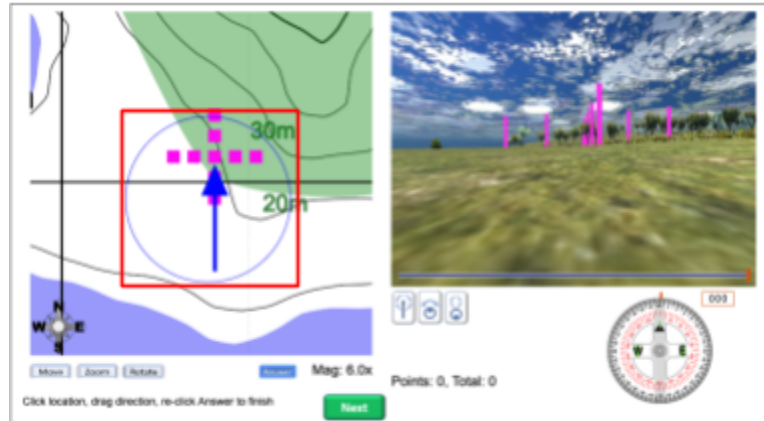
Making your "Where am I?" Answer

1. Select the "Answer" button under the map

2. Click within the blue circle to mark the location
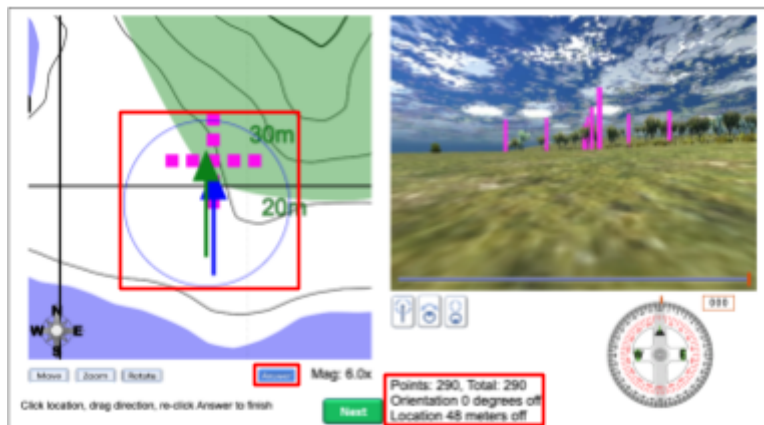

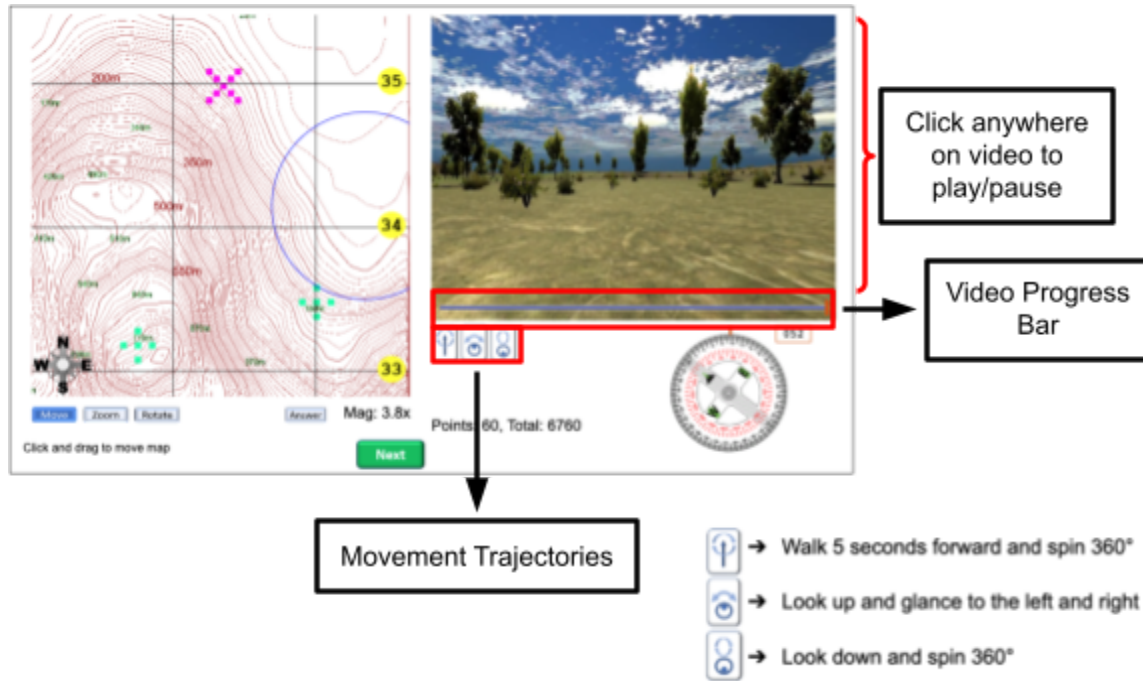3. Drag the arrow in the direction shown at the start of the video

4. Click the "Answer" button a second time to finalize your response

5. A green arrow will appear showing the correct answer. You will be awarded points for accuracy. **The key to success in CERES is to be as precise as possible in your location answer.**

Control of the Video

Click anywhere on video to play/pause

Video Progress Bar

Movement Trajectories

→ Walk 5 seconds forward and spin 360°

→ Look up and glance to the left and right

→ Look down and spin 360°

When a new location is presented, the video will automatically play. You're able to play or pause the video by clicking anywhere on the video. You are also able to scroll to any part of the video using the video progress bar.

Click the icons below the video to change the video's movement trajectory

The Compass

The lensatic compass image under the video shows the direction you're facing at each moment in the video. The orange marker at the top of the dial indicates that direction.

The upper right corner of the compass shows the amount of degrees you are facing in the video. Cardinal directions are associated with degrees. Example shown on the right:

000 Facing North

090 Facing East

180 Facing South

270 Facing West
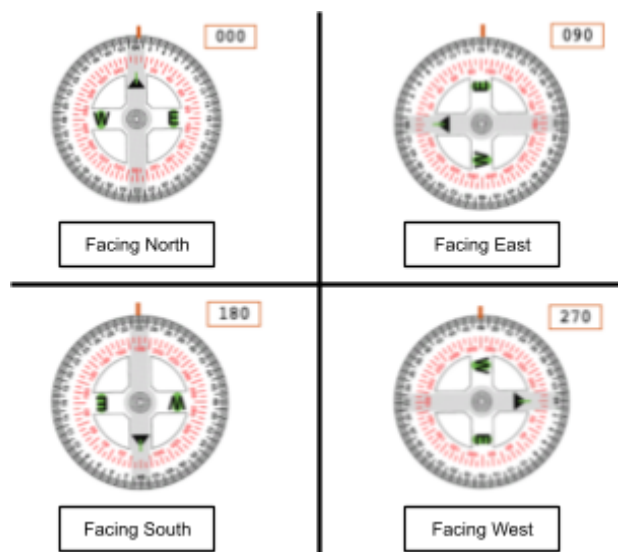
The Hamburger Menu Options

To get to the Hamburger Menu, click on the upper right corner of the app. This is where you will get a list of options:

Instructions

Replay the in-app instructions and video. You will be able to view this at any time and your progress will be saved.

Finish

Complete your session and upload your performance data to the servers

Performance

Shows a report of points earned this session and previously. Also shows scores for the last locations that you most recently completed.

Feedback

Opens a brief feedback form at the bottom of the app. Click on the lower left corner button "Submit" to submit your feedback to us about the app. We also have a separate survey where you can also provide your feedback. Both forms of feedback are completely anonymous and any input would be greatly appreciated. Thanks!

https://tinyurl.com/Feb2023CERESFeedback

Note that this is a redirect to the following link below that directly connects to our survey system at Qualtrics.com
https://northwestern.az1.qualtrics.com/jfe/form/SV_81Rwkkm4hL8N3Aq

New Login

For use on shared computers this allows another student to work and have their own progress tracked.