

Sharing the Geochemical Stories of the Earth with Children on the “Every Rock Has A Story” YouTube Channel

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The geosciences (including geochemistry) are the least diverse of all STEM fields. In addition, the geosciences continue to be plagued by historically and culturally ingrained stigmas (Figure 1a) that conspire to push science minded youth, and especially youth from traditionally underrepresented communities, away from the geosciences. These problems hurt the geosciences and in turn hurt our global society where the geosciences are critically important to solving many of today’s most pressing environmental issues (e.g. climate change, environmental sustainability, resource depletion, critical minerals and metals, water, energy, etc). The world needs today’s young learners to embrace the wonders and questions and challenges of the geosciences so they can become the informed and (com)passionate leaders who can help solve them in the future. This of course includes geochemistry.

Every Rock Has A Story is a growing collection of YouTube videos for children (Figure 2). Created in 2020 during the COVID lockdown, each episode begins with a different rock and goes on to tell the story that derives from it, encompassing topics like climate change, geochronology, soil nutrients, marine biogeochemistry, deep earth processes, ancient life, and outer space. Storytelling is an effective way of thinking and sense-making that engages the interest of students, especially including those from traditionally underserved communities. While Season One was filmed alone at home during COVID, the 25 episodes of Seasons Two and Three moved to a proper studio and feature diverse co-hosts and children who share not just rocks, but also their own scientific journey to help more children see themselves as scientists (Figure 1b). Many of the stories focus on geochemical themes or approaches, but in a manner intended to be accessible, exciting, and enticing to a diverse elementary school audience. The videos have also been used in the classroom to help spark interest and share some of the exciting geochemistry being done today. Feedback on the program suggests that the episodes are gaining in popularity and effectiveness. The addition of diverse co-hosts and children, proper studio production quality, and filming on location in labs and field areas (in Season Three) have been critical to this improvement.

Figure 1 – Every Rock Has A Story seeks to present the diverse faces of geoscience and share that with children, so they can better see themselves as scientists

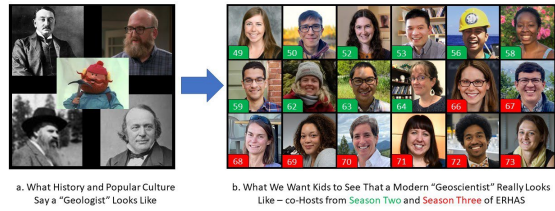


Figure 2

