

CHAPTER 3	Launch Lab: The Mountain Pine Beetle vs. an Ecosystem Answer Key	BLM 3.0.2A
ANSWER KEY		

Answers to Analysis Questions

1. Biotic factors affecting the lodgepole pine include: logging, parasites, disease; abiotic factors affecting the lodgepole pine include: fire, temperature, available moisture, sunlight, soil.
Biotic factors affecting the mountain pine beetle include: availability of food (mature trees), predators (none); abiotic factors affecting the mountain pine beetle: fire and temperature are the key ones.
2. The key reason is the occurrence of warmer winter temperatures for several years, which have allowed the pine beetle to spread unhindered. Fire suppression has meant that trees are older and closer together, and thus more accessible to the insects.
3. Local reports suggest that the forest ecosystem is no longer able to support small mammals, song birds, and local plants in terms of providing food or shelter.

Answer to Extension Question

4. You should include reference to aesthetic as well as economic and social impacts of the infestation, such as deterioration of the forest (all); disappearance of wildlife (all); loss of important medicinal plants (elder); loss of employment (logger, wilderness tour operator); disruption of local economies (logger, wilderness tour operator); disruption of communities (elder, logger, wilderness tour operator); challenge of forest management (planner).