

Chapter 6, The Integumentary System

“Apply What You Know” Answers

- p. 182— The palms and soles are subject to a lot of mechanical stress on the skin, so the skin here benefits by having a slip-resistant, interdigitating boundary between the epidermis and dermis. The face and abdomen are much less subject to stress and have less need of dermal papillae to lock the two layers of skin together.
- p. 185— If the whites of the eyes are also yellow, it is a sign of jaundice. If the eyes look normal and only the skin is yellow, the color is probably due only to dietary carotene.
- p. 193— The large amount of melanin in the skin is an effective barrier to ultraviolet radiation, largely preventing it from penetrating to the nuclei of the stratum basale and damaging the DNA of the epidermal cells there.
- p. 194— A third-degree burn destroys the nerve endings that detect tissue damage and produce the sensation of pain, whereas first- and second-degree burns leave all or some of the pain receptors intact.