**Directions:** *Read and annotate the following articles. Answer the question in* ***2 to 3 sentences****.*

**A Second Act for Biosphere 2**

**The New York Times**

**June 10, 2013**

**Michael Winerip**

In the fall of 1991, eight men and women marched into a glass and steel complex that covered three acres in the Arizona desert and was known as Biosphere 2. Their mission: to test whether they could be self-sustaining in this sealed-off environment, with hope that the model would someday be replicated *(repeated)* to colonize outer space.

They wore “Star Trek"-style jump suits, which, depending on your view of the grand experiment, either made them look very scientific or like inmates at the county jail.

Either way, there was serious intent and money behind the project, $150 million, underwritten *(paid for)* by Edward Bass, environmentalist heir to a Texas oil fortune.

The original idea was that the inhabitants would grow all their own food, and that the wilderness areas would naturally recycle their air and water. In Discover magazine the project was called the most exciting science venture *(risky business enterprise)* since man landed on the moon.

Early on, there were problems. One Biospherian accidentally cut off the tip of her finger and left for medical care. When she returned, she carried in two duffle bags of supplies to the supposedly self-sustaining environment (which presumably would not have been feasible on, say, Mars).

But the [most damaging discovery](http://www.nytimes.com/1991/11/12/news/recycling-claim-by-biosphere-2-experiment-is-questioned.html) was that a carbon dioxide scrubber had been secretly installed to protect the occupants from dangerous levels of the gas.

By the end, as one of the Biospherians put it, they had been suffocated, starved and gone mad.

Columbia University, then the University of Arizona, eventually took over the mammoth *(huge)* space to conduct earth science research, and nearly 150 papers have been published. In 2006, [The New Yorker reported,](http://www.newyorker.com/archive/2006/11/20/061120fa_fact_kolbert) “much of what is known about coral reefs and ocean acidification was originally discovered, improbably enough in Arizona, in the self-enclosed, supposedly self-sufficient world known as Biosphere 2.”

1) How was the Biosphere 2 a failure?

**Sprawl Outrun’s Arizona’s Biosphere**

Fred A. Bernstein

New York Times

May 28th, 2006

But during the first two-year mission that began in 1991, the Biosphere was beset *(attacked)* by one problem after another: Oxygen dwindled *(lowered),* and the sea became acidic. Crops failed, causing the bionauts to lose weight rapidly, while ants and other insects thrived.

Biosphere administrators later admitted that they had secretly pumped 600,000 cubic feet of fresh air into the Biosphere, supplemented *(added to)* the bionauts' home-grown diet with stored food and smuggled in emergency supplies. Then, two bionauts were arrested for breaking the Biosphere's seals. Soon the 100-year experiment was abandoned, and the Biosphere was reopened as a tourist site. Visitors were now allowed inside, where the sights include 3,800 species of plants and a million-gallon sea.

Joaquin Ruiz, the dean of the College of Science at the University of Arizona in Tucson, said that because of its size, the Biosphere is "an important instrument."

Dr. Ruiz participated in a conference at the National Academy of Sciences in Washington in March 2005 to determine whether the Biosphere could still serve a useful function.

"The consensus was that it could," Dr. Ruiz said. "It is indeed an enormous terrarium, but the scaling of that terrarium allows you do to large-scale ecology experiments that cannot be done anywhere else." For example, he said, the Biosphere could be used to simulate the effects of the loss of small amounts of moisture in a desert, helping scientists understand the effects of a drought.

2) How was the Biosphere 2 valuable to science research?

3) Do you think the Biosphere 2 should have been built? Why or why not?