Answer Key

1. Short answer
    a. Answers will depend on the individual location.
2. Short answer
    a. Possible answers could include, but are not limited to: painting parking lots, basketball courts, etc. with reflective coatings; vegetated roofs/rooftop gardens; shading structures; tree and garden planting.
3. Short answer
    a. While this topic is not addressed in detail in the Cool Surfaces Animated Video, this question is an opportunity for students to think critically about how well cool surfaces might work in different climates. In truth, many factors influence energy cost savings from cool roofs and walls, including solar reflectance, type of roof or wall covering, climate, and insulation. You can find more information in the CRRC's document *How Does a Cool Roof Save Energy?* On the other hand, cool roofs and walls help improve resilience to heat and mitigate the urban heat island effect during hot times, regardless of climate.
4. False. Thermal Emittance means how good a material is at *releasing* heat it's already absorbed.
5. True
6. C. Infrared
7. False. Darker materials can have cooling properties if they are made with special pigments that reflect infrared light.
8. B. Solar Heat Gain
9. A. Solar Absorptance