Scientist

02 Sep 10:30
Duty six : Red

Start	Time	Activity	Requirements	Instructions	Scouter
Scientists investigate the world around us - studying or has expert knowledge of one or more of the natural or physical sciences					
02 Sep 10:30	5	**Activities :** Opening	Register, beans, flag, totem and skin	Grand Howl Flag Break Register Inspection - belts and shoes	Akela
Atoms make up everything. When they bind together, they form molecules - they are attracted to each other					
02 Sep 10:35	10	**Game :** Chemical Bonds		Cubs run around a designated area. When the whistle blows they must stop running around, a number will be called and they must get themselves into teams of that particular number – i.e. if 3 is called, they need to get into teams of three, etc.	Bagheera
What is a solid, liquid and gas? We're going to make a goo that is a little confused about what it is					
02 Sep 10:45	20	**Activities :** Corny Goo	Water 2 Tablespoons Cornflour Bowl Spoon	1. Put two tablespoons of corn flour into the bowl 2. Add a table spoon of water to the flour stirring well with the spoon. Keep adding water a few drops at a time until the goo is thick and creamy. 3. Can you feel a difference between stirring it fast and slow? Tap the top of the Goo quickly, does your finger sink in? Pick up the goo and roll it between your fingers and feel the texture. What does it feel like? Stop rolling - what happens? 4. Make sure you wash your hands when finished. When you roll the goo, it feels dry and hard, like a solid. When you stop rolling, it slowly spreads over your fingers, like a liquid. Cornstarch particles float in water. When you roll it, the particles are forced together and when you stop rolling, the water and cornstarch separate again. It is a bit like quicksand.	Akela
What do you get when you join atoms together such as Oxygen, Hydrogen and Carbon? If we use jelly tots for atoms, at least we know it will taste good, whatever it is					
02 Sep 11:05	15	**Activities :** Candy Model Molecules	Jelly tots or similar sorted into three colours Toothpicks (or spaghetti) Bowl	1. Give each different atom a colour. Hydrogen = red; Oxygen = yellow and Carbon = green. 2. Make a water molecule (H2O) - this means that two hydrogen atoms are joined to one oxygen atom to make water. Join two red sweets to one yellow sweet with toothpicks. 3. Make a carbon dioxide molecule (CO2) - this means two oxygen atoms are joined to one carbon atom. So, join two	Bagheera

				yellow sweet to one green sweet with toothpicks 4. Cubs can eat their molecules when done	
Time to have some liquid and solids					
02 Sep 11:20	5	**Activities :** Juice and biscuits		Juice and biscuit break	Mang
Chemists make some cool things by mixing different things together. Should we see what we can mix up?					
02 Sep 11:25	15	**Crafts :** Bouncy Balls	• Borax (found in the laundry section of the store) • Cornstarch (found in the baking section of the store) • White glue (e.g., Elmer's glue - makes an opaque ball) or blue or clear school glue (makes a translucent ball) • Warm water • Food coloring (optional) • Measuring spoons • Spoon or craft stick to stir the mixture • 2 small plastic cups or other containers for mixing • Marking pen • Watch with a second hand • Zip-lock plastic baggie	1. Label one cup 'Borax Solution' and the other cup 'Ball Mixture'. 2. Pour 2 tablespoons warm water and 1/2 teaspoon borax powder into the cup labeled 'Borax Solution'. Stir the mixture to dissolve the borax. Add food coloring, if desired. 3. Pour 1 tablespoon of glue into the cup labeled 'Ball Mixture'. Add 1/2 teaspoon of the borax solution you just made and 1 tablespoon of cornstarch. **Do not stir.** Allow the ingredients to interact on their own for 10-15 seconds and then stir them together to fully mix. Once the mixture becomes impossible to stir, take it out of the cup and start molding the ball with your hands. 4. The ball will start out sticky and messy but will solidify as you knead it. 5. Once the ball is less sticky, go ahead and bounce it! 6. You can store your plastic ball in a sealed Ziploc bag when you are finished playing with it. 7. Don't eat the materials used to make the ball or the ball itself. Wash your work area, utensils, and hands when you have completed this activity.	Akela
Scientists have to be careful in their laboratories - they work with dangerous elements and experiments can explode if you are not careful					
02 Sep 11:40	10	**Game :** Infected		Cubs stand in a circle. To start the game, pass the “experiment” (bean bag) around the circle. When the whistle is blown the Cub with the “experiment” has been infected and goes to the medical centre and misses a turn by sitting down, stand up when well again. The bean bag can be thrown across the circle as well	Bagheera
Crystals are also formed by chemical bonds. You can grow your own crystals from sugar or salt.					
02 Sep 11:50	10	**Crafts :** Crystal Stars	Epsom Salts Black paper/card Star stencil Sponge Warm water in cup or bowl	1. Cut a star shape stencil out of card 2. Dissolve Epsom salts in half a cup of hot water. Keep adding salt until no more will dissolve 3. Dip the sponge into the water. Place the stencil over the black paper, rub the sponge over the star shape onto the black paper 4. Carefully lift the stencil to another area on the paper. "Paint" more star shapes with your salt water until you	Akela

				run out of room on the black paper 5. Let your paper dry. The crystal stars will appear! The Epsom salts dissolve in the water. When the water evaporates, the salts are left behind, forming small crystals on the paper.	
So, lets see if we can blow something up					
02 Sep 12:00	10	**Activities :** Blowing up Balloons like magic	baking soda vinegar plastic bottle balloon funnels	1. Using your funnel pour vinegar into your bottle. You only need to fill about 1/3 of the bottle. 2. Using another (dry) funnel pour baking soda into your balloon. Fill the balloon approx. 1/2 way. 3. Cover the top of the bottle with you balloon. Make sure you don't let the baking soda spill into the bottle prematurely. 4. When ready, lift your balloon and let the baking soda fall into the vinegar. 5. Watch as the mixture fizzes, bubbles & expands your balloon! 6. Discuss how the baking soda & vinegar produce a gas which fills the balloon. 7. Repeat! Believe me, your kids will want to do this more than once and form a reaction that was so visual - blowing up the balloon. The science behind it - Baking soda and the vinegar create an ACID-BASE reaction. When combined/mixed they create a gas - carbon dioxide. Gasses need room to spread, so the carbon dioxide fills the bottle and then moves into the balloon inflating it.	Bagheera
John May, our visitor, would like to chat to you and tell you a bit about himself					
02 Sep 12:10	20	**Activities :** Closing	Totem, Skin Badges, certificates	Announcements Badge handouts Grand Howl Flag Down Prayer Dismiss	Raksha

Programme prepared on 09 May 00:28