

- 1 [1] Allow 1 credit for 3
- 2 [1] Allow 1 credit for 1.
- 3 [1] Allow 1 credit. Acceptable responses include, but are not limited to:
  - Animals need oxygen for respiration, so oxygen levels of 21% would allow more amphibians to evolve from the 12% levels seen at the start of the Devonian.
  - During the Devonian, increased levels in available O<sub>2</sub> in the atmosphere allowed insects that utilize oxygen to increase in number of insect genera from near zero to approximately twelve.
- 4 [1] Allow 1 credit. Acceptable responses must include an evaluation of the specific evidence provided, but not limited to:
  - Since other major time periods of temperature change do not always coincide with a major extinction, it is not possible to tell if these factors are causal or correlational using the provided evidence.
  - The claim should be refuted because the temperature change during the Devonian was minimal and yet a mass extinction event occurred then. Other factors must have been at play.
- 5 [1] Allow 1 credit Acceptable responses include, but are not limited to:
  - It would be important to limit the amount of space that was used by the geological carbon sequestration equipment because the disruption of habitat would negatively impact the local ecosystem and the species that live there.
  - Designers would need to be sure to pump the carbon into a layer that would not allow it to leak into the water/soil because that could affect the organisms that use that water/soil and therefore harm the ecosystem that they live in.

1	HS-LS2-5
2	HS-LS4-5
3	HS-ESS2-7
4	HS-LS4-5
5	HS-ETS1-1