

MARS IN A MINUTE: Why is Curiosity Looking for Organics?

Organics are carbon-based molecules – key ingredients to life. If Curiosity finds organics in ancient rocks, there's a better chance Mars once had good conditions for small life forms called microbes.

But, finding organics is hard! That's because organics easily break down when exposed to harsh things like extreme radiation and chemical oxidants that gave the Martian surface its rusty color.

A great place to look for ancient organics today is in rock layers. Organics that were quickly trapped and buried in layers of mud or in sediments that sank to the bottom of a body of water could have an especially good chance of being preserved.

Scientists think Curiosity's landing site, Gale Crater, contains those special layers, created in ancient times when water was present. The water dried up long ago, but rock layers that remain today could still preserve organics inside.

If Curiosity finds organics, it wouldn't prove life existed, but it sure would improve the odds that Mars once had the right ingredients for life!