Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_

**Scientific Variables**

Identify the independent and dependent variable in each scenario. For controlled variables, list at least 3 things that **should** be kept constant, even if they are not mentioned in the scenario.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Scenario** |  | **Independent** | **Dependent** | **Constants (Controlled)** |
| One chicken is injected with a growth hormone while another chicken is not injected. Both chickens are weighed after a year. | https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRY_b8d0KPLy6sv4T6HxIyYr1LuJ9DBjeggLo_GWgTV0C0-XB5x | Use of growth hormone | Weight of chickens | * same type of chickens
* chickens eat same food
* chickens live in same environment
 |
| A bug repellant is sprayed on one arm the other arm is not sprayed. The number of bug bites on each arm is recorded after 2 hours. | https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQpaiskAGJPRRoTRn6jCJBCySshPYKZPXYazMFddbZga3wSvCIwkg |  |  |  |
| Garfield sleeps 9 hours the night before his science exam. His twin sister has the same exam and sleeps 6 hours the night before the test. Afterwards, they compare their scores on the test. | https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTv8QQx2DKXMiDyNPPDJX34FHFF4kp5eRkyYidn7IH6caIJC_gl |  |  |  |
| Group A exercises for a month. Group B does not exercise. Throughout the month, they record their weight. | https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcTcC5zx4qzfrMpjZtWoIV5moLXIaIlsWl-bJpRqYBUR0i4kpDD4J4MTZ6w |  |  |  |
| One math class studies for an assessment while the math class next door does not. The scores of the two classes are compared. | https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGxpmmgbxvHoOiG_ZhNpAn9qnJXp1DLTZU6dRjHNPofDiutp8y |  |  |  |
| One plant is given sunlight every day. Another plant is kept in a dark closet. Over the course of 3 weeks, we measure the height of the plant. | https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGKHOY79LNsOFe4SzgU2QGYPZaaXaVm9PKejZ5mE6oZsRahDrU |  |  |  |
| One plant is given fertilizer A. Another plant is not given any fertilizer. Over 3 weeks, we record how green each plant looks. | https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGKHOY79LNsOFe4SzgU2QGYPZaaXaVm9PKejZ5mE6oZsRahDrU |  |  |  |

**Scientific Variables KEY**

Identify the independent and dependent variable in each scenario.

|  |  |  |  |
| --- | --- | --- | --- |
| Scenario |  | Independent  | Dependent |
| One chicken is injected with a growth hormone while another chicken is not injected. Both chickens are weighed after a year. | Description: https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRY_b8d0KPLy6sv4T6HxIyYr1LuJ9DBjeggLo_GWgTV0C0-XB5x | Growth hormone | Weight of chickens |
| A bug repellant is sprayed on one arm the other arm is not sprayed. The number of bug bites is recorded after 2 hours. | Description: https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQpaiskAGJPRRoTRn6jCJBCySshPYKZPXYazMFddbZga3wSvCIwkg | Bug repellant | Number of bug bites |
| Javier sleeps 9 hours the night before his science exam. His twin sister has the same exam and sleeps 6 hours the night before the test. Afterwards, they compare their scores. | Description: https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTv8QQx2DKXMiDyNPPDJX34FHFF4kp5eRkyYidn7IH6caIJC_gl | Hours of sleep | Exam scores |
| Group A exercises for a month. Group B does not exercise. They measure the amount of weight they gained.  | Description: https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcTcC5zx4qzfrMpjZtWoIV5moLXIaIlsWl-bJpRqYBUR0i4kpDD4J4MTZ6w | Exercise | Weight |
| One math class studies for an assessment while the math class next door does not. The scores of the two classes are compared.  | Description: https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGxpmmgbxvHoOiG_ZhNpAn9qnJXp1DLTZU6dRjHNPofDiutp8y | Studying | Test score |
| One plant is given sunlight every day. Another plant is not given any sunlight. After 3 weeks, we measure how tall the plant is. | Description: https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGKHOY79LNsOFe4SzgU2QGYPZaaXaVm9PKejZ5mE6oZsRahDrU | Sunlight | Height of plant |
| One plant is given sunlight for 12 hours a day. Another plant is not given any sunlight. After 3 weeks, we compare how green each plant looks. | Description: https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcRGKHOY79LNsOFe4SzgU2QGYPZaaXaVm9PKejZ5mE6oZsRahDrU | Sunlight | Color/shade of green |