

Engineer a New Paper Clip

| | | |
|----------------------------|-------------------------|---------------|
| Duration: 45-90 min | Age Group: 10-12 | Expert |
|----------------------------|-------------------------|---------------|

1. **Intro and Discussion Introduction:** Make a new paper clip design that is functional. **Preparation:** You could do this with cardboard or straws and tape, but it's so much more fun to work with wire. You would need wire, wire cutters, pliers, or just use paper clips and pliers.
2. **Discussion:** How could you make a paper clip better and more fun? What design would you use?
3. **Brainstorm:** Spend some time working out some ideas. What design would look cool? What design wouldn't crease the paper? Use paper and pencils to document them.
4. **Choose an Idea:** Share your ideas with your group. Which ideas do your friends think would work? Which ones might be impractical? If you can decide, you can also vote for the majority.
5. **Make it:** Using pliers straighten out the paper clip. If this is already done, then take the pliers and twist the wire into the required shape.



6. **Test it:** Try out your design. Take a stack of paper and clip them together. Does the clip crease the paper? Can it hold them together? If the design has some faults, go back and change the paper clip design a little bit. Then test it again.

7. **Present your Model:** Present your paper clips to others in your class. Maybe they'll like it so much, you might have to make more!



8. **Tidy Up:** Clean up your workspace and throw away paper clip scraps. Return your tools and store your custom paper clips.