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IBDP Geography - Atmospheric Feedbacks - Albedo

Table 1. Reflectivity values of various surfaces.

| Surface | Details | Albedo |
|--------------------|--------------------|---------------|
| Soil | Dark and Wet | 0.05 - |
| | Light and Dry | 0.40 |
| Sand | | 0.15 - 0.45 |
| Grass | Long | 0.16 - |
| | Short | 0.26 |
| Agricultural Crops | | 0.18 - 0.25 |
| Tundra | | 0.18 - 0.25 |
| Forest | Deciduous | 0.15 - 0.20 |
| | Coniferous | 0.05 - 0.15 |
| Water | Small Zenith Angle | 0.03 - 0.10 |
| | Large Zenith Angle | 0.10 - 1.00 |
| Snow | Old | 0.40 - |
| | Fresh | 0.95 |
| Ice | Sea | 0.30 - 0.45 |
| | Glacier | 0.20 - 0.40 |
| Clouds | Thick | 0.60 - 0.90 |
| | Thin | 0.30 - 0.50 |

Sources: Oke, 1992; Ahrens, 2006.

Task 1 – Define Albedo and explain its changes with relation to the surfaces shown in table 1 above

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Task 2 – To what extent do seasons alter global albedo levels in the temperate and tundra regions of the northern & southern hemisphere?

Task 3 – Explain what positive feedback means and how a decrease in terrestrial ice coverage can cause positive feedback loops to occur.