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**Experimental Design Practice**

1. Brody’s parents would not let him study while listening to music in his room. They told him that he could not concentrate with the background noise. He decided to test this idea with an experiment on his class. Each Friday, his English class took a vocabulary quiz on 25 new words learned that week. Brody got his teacher’s permission to try the experiment. On the first Friday, they took the test with the normal, quiet atmosphere of a classroom. The second week he played rock music, followed by jazz the third week, and finally country music the last week. Brody compared the test scores in weeks 2-4 to the scores the 1st week. His teacher and his parents were surprised by the results.

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| Independent Variable | Dependent Variable |
| Constants (3) | Control |

2. Electromagnets are made by wrapping wire around a nail and connecting the wire to a battery. Sandy and Micah wanted to test to see if the size of the wire they used could make an electromagnet stronger. They selected 6 steel nails of the same size to make the electromagnets. Using 6 different sizes of insulated wire, they put 50 turns around each nail. Next, the nails were connected to 2 D-cell batteries to make electromagnets. The strength of each magnet was tested by counting the number of paper clips it picked up.

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| Idependent Variable | Dependent Variable |
| Constants (3) | Control |