**Distribution of Species: A Tale of Two Squirrels**

When the Grand Canyon was forming, a single population of tassel-eared squirrels may have been separated into two groups. Today, descendants of the two groups live on opposite sides of the canyon. The two groups share many characteristics, but they do not look the same. For example, both groups have tasseled ears, but each group has a unique fur color pattern.

An important difference between the groups is that the Abert squirrels live on the south rim of the canyon, and the Kaibab squirrels live on the north rim. Also important is that the Kaibab squirrel lives in an area of the north rim that is covered with conifer trees that are dark green in color. This forest is surrounded by vast desert. If a squirrel tried to leave the forest it would dehydrate before it could reach a better place to live. Also, twice as much precipitation falls on the north rim than on the south rim every year.

Over many generations, the two groups of squirrels have adapted to their new environments. Over time, the groups became very different. Many scientists think that the two types of squirrels are no longer the same species. The development of these two squirrel groups is an example of isolation causing a distribution of species to become two different species from the same ancestor.

1. Complete the T-chart below with at lease three similarities and two differences.

|  |  |
| --- | --- |
| Similarities | Differences |
| 1. | 1. |
| 2. | 2. |
| 3. |  |

1. Predict which squirrel is the Kaibab squirrel. Explain your reasoning using evidence from the pictures and text.
2. Biogeography refers to the distribution of species due to their geography. This study of why plants and animals live where they do provides evidence for evolution. Why do you think scientists consider these two squirrels to be different species with the same common ancestor instead of the same species?