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| **Activity title** |
| **Secret messages** |
| **Stay safe** |
| Whether you are a scientist researching a new medicine or an engineer solving climate change, safety always comes first. An adult must always be around and supervising when doing this activity. You are responsible for:    • ensuring that any equipment used for this activity is in good working condition  • behaving sensibly and following any safety instructions so as not to hurt or injure yourself or others    Please note that in the absence of any negligence or other breach of duty by us, this activity is carried out at your own risk. It is important to take extra care at the stages marked with this symbol:⚠ |
| **Time required** |
| 40-60 minutes (including after dark activity) |
| **Activity summary** |
| Pretend you are a secret agent by writing secret messages to your friends using invisible ink made from lemon juice and water. Your friends can then reveal your messages using heat to solve the clues and see what has been written! |
| **What equipment will you need?** |
| * Lemons of bottle of lemon juice * Water * Small bowls * Cotton buds/paint brushes * White paper * Hairdryer or lamp |
| **How to do it** |
| **Step 1 – Make invisible ink**   * Squeeze some lemon juice into a bowl * Add a few drops of water * Mix the water and lemon with a spoon   **Step 2 – Using invisible ink**   * Dip a cotton bud into the mixture * Write a message onto white paper * Wait for the juice to dry and turn invisible   **Step 3 – Reading a message**   * Heat the paper using a hairdryer or put it next to a warm lamp bulb * The message will turn brown and be revealed   **Looking for more?**   * Use invisible ink to write a secret note to a friend * Ask them a question and see if they can read it! |
| **Summer jokes** |
| * **What kind of music do killer whales like?**   They listen to the orca-stra!   * **What is brown, hairy and wears sunglasses?**   A coconut on holiday!   * **Why does ice cream always get invited to the party?**   It’s cool!   * **What animal is always at a baseball game?**   A bat! |
| **Fun facts** |
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| * The fastest recorded raindrop travelled at a speed of 18mph! * You can estimate the temperature of a place by the number of times some crickets chirp in a second. * Octopuses have blue blood and nine brains. * The Eiffel Tower in Paris, France grows taller every summer and shrinks back in winter! |
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