

SURVIVOR CHALLENGE

Name 1: _____ **Name 2:** _____ **Name 3:** _____

Work in a group. Write down all names, but you only need to turn in one paper.

SYNOPSIS: You will be taken to a random location somewhere on the northern hemisphere of the Earth at a random time of the year. Your goal is to figure out where you are located and what month of the year it is using only basic observations of the sky and your ingenuity. You will be graded primarily on the quality of your plan, not your answers.

Real science involves creativity and imagination to figure things out. Part of the goal of this lab is to provide a better understanding for how scientists actually work.

EQUIPMENT: This lab write-up, a pencil, and a white board and marker to share with your group for brainstorming. Globes, laser pointers, and red flashlights are available to share among the whole class.

TOOLS AT YOUR DISPOSAL: Since you will effectively be in control of the planetarium, here are some tools and superpowers you can utilize to help you figure out your time and location on Earth:

- You will have a chance to observe the Boulder sky on the mystery date for 24 hours before you are taken to a mystery location.
- You have an imaginary watch that is always set to Boulder time during this whole activity. At any time you can ask the planetarium operator “What time is it in Boulder?”
- You may request information from the planetarium operators, for instance, “stop turning the sky at sunset and tell us the time when the sun sets.” Or, “stop the sky at noon.”
- Once you are in the mystery location, you can observe the sky for 24 hours (and stop the sky as you wish). You may also observe any day one month earlier and one month later than the mystery date.
- You DO NOT have superpowers to be able to see lines, grids, degrees, cardinal directions, or other projections on the sky. You must use what you’ve learned in class and your ingenuity to discover some of these things for yourself!

Observations we will make and what they can tell us:

For each item give your answer, what evidence you used *and* how accurate you think it is.

Our latitude is:

We know this because:

Our longitude is:

We know this because:

The date is:

We know this because:

Where do you think you are?

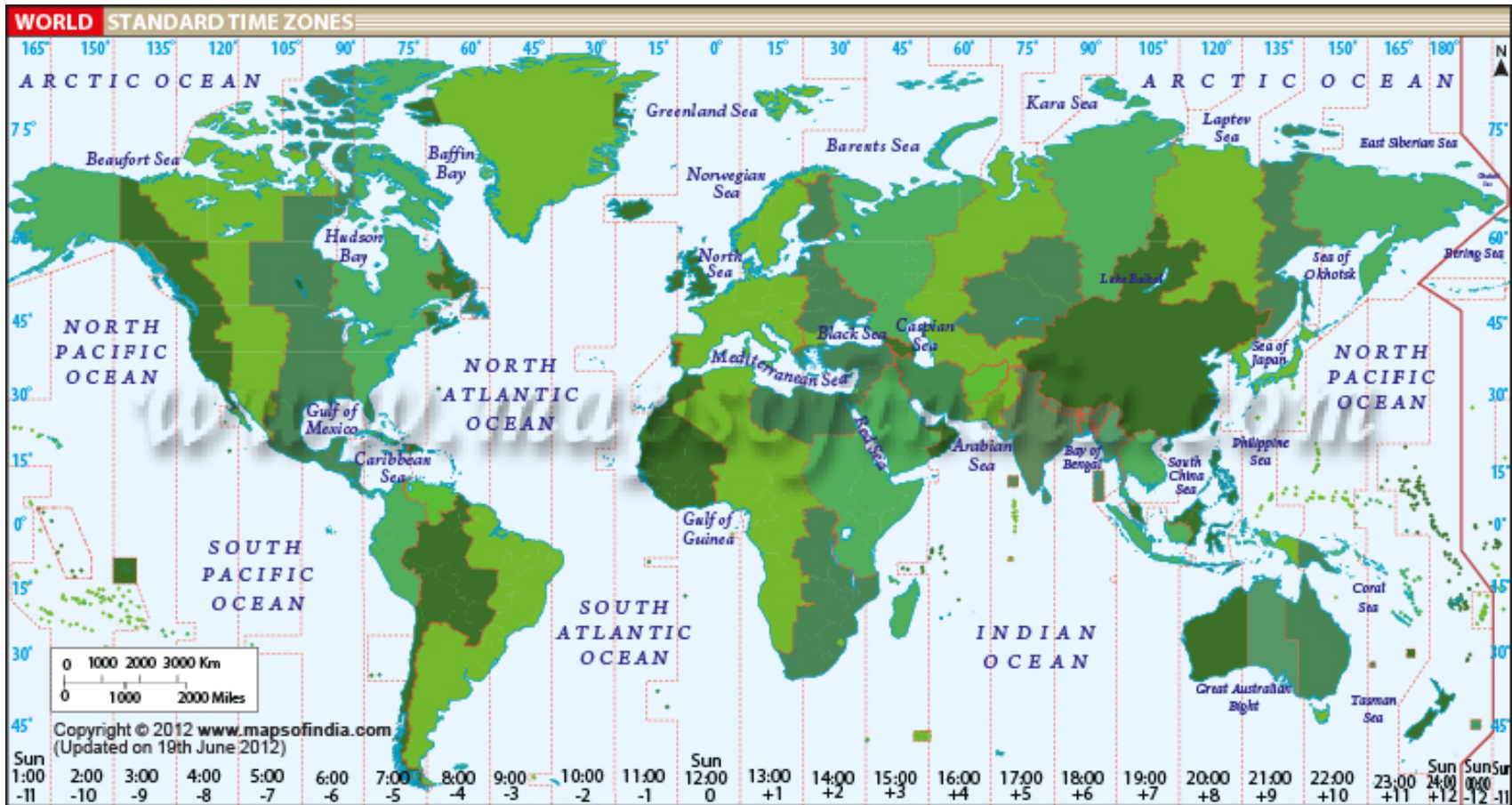


Image courtesy of www.mapsofindia.com