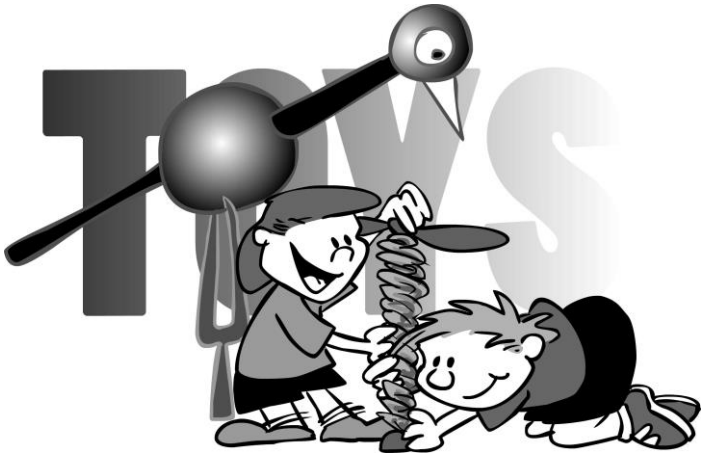

G.A.T.E.WAYS

Invites gifted Year 1 and 2 children with

a love of science and technology to

' TINKERING WITH TOYS'

G.A.T.E.WAYS is an independent organization offering challenging and enriching activities and experiences to develop and extend highly able children. This *JOURNEY* for both girls and boys will run over four mornings. Self-designed and made toys can be particularly rewarding to play with. Each week we will explore the science behind what makes a range of toys 'work', before engineering (designing, testing and modifying) our own creations which the participants will take home. Please note that this program has a $5.00 materials' levy.

Week 1: Tumbling Toys

We begin this session by playing with a number of commercially available toys that tumble to investigate which properties allow tumbling to occur. In doing so, we will explore the concepts of gravity, friction and mass. Then we will be introduced to the concept of good design. Each participant will make three different tumbling toys to take home and experiment with further.

Week 2: Toys that climb/swing

During this session, we will add to our understanding of friction and gravity as we create our own toys that climb. We will then move on to looking at pendulums and the science behind things that swing before creating and testing our own 'cup and ball' toys. We will be introduced to the concept of testing and modifying prototypes.

Week 3: Toys that rely on light

The focus of this session will be on how the properties of light can be used to create patterns. We will experiment with how light passes through or reflects off different surfaces, before we design and create our own kaleidoscopes. Today we will have fun predicting, testing, designing, and constructing.

Week 4: Let there be light

Our final session will draw on our understanding of light and reflection from the previous session, and will include some basic knowledge about simple circuits, conductors and insulators. Each participant will then put their engineering design knowledge to the test when they design their own torches – from concept to end product.

About The Presenter

Robyne Bowering has been a passionate and enthusiastic science teacher and teacher educator for over twenty-five years. Robyne actively engages her students through a wide range of hands-on, minds-on activities.

Requirements: Bring writing materials, a notebook/paper; a labelled, small photograph of yourself; a snack (no nuts please); Also bring a stamped, self-addressed DL envelope for your report (write your name on the back)