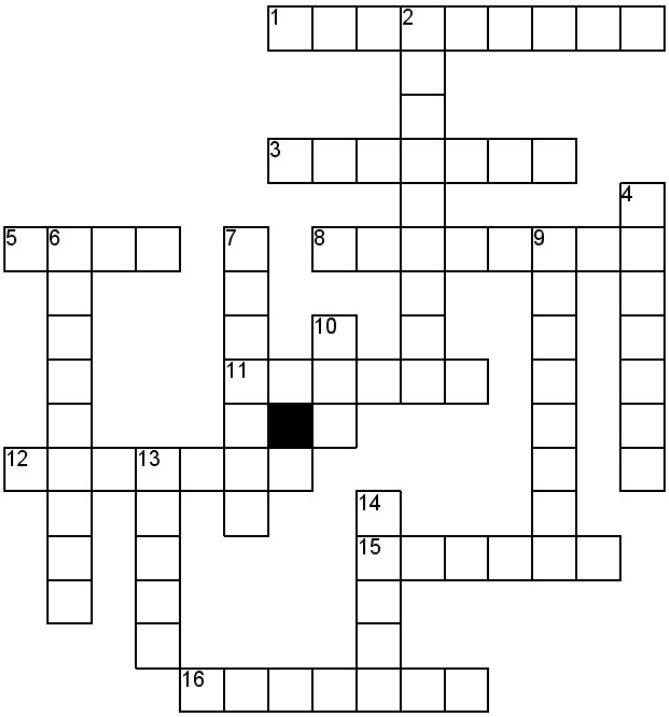
A. Crossword Puzzle

① Read the on-line Earth & Space notes for this chapter (i.e. see "youngs-wiki") and complete the crossword.



The amount of incoming radiation reflected by a surface is called its (15a) . Surfaces with a (5a) albedo reflect more radiation than a surface with a (10d) albedo. For example, (11a) (average albedo of 40-70%) reflect a lot of radiation while (16a) (average albedo of 10-20%) do not reflect much radiation.

Changes that affect albedo can also affect Earth's ability to maintain its energy balance which results in the (12a) and (3a) of Earth.

- If the ice in a region (13d) , then the albedo of the region (1a) . As a result, less incoming radiation from the Sun is (2d) and more energy is (9d) . This causes the Earth's temperature to (8a) , which in turn causes more ice to melt, and so on.
- When a (7d) erupts, ash and gas are spewed into the atmosphere which (6d) the albedo of the region. The gas and ash (4d) radiation, so there is less radiation that can be absorbed. As a result, Earth's temperature (14d) , the amount of snow and ice cover increases, and so on.

B. Wrap-Up Notes

① Take a blank lined page and at the top of the page, in the middle, write the title for this section.
② Leave a blank line and then, on the left side, write the heading "WRAP UP NOTES".
③ Turn to the last page of the notes (P.317) and add the wrap up notes below this heading. Be sure to write neatly!

C. Questions

① Leave a blank line after the wrap up notes and then, on the left side again, write the heading "QUESTIONS".
② Answer the questions below under this heading. Be sure to use complete sentences and to write neatly!
③ Attach your answers to this sheet when you are finished.

1. Fresh snow has an albedo of about 85%, and old snow has an albedo of about 50%. Which will reflect more of the Sun's radiation? Explain why.
2. You want to keep a bottle of pop cool on a sunny day, but you only have a white cloth and a black cloth with you. Which cloth would you use to wrap your pop and why?
3. How would a large volcanic eruption change Earth's albedo? How would this change affect Earth's temperature?
4. Scientists think that a giant meteorite crashed into Earth millions of years ago, resulting in the extinction of dinosaurs. The meteorite's impact produced a thick cloud of particles that prevented some sunlight from reaching Earth. Why do you think this might have led to the extinction of dinosaurs? (2 reasons)
5. The icecaps at Earth's pole are becoming smaller as the ice melts. Would this cause the Earth to warm up or cool down? Explain why.