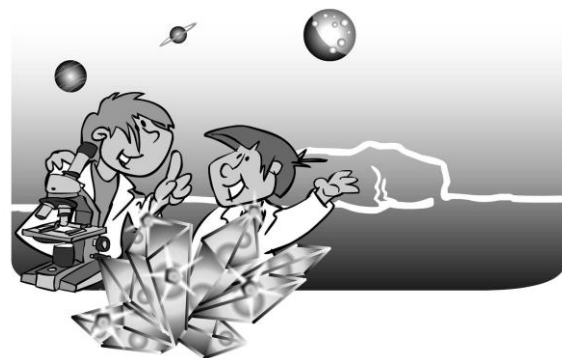
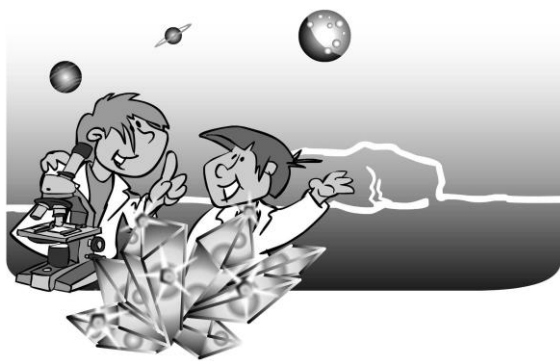


A G.A.T.E.WAYS JOURNEYS PROGRAM

for Year 3 and 4 children

with a love of science

'Rock of Ages'



G.A.T.E.WAYS is an independent organisation offering challenging and enriching activities and experiences to develop and extend highly able children. This *JOURNEY* will run over four half days. It will introduce you to the wonderful world of rocks and the scientific discipline of geology. Man has used rocks from the earliest time to fashion tools and weapons, but rocks have more much more importance than just that. Every rock has a story to tell and you will learn how to read it! The presence of fossils in certain types of rocks provides scientists vital clues to life on Earth millions of years ago. What is the difference between rocks and minerals? During this interesting journey students will learn about all this and much, much more.

Session 1 A Very Rocky Planet

Today we'll discover what rocks are and why scientists are interested in studying them. We'll also find out what rocks we use in our daily lives. There are a number of different types of rocks both in Australia and world-wide - we'll investigate their origin and formation and also find out about some amazing chemical compositions. Did you know many rocks are much older than the oldest dinosaurs? How old are they? Have you ever smelled a rock or met one that blows bubbles? At the end of today's session, you will be given an interesting piece of homework that involves no writing!

Session 2 Rocks Orbiting the Sun

Today we will discover that Earth is not the only celestial body with a rocky surface. What are the other members of this rocky group? We will learn about the major differences between rocks from Earth and lunar rocks. We will discover what type of rock would be the most abundant on the Moon and why. We will also explore why rock formations on Mars attract so much scientific attention. What types of rocks are found on Mercury, Venus, Jupiter's moon Io and the asteroids?

Session 3 To Serve Our Needs

This session will be all about rocks and minerals. We will find out why minerals are so valuable to us. How did minerals originally form and is this process still happening? Let us discuss this: although humans have been to the Moon, mankind is still deeply immersed in the stone-age. Out of this will we will learn how dependent we are on rocks and minerals. What about some of their strange uses? We will discover how geologists determine the age of rocks. Did you know that the Earth's crust is constantly being recycled? Watch this dramatic process unfold.

Session 4 Telling the Story

We will begin today's session by studying a collection of fossils. What are fossils and how do they form? Can fossils be found in any type of rock? We will discover that every fossil tells a story, all we need to do is to open our eyes to listen. Did you know that fossils are a vast source of energy? We will discuss whether fossils are still being formed and ponder whether some humans might become fossils in the future. We will look at mountain ranges and determine whether they are of sedimentary or igneous origin. We will experiment with splitting rocks to discover what is inside.

Assessment and Reporting

Assessment will be based on an evaluation of each student's participation in the lesson activities. A self-assessment will also be completed. At the end of the program a short written report will be completed on each student and forwarded to parents.

Requirements:

- * writing materials (pencil case) and an exercise book/notepad; and a snack (no nuts please)
- * bring a small named photograph of yourself to the first session
- * bring a stamped, self-addressed DL envelope for your report

ABOUT THE PRESENTER

Herwig Waldhuber has taught technology, science and woodwork over the years. He says there is a geologist inside him desperately wanting to get out. He has always been very interested in rocks and has an amazing collection of rocks, minerals and fossils. He has run many successful G.A.T.E.WAYS programs on a range of science, history and astronomy topics.