“Deadly Landslides” – Discovery Channel

(“Google” this title for a Discovery Channel You-tube video – approximately 52 minutes long)

***ANSWER on your own paper…….. (answers only)***

1. Each year landslides kill more and cost more than \_\_\_\_\_\_\_\_ .
2. LANDSLIDES: \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_
3. Debris flows are triggered suddenly and move at about \_\_\_ mph.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_ is the prime mover.
5. Vista Royale, Southern California: subdivision built on two previous \_\_\_\_ that were supposedly repaired.
6. In Oregon: Geologists have created the world’s largest \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_laboratory.
7. “Rapid ones usually \_\_\_\_\_ \_\_\_\_\_\_\_\_.”
8. Vast majority of landslides are triggered by ground \_\_\_\_\_ \_\_\_\_\_ in response to rainfall.
9. After \_\_\_\_ gallons of water, things start to get interesting.
10. When a shear surface forms underground, particles once packed together begin \_\_\_\_\_\_\_\_\_\_\_\_.
11. Landslide processes become dramatic only every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. After El Nino storms of 1982: \_\_\_\_\_\_\_\_ landslides in the Bay Area caused $\_\_\_\_\_\_\_ damages.
13. Tell-tale signs:
    1. Drainage is usually disrupted – you can see \_\_\_\_\_
    2. Very steep cliff at top called \_\_\_\_\_
    3. “\_\_\_\_ \_\_\_\_\_” tracks left on mountain side after landside
14. California: two \_\_\_\_\_ \_\_\_\_\_ meet: Los Angeles at “ground zero”; San Andreas Fault squeezing and \_\_\_\_\_\_ the terrain.
15. San Gabriel Mountains – elevation \_\_\_\_\_\_\_ feet above Los Angeles.
16. San Gabriel – rising today and eroding today = \_\_\_\_\_ \_\_\_\_\_\_ relief Mountain range.
17. ………..stabilized at the \_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_.
18. In San Gabriel Mountains - \_\_\_\_\_ tons of rock from each acre every year.
19. Every \_\_\_\_\_\_\_\_\_\_\_\_ along the San Gabriel’s front has been barricaded: Debris basins are designed to protect people below from forces of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
20. February 1978: storm channel was “quiet” because it was blocked by a \_\_\_\_\_\_\_\_\_\_\_\_\_.
21. Land moving about \_\_\_\_\_\_\_ mph.
22. The family was on the bed it was “lifted” so high by the mud in the house so that their hands \_\_\_\_\_\_\_\_\_.
23. Mud rose up to their \_\_\_\_\_ before stopping.
24. \_\_\_\_ people died - \_\_\_\_\_’s of homes were damaged – and \_\_\_ \_\_\_\_\_ escaped from the zoo.
25. Highway 101 – Washington State: Road covered with \_\_\_\_ feet of mud.
26. Huge landslide = \_\_\_\_\_\_ feet wide.
27. Heavy rainfall is often the culprit behind landslides, but here it has an ally, crumbling \_\_\_\_\_\_ that was laid down in the \_\_\_\_\_\_ \_\_\_\_\_\_\_.
28. Slopes are steep and covered with a layer of loose sand and gravel easily permeated by water, it all sits on a slippery layer of \_\_\_\_\_.
29. Over a period of \_\_\_\_\_\_\_, the hill came apart, carving its way \_\_\_\_\_ feet to the Swanson home.
30. Geo-phones are basically \_\_\_\_\_\_ \_\_\_\_\_\_\_.
31. Sound waves from the blast move through the earth, bounce off the \_\_\_\_\_\_\_, and return.
32. \_\_\_\_\_ is enemy number 1 for slide-prone slopes.
33. Geologists need to drain more than \_\_\_\_\_\_\_\_\_\_ gallons of water per day.
34. The most dangerous landslides are from \_\_\_\_\_\_\_\_\_.
35. Steep-sided volcanoes covered in snow pose the most extreme landslide hazard of all – they can travel at about \_\_\_\_\_\_\_ ft/sec.
36. Geologists consider \_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_ the most dangerous volcano in the United States.
37. An avalanche can start from a layer of snow as thin as \_\_\_\_\_\_\_\_ inches.
38. Because of its tremendous snowfield and glaciers, \_\_\_\_\_. \_\_\_\_\_\_\_\_\_ has more \_\_\_\_\_\_\_ trapped than the entire Cascade Peaks combined.
39. Other evidence points to lahares every 500 years, which means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
40. The last lahare spread about \_\_\_\_\_\_\_ miles into the valley.
41. November 1985 – Columbia: November 13th – volcano eruption melted \_\_\_\_\_\_\_\_\_\_\_\_\_
42. Within \_\_\_ hours a town was completely erased.
43. \_\_\_\_\_\_\_\_\_ killed in an avalanche of mud.