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About this Book

Science is the study of the physical and biological environment. Children who are exposed to the wonders of science in an enjoyable and caring way will begin to appreciate the beauty of the unique world in which we live.

Science is more than the study of facts and the acquisition of basic scientific knowledge. It involves observing, predicting, testing (experiencing trial and error), discovering and discussing results. **Simple Science Fun** has been designed with these processes in mind.

There are three areas of science study: life (e.g. growth, food chains and habitats), earth (e.g. air, soil and water) and physical (e.g. matter, light and force). **Simple Science Fun** ventures into all three of these areas. Each experience has been designed to be quick and easy. With only minor or no preparation required, children are introduced to science experiences which are amazing, exciting and intellectually stimulating.

Why should **Simple Science Fun** be an important supplement to your child's educational experience?

Understanding the principles of science is essential to children if they are to cope successfully with our ever-changing world. Decision making is a critical skill. **Simple**

Science Fun causes children to predict and make decisions based on prior knowledge, as well as newly acquired knowledge. **Simple Science Fun** helps children become aware of the concept that 'what we expect to happen often times does not'. The skill of making confident decisions will prove to be one of the most essential tools for children to function as happy and healthy persons.

Understanding that science has rules that remain constant, children begin to build confidence and develop a willingness to take risks. For example, no matter what lesson is being taught, the principles of inertia (an object's resistance to change in motion, depending on its mass) always perform with 100% accuracy. Insight into these science consistencies benefit children when they begin to make inferences in other subject areas.

An appreciation of science brings personal pleasure and satisfaction. Enjoyment is an excellent motivator. To be effective, the study of science should be enjoyable to everyone involved. For too many years science has been taught with only textbooks, worksheets and very controlled experiments. This not only gets boring for children but the parent or teacher, as well. If the science experienced is fun for all, all will experience the joy of learning science.

Science Safety Rules

1. Begin science activities only after all of the steps have been reviewed.
2. There should always be an adult present when working with any kind of sharp object (e.g. scissors, craft knife, safety pins, skewers, toothpicks etc.).
3. Never allow the children to put anything in their mouths unless it is required by the science experiment and there is adult supervision.
4. Raw eggs have the potential to cause salmonella poisoning. Wash the inside and outside of egg shells with a little bleach before using.
5. When collecting plants, be sure to caution your child to collect only in permitted areas and to collect gently. They should also know how to recognise poisonous plants in your area and know not to touch the parts of a plant they are uncertain about. Warn them not to eat the parts of any plants they collect in the wild, unless they have been assured of their safety by a knowledgeable adult.
6. Never remove an item that is being used as a home for an animal. Respect all living creatures.
7. Clean up and dispose of waste and recyclables in proper containers when finished with an activity.

Have fun and be safe at the same time!

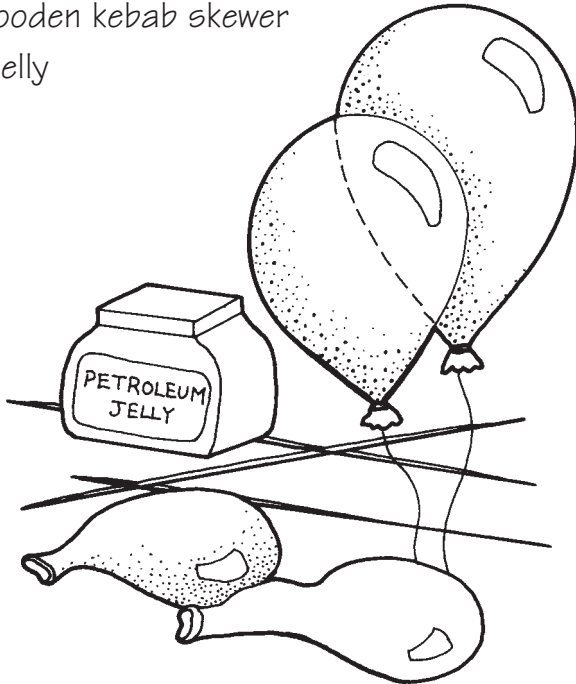


MATERIALS

Amazing Balloon

LET'S DO IT!!

- several 20–25 cm round-shaped balloons
- one thin, wooden kebab skewer
- petroleum jelly



1. Blow up one balloon (not too full). It works best when the balloon is blown to half-size. Then tie the end of the balloon in a knot. Stick a wooden skewer into the balloon. What happens?
2. Blow up a second balloon just like in step one. This time you are going to attempt to put the skewer through the entire balloon without popping it.
3. Coat the tip of your skewer with petroleum jelly and then push the sharp end of the skewer into the balloon right next to where the knot is tied.
4. Continue to push the skewer gently through the inside cavity of the balloon and then exit the balloon at the top of the balloon where the rubber is least stretched. (This area looks like a small, dark dot or circle.)
5. When the point of the skewer begins to exit the balloon, continue pushing so the skewer is even on both sides.
6. Why did the balloon not pop?

WHY IT WORKS

Balloons are made of rubberised material. This rubberised material is called a polymer. ‘Poly’ meaning many and ‘mer’ meaning molecules. The balloon’s material is made up of many molecules linked together. These links are strong and try hard to stay linked (they do not like being broken or pulled apart). When the skewer is pushed through the balloon where it is least stretched (unlike the first popping experience) the links give just enough, allowing the skewer to pass through the balloon. This also creates a hole in the balloon, allowing air to slowly leak out. This slow leak becomes obvious if the skewered balloon is observed about half an hour later.