

Student Signatures: _____ Team #: _____
Team Name: _____

***Ladera Vista Science Olympiad Invitational
December 12, 2015***

May the Force Be With You!!

To the Student: Welcome to Road Scholar!

You will need pens, pencils, ruler, protractor, and calculator.
You may use any printed resources you brought with you.
You may not use a computer.

Your names, team name and team number must be written both on this booklet and the answer sheets.

You may write in this booklet for scrap, but your final answers must be written on the answer sheets provided. All questions and answer sheets must be attached and in order.

Your answers must be complete - measurements must have units; town names must include state, province, or other appropriate identification.

If you are not certain as to what you should be doing, or if a question does not make sense to you, ask the event supervisor what to do.

Make sure you read the story line in italics. Some of the questions will not make sense without the story, so they will be harder to you.

Cautions: Avoid penalty points or disqualification!!!

Make sure you do not make any marks on any maps provided to you!

Make sure you start working only when told to do so, and stop exactly when told to do so by the event supervisor.

Good luck!

A long time ago, in a galaxy movie studio far, far, away...

In 2005, fans enjoyed the release of the most recent movie in the Star Wars Franchise, Episode III: Revenge of the Sith. Now, over 10 years since the release of that film, the Star Wars Franchise is poised to come back to life with the release of Star Wars Episode VII: The Force Awakens.

*You work for **Adventures by Disney**, the exclusive tour division of the Walt Disney Company. In addition to having world-class, exclusive VIP tours around the world, **Adventures by Disney** has a special interest in creating exclusive experiences centered around their North America theme-parks, the Disneyland Resort and Walt Disney World.*

As you know, Disney bought Lucasfilm and the rights to the Star Wars Franchise in 2012. With the release of the next installment in the Star Wars saga, Disney is planning a limited-time, exclusive enhancement to its Southern California Tour.

As the lead planner for the Southern California Adventures by Disney experience, you have been tasked with planning out the locations and order of the Star Wars enhancements for the experience.

At your station you have three maps:

The AAA Los Angeles Highway map.

USGS Redondo Beach Quadrangle map

Partial USGS San Pedro map on 8.5" x 11" paper (downloaded from the Internet)

***** Use the AAA Los Angeles Highway map*****

The Southern California Adventure begins with the flight landing at Los Angeles International Airport and then transportation to the Loews Hollywood Hotel.

1. Planes taking off and landing at LAX almost always take off to the west and land from the east. Based on what you see on the map, what geological feature is the most likely explanation for this?

2. The Loews Hollywood Hotel is located in Hollywood, CA at the intersection of Hollywood and Highland.

A. What are the AAA map grid references for the city of Hollywood, CA?

B. What is the shortest distance from LAX to the city of Hollywood, CA, assuming that you are traveling primarily freeways?

As your Adventure travels from LAX to Hollywood, the tour bus will pass some key points of interest along the way, including a famous University, known for everything from its law school to its sports teams.

3. What top university is located along the tour bus's route from LAX to Hollywood?

After a good night's sleep at the hotel, participants in the Adventures by Disney Southern California tour will visit a variety of Hollywood spots, including a VIP visit to the Jim Henson Company Studios, built on the original site of Charlie Chaplin's movie studio.

As you consider possible additions to the tour to enhance the experience for the Star Wars release, you are considering adding a stop at the place where the recording of the movie's score was done. John Williams, the film's composer, recorded the music at the Sony Pictures Studios' Barbra Streisand Scoring Stage in Culver City, CA.

4. As the crow flies, how far is it in miles from Hollywood, CA to the city where the recording studios are located? (Express your answer to the nearest 1/2 mile).

5. If you were to have the tour bus drive to the studios by taking US 101 South to SR 110 South to I-10 West, how far would the tour bus have to drive to get to the recording studios? (Express your answer to the nearest whole mile).

As you consider the map in planning for this addition to the tour, you notice that the road changes when moving from US 101 to SR 110 to I-10.

6. How does the road classification change when going from US 101 to SR 110 to I-10? (Express your answer as: US 101 is _____ SR 110 is _____ I-10 is _____)

On day 3 of the Adventures by Disney Southern California excursion, the usual itinerary includes a trip to the Walt Disney Studios and Archives in Burbank, CA followed by a change of home base down to the Disneyland Resort's Grand Californian Hotel & Spa. However, some spectacular movie premiere events are scheduled around Hollywood leading up to the movie's premiere.

December 11th through the 14th will see the closure of Hollywood Boulevard between Sycamore Avenue and Highland Avenue and a massive tent will be erected from Highland to La Brea to accommodate the reception following the film's premiere at 6:30 PM on Monday December 14th.

7. What two boulevards are visible on the map as alternate streets that any tour bus might take instead of Hollywood Blvd? They should be parallel to Hollywood Blvd and within 1 mile of it.

In addition to the official red carpet premiere in Hollywood, many other movie theaters are doing promotions in and around the movie's opening. AMC Theaters is hosting a Star Wars Marathon Event at 39 locations beginning on December 17th at 1 AM. AMC will show all seven movies in a row, beginning with Episode I and working all the way through to the new release of Episode VII.

8. AMC has a movie theater in Downtown Disney, affiliated with the Disneyland Resort. How many miles does the bus have to drive from Hollywood, CA to Anaheim, CA? Please give your answer to the nearest whole mile.

9. If, instead of driving from Hollywood to Anaheim, you decided to add a helicopter option, which two airports could your guests land in that are within 10 miles of the Disneyland Resort?

10. What cities are those airports in?

11. It is not actually possible to take a boat from John Wayne Airport to the Disneyland Resort, but if it was, what river would that boat go up?

12. What county is the Disneyland Resort located in?

***** Map Change - Use USGS Redondo Beach Quadrangle Map *****

*As part of your job duties for **Adventures by Disney** you are always on the lookout for new and fantastic hotels and getaways. You have heard rumors about a fabulous new resort called "Terranea Resort". Apparently it was built on the site of an old amusement park called "Marineland".*

13. Using the main contour line in that area on the Redondo Beach Quadrangle Map, what is the approximate elevation over sea level of Terranea? Please estimate to the nearest 100 feet.

14. What is the latitude and longitude of the southeast corner of the Redondo Beach Quadrangle Map? (Please express your answer as "The Longitude is _____. The Latitude is _____".)

15. What is the basic contour interval on this map?

16. What is the scale of this map?

17. What series is this map?

18. How much does the land rise at Terranea from the sea shore to Palos Verdes Drive south?

Disney Cruise lines is also considering using Terranea Resort as a stopover on some of their most exclusive cruises. They know that there is no landing place for the big cruise ships, but are considering sending guests ashore in smaller craft. The big ships need at least 50 feet of Ocean Depth.

19. How close can Disney Cruises get their big cruise ships to the shore at Abalone cove, near Terranea? (Give your distance in Feet, rounded to the nearest 1000 feet)

***** Map Change - Use USGS San Pedro 8.5 x 11 map (downloaded from the Internet) *****

Adventures by Disney requires its planners to have a thorough knowledge of the geographic area around any proposed new hotels or resorts. Therefore, you have decided to learn as much as you can about the area around Terranea.

20. What is the elevation of Marymount College?

21. What is the elevation of the lowest contour line on this map?

22. What is the elevation of the highest contour line on this map?

Map Drawing Problem

Your supervisor at Adventures by Disney is intrigued by your description of Terranea, especially what you told her about the different elevations found on the property. She has asked you to draw a more detailed topo map of the resort. Based on your observations and measurements while you were there, you have the following data:

The main building sits centered on the property and is situated at 100 feet above sea level. The property rises from the main building as you travel north until it reaches Palos Verdes Drive North at an elevation of 200 feet above sea level.

There are two building situated at the Southwest and Southeast corners of the property, both on the shoreline. The Southwest building is at an elevation of 20 feet above sea level, the Southeast building sits 50 feet above sea level.

There is a valley that runs from Palos Verdes Drive North to the shore, between the Main Building and the Southwest building, at an elevation of 225 feet.

Please use the space and instructions on the answer sheet to draw your map.