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| Science 9 | Introduction |
| Scientific Method | 84 mins |

Scientific Method

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| Steps  **Design a problem**  Question that needs solving  **Do Research**  Find out anything you can about the subject, has the question been asked before?   * Decide on variables to test   What are you going to change and what are you going to look for in response?   * Manipulated Variable (Independent) * What you change * You only want ONE of these * Responding Variable (Dependent) * What changes because of what you did * You only want ONE of these * Controls * What you make sure doesn’t change * You can have as many as you want BUT they must have complete control of them   **Make a Hypothesis**   * An educated guess   If … then … because  **Design an experiment**   * Materials * What are you going to need? * Procedure * Steps to complete the experiment   **Make observations**  What did you see, hear, taste, feel, smell  **Conclude**  Was your hypothesis correct?  **Experimental Error**  Was there anything in the experiment that caused your results to not workout?  Look at your controls  **Peer Review**  Can other repeat your experiment and get the same results? | Does sunlight affect the growth of a plant?  Plants go through Photosynthesis which needs energy from the sun  **NEED EXAMPLES FROM CLASS**  The amount of sunlight on the plant per day  The amount of growth seen in the plant  From examples  **If** the amount of sunlight a plant receives decreases **then** the plants growth will decrease **because** the plant goes through photosynthesis to make food, without sunlight the plant will make less food, starving the plant of nutrients will cause the plant to not grow as well.  Several plants, The sun, a blanket,   1. Measure the starting heights of 2 plants 2. Place one plant in a sunny area of your house 3. Place the other plant beside the other plant but under a blanket 4. After 30 days measure the heights of the plants  |  |  |  |  | | --- | --- | --- | --- | | Plant | Starting Height | Height after 30 days | Change in Height | | 1 (in the Sun) | 10 cm | 20 cm | 10 cm | | 2 (under blanket) | 11 cm | 13cm | 2 cm |   Plant 1 what green and standing straight  Plant 2 was brown and leaves were brittle  As the amount of sunlight decreased the plant growth decreased.  Were the plats the same height? Type? |