

Review Sheet for Semester Test

Use this sheet to help you prepare for the test. You do not have to write down answers on this sheet. You WILL NOT be expected to hand this sheet in.

The test will consist of 100 multiple-choice questions and several additional questions. The additional questions for the regular classes will be involve diagrams/maps of Giant Springs, Montana Rivers, and the orbit of a comet (see #69-71 on this review sheet). The additional questions on the honors test will be essay questions (see #72-75 on this review sheet for topics).

If you are confused about topics consider using the resources available on Benson's website. Those in the astronomy unit may be especially helpful.

1. Why can fossils of sea creatures be found high above sea level in mountains around the world?
2. Be familiar with the names of common sedimentary, igneous, and metamorphic rocks.
3. Study the rock cycle handout. Be familiar with the processes represented by the arrows.
4. Know the difference between "weathering" and "erosion".
5. There will be a question to test your knowledge of the San Andreas Fault.
6. What are some warning signs that scientists monitor to see if a volcano is about to erupt?
7. What are the components of a pyroclastic flow?
8. There will be a question to test your knowledge of the earthquake situation in Helena.
9. What is the difference between an epicenter and a focus (earthquakes)?
10. Be familiar with the three situations where there is volcanic activity (types of volcanism), and know some examples of each.
11. Be familiar with the three types of earthquake waves and their characteristics.
12. What is a shadow zone?
13. There will be a question about tsunamis.
14. Be familiar with the 1959 Montana earthquake.
15. What are the processes that lead to the formation of sedimentary rock?
16. Know the difference between plutonic igneous rocks and volcanic igneous rocks, and be able to give some examples of each.
17. Why can you see Madison limestone in parts of western and central Montana, but not eastern Montana?
18. Be familiar with the formation of the Himalayas.
19. Be familiar with the formation of Crown Butte
20. Where are earthquakes and volcanoes most common, and why are they more common there?
21. Be familiar with the principles of crosscutting and superposition.
22. What are the two most common types of igneous rocks?
23. Be familiar with the 1986 disaster at Lake Nyos.
24. Why are the crystals (grains) in granite interlocking?
25. Where are the headwaters of the Missouri River?
26. Be sure to study the map activities titled, "USA Drainage Basins", "Montana Rivers", and "Helena Area Watersheds".
27. How do tailings contribute to the formation of acid mine drainage?
28. What are the three ways we deal with sewage in the Helena area?
29. What is a watershed (a.k.a. drainage basin)?
30. What is the difference between curds and scaling?
31. What is the purpose of the Red Mountain Flume?
32. How did Glacial Lake Missoula form?
33. How did the last ice age impact the Missouri River?
34. How did Flathead Lake form?
35. What does the term "water table" mean?
36. What contaminant is showing up in groundwater in the Helena Valley as a result of problems with septic systems?
37. How does long-term contact with limestone affect the hardness of water?
38. What is a "divide"?
39. What 3 kinds of evidence help scientists determine how far the ice advanced during the last ice age?
40. What caused the Snowball Earth period(s) to finally end?
41. How often has Earth experienced an ice age over the last 1 million years?

42. How long ago did the last ice age end?
43. What are the three byproducts of sewage treatment and what does the City of Helena do with each?
44. What are the factors that contribute to the onset of an ice age?
45. Why do the Sun and Moon rise in the east and set in the west?
46. Be familiar with the 4 time zones for the lower 48 states.
47. What is the difference between a lunar eclipse and a solar eclipse?
48. What causes the tides?
49. What did Edwin Hubble discover?
50. List several types of objects you can see in the night sky. (We call them “stars” but they are not all stars.)
51. How long does it take? . . . Earth to orbit the Sun? Moon to orbit Earth? . . . Earth to spin on its axis?
52. Study the video WS called “Failure is Not an Option” – have a general understanding of these events.
53. Study the notes handout titled “The Moon”.
54. What are the stages in the life cycle of a star like our Sun?
55. Why doesn’t the Sun explode or collapse?
56. What does Earth’s magnetic field protect us from?
57. What is a solar cycle?
58. What causes there to be meteor showers at certain times every year?
59. What causes Earth to have seasons?
60. What is so great about the Hubble Telescope?
61. Be familiar with the general location of the planets, asteroid belt, Oort Cloud, and Kuiper Belt.
62. Why is Pluto no longer considered to be a planet?
63. What was the ideal situation that we wanted as far as moon phase and tides on D-Day?
64. Can you put these in order from largest to smallest? Sun, Solar System, Universe, Galaxy, Earth
65. What is a black hole and why won’t the Sun become one?
66. There will be 6 questions to see if you understand the Earth – Moon – Sun relationship. Hopefully you did the online moon phase activity posted on “Unit 9” of Benson’s website.
67. Why do scientists believe there is a supermassive black hole at the center of the Milky Way?
68. Why do comets have tails?
69. NOT HONORS - On a diagram that shows a comet at different locations on its orbit, could you show where it is most likely to have a tail and show where that tail would be? Could you figure out where it is going the fastest as it orbits the Sun?
70. NOT HONORS - There will be several questions about the situation at Giant Springs. This was covered in class and during the “Testing Water for Hardness” Lab. Here is a refresher:
www.formontana.net/giantsprings.html
71. NOT HONORS - There will be a map of the rivers in Montana and you will have to do most of the same things you had to do on the last test.
72. HONORS – There will be an essay question about the factors that have caused the onset of ice ages over the past 3 million years.
73. HONORS – There will be an essay question about the factors that work together to cause the Northern and Southern Lights.
74. HONORS – There will be an essay question about one of the topics covered on the WS: The Planets.
75. HONORS – There will be an essay question to test your understanding of Kepler’s Laws (hint: formula).

May the force be with you.