P1U1. Apply your skills

So, we've talked about how conservation efforts can prevent extinction, but what happens after a species has _____(1)? Is there anything we can do to undo extinction? Years ago, scientists would have said no. But now, with advances in _____(2), we have started thinking about bringing extinct species back to life. This is called _____(3). Many people think there are advantages, but others think it creates problems. We'll talk more about that in a little bit.

First, there are a number of health and environmental _____(4) about de-extinction. The concern is that de-extinction could have too many unknown _____ (5). In other words, that today's species and _____ (6) could be harmed or damaged by bringing back to life an animal species that went extinct thousands of years ago. Maybe that animal will cause the extinction of other animals—and that could further damage the environment. Also, reintroducing a species has possible _____ (7) for animals and humans. We know that some animals—most notably, _____ (8) —have spread diseases in the past. Diseases that have led to the death of millions of people. It's possible that a reintroduced species would cause similar problems.

Second, there is an _____ (9) problem: De-extinction might make people think that a species can easily be brought back to life. This could lead people to focus on de-extinction as a way to bring back lost species. Instead, they could be looking for ways to preserve living species that are _____ (10) or endangered now. De-extinction, they say, will stop us from looking for solutions: how we can prevent the extinction of current species.

Now, I'd like to briefly explain how the_____ (11) of de-extinction works—mind you, this is one way we think de-extinction can happen; we haven't done it yet. So first, scientists _____ (12) the genome—the DNA, the whole biological set of instructions—of an extinct animal. After they've understood the extinct animal's DNA, they then _____(13) it to the DNA of a similar living animal. Next, they genetically engineer the DNA of the existing animal so that it becomes like that of the extinct animal. That is, they use technology to _____ (14) the animal's DNA. The result is a

"hybrid"—an animal that gets most of its DNA from a _____ (15) but has some DNA of the extinct animal. High-tech engineering, huh?

To summarize what I've discussed so far, de-extinction—the process of bringing extinct species back to life— is a controversial idea in conservation biology. Its _____(16) believe that it can help fix damaged ecosystems and also give us important knowledge about why species become extinct in the first place. On the other hand, critics say that there may be unexpected _____(17) of bringing species back to life: We don't know what will happen. So we should _____(18) on conservation, they argue. And I agree, we should focus on _____(19) conservation. We've also taken a look at one way of approaching de-extinction: _____(20) hybrid animals that have the DNA from both living and extinct animal species.