



Name _____

Argumentation and Radio Waves

You and your groupmates will work together to learn about antennas and then create a plan to increase the reception of the setup in your room.

The following terms describe aspects of antennas.

1. Interference
2. Polarization
3. Directionality
4. Gain
5. Ground plane
6. Coax choke

All of these affect the reception of an antenna. While some you can alter, others are fixed in an antenna. It would be best if you researched each term to determine how it affects an antenna's reception and whether it can be changed. In addition to the terms, there are some basic features of an antenna that can affect its reception. You and your group need to identify two features you believe could affect the reception and include those qualities in your research.

Features to research:

- 1.
- 2.

To complete this research quickly, you and your groupmates must divide the work. After everyone is done researching, come back together and share what you found with your group mates. Then, as a group, develop a design for improving the reception. You may use as many or as few alterations as you choose, but you must have a reason (backed with evidence) for each change you make. If you move quickly through these first two steps, you can test your solution and then change your plans to increase reception.

Step I Research

What are you researching?

What did you find out? (Be sure to include your source for this information.)

Step 2 Group Discussion

Discuss what you are going to do to increase reception.

Step 3 Create a solution.

What are you going to do to increase reception.? Be sure to give a reason supported by evidence for each element of your plan.

Step 4 Test your solution.

Get your teacher’s permission to test your solution. Be sure to record your results.

Step 5 Redesign

Using the data from your test, make changes to your solution. Again, make sure you have a reason for each change.

Step 6 New Solution
