Part 2 questions:

1. What areas are the brightest?
   The brightest areas are along the equator and in the north around Greenland and the North Pole.

2. What areas are the darkest?
   The darkest areas are around the South Pole, Northern Africa and the southern oceans.

3. How would you define reflected shortwave radiation in terms of brightness?
   The brighter the image is, the more light is reflected giving the lighter color. The darker the image is, the more light is absorbed into the surface, for example, the oceans.

Part 3 Questions:

1. What regions of the Earth are have the most reflected short wave radiation each month of the year? These regions appear "bright" on the map.
   The regions with the most reflected radiation is the north and south poles respectively throughout the year.

2. How does this change in the amount of reflected short wave radiation relate to the seasons?
   In the warmer months, the north pole and northern hemisphere has the most radiation and in the winter, colder months the south has more radiation.

3. Which months of the year have the largest area of reflected short wave radiation
   The months are March, April and May.

4. Canada is heavily forested with evergreen trees, so the cause of this reflected solar radiation is not soil or desert. What might be causing this reflection of the light?
   In the spring Canada has the highest level of reflected radiation due to the intense amount of snow covered land which increases the albedo and reflected radiation.

Part 4 Questions:

1. Why is snow important (beyond it is fun to play in)?
   Snow is a major source of water for the earth including drinking water for crops.

2. What percentage of light is reflected by snow vs. bare ground?
   Snow reflects 80% or more of the sunlight, and bare ground only 5-40% of sunlight.
3. What influence might this have on the Earth's energy balance?
   Without the snow and ice the earth's temperature would be much higher because less sun would be reflected.

4. What regions of the Earth are the most snow covered each month?
   The northern hemisphere has the most snow from December to February. In June through August the snow in the southern hemisphere increases.

5. How does this change in relationship to the seasons?
   Winters are less harsh and there is less snow in the SH because the NH has more area of land mass.

6. Which months of the year have the largest area of snow cover in the Arctic regions of Canada and Siberia, Russia?

The largest snow cover in Canada and Siberia occur during the months of December through February.

7. How is land surface temperature different than surface air temperature?
   Land surface temp is measured at the Earth's surface, and surface air is measured one- two meters off the ground.

8. Why do scientists monitor land surface temperature?
   Measuring the surface temp helps predict weather and climate.

Step 5 Summary:

Summary- When reflected radiation increases, snow cover also increases. As RSR and the snow cover increases, surface temp drops. The relationship between the three stays consistent.