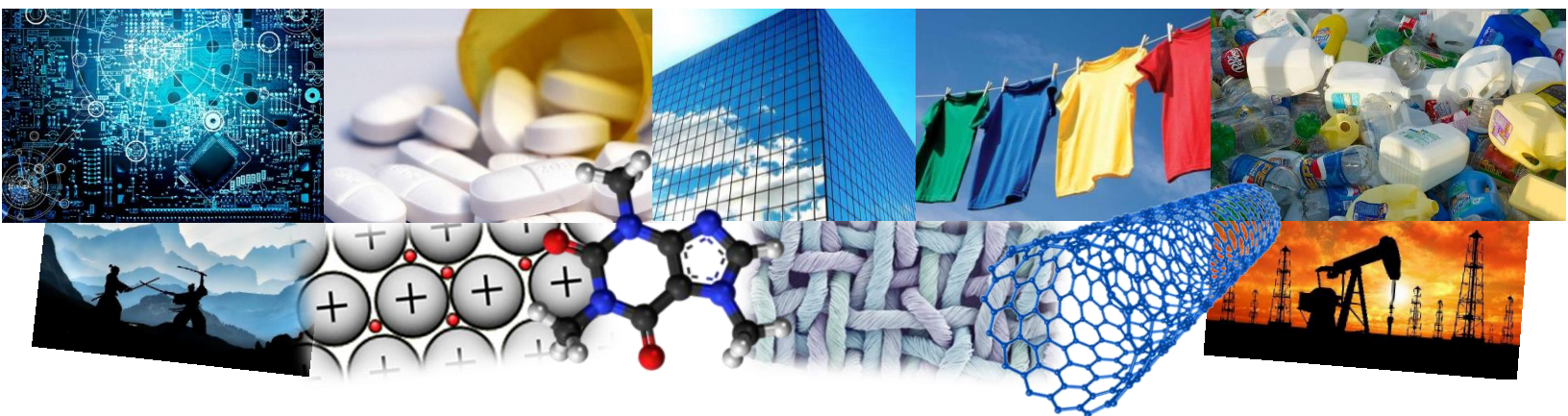


## Project: Chemical bonding in man-made materials



To show what you have learned and understand about the way atoms form new compounds through chemical bonding, you will study a specific molecule's properties and structure and create a **visual product** that effectively communicates how chemical bonding works and why it matters. Your individual research should focus on something you are personally interested in and its connection to what we've been learning about the structure of substances. You should also specifically think about substances that have been created and developed by humans.

### Start by thinking of topics that are of personal interest to you:

1. Name at least two or three things that are important or interesting to you. Are these things you'd like to learn more about? How can you connect these to what we're learning about in Chemistry?



**Consider what kinds of resources will be most helpful in finding the answer to your research question:**

6. How will you know if these sources are reliable or not?
  
7. How will you keep track of your sources and refer to them in your final product?
  
8. What is the best way for you to connect your final product directly to these sources of the information you use along the way?
  
  
  
  
  
  
  
9. In the space below, keep a list of the sources\* you are using and how you know they are high quality, reliable sources of information for your research:

What source are you using?	Why was this source useful? What important idea did you learn?	How do you know this is a high quality, reliable source of information for your topic?

*\*Just because there are only a few rows above doesn't mean you should only use a few sources! Add more to your list of sources by attaching another piece of paper and keep track of all your sources and how you know they are valuable and reliable.*

**Decide which kind of final product will best help you effectively communicate what you've learned:**

10. Choose one of the options below for your visual product:

- Design and publish a digitally-created visual graphic** such as an infographic, a digital poster, an interactive webpage, a digital 3D model, or a video that explores a specific man-made molecule of your choice and its structure. Your digital graphic must show thoughtful consideration of **design, communication, and viewer-friendliness** and should strategically utilize the benefits of the digital format you chose. There must be **strong use of valuable scientific and statistical data** (with correct citations) that is communicated in an **intriguing and thought-provoking format**.
- Build an interactive, physical 3D model** of a specific man-made molecule of your choice and annotate it with explanation of how its structure explains its properties. Your model must be **unique in presentation and material**, and it must be **thoroughly annotated** with explanations of its **chemistry** (including its **molecular geometry, polarity, and impact**). Your physical model must include **strong evidence of research** (with correct citations) as well as thoughtful consideration of **design, communication, and viewer-friendliness**.

Your final product is due on \_\_\_\_\_.