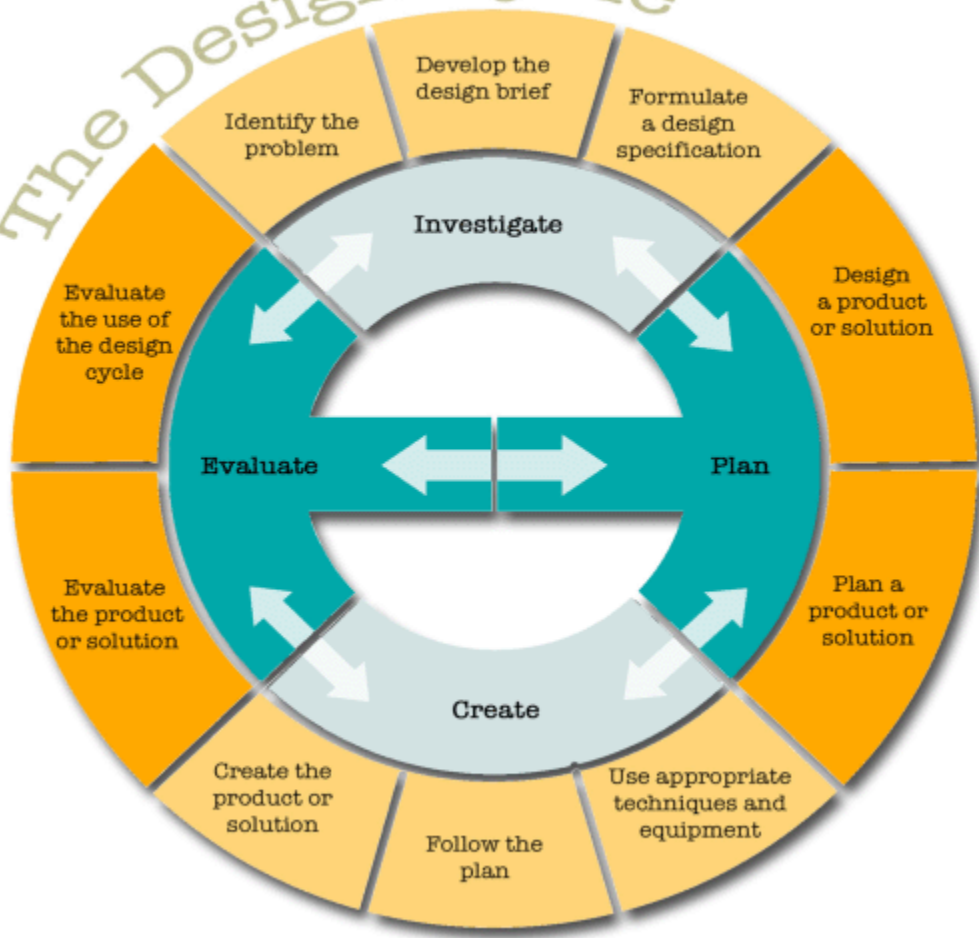


The Design Cycle



The purpose of the Design Cycle is to clearly show that anything you create, whether it's a Science Project or a 5-Paragraph Essay or even a paper airplane, there are steps you must take to create whatever you're creating. Usually, it follows the steps in the Design Cycle.

Investigate:

1. Before creating anything, you must figure out what it is you're creating (**Identifying the problem**).
2. There will be times, not all the time, you will need to write a short description of what it is you're about to work on (**Develop the design brief**).
3. Then, you figure out what is needed to create your project (**Formulate a design specification**).

Plan:

1. When you start out your project, you have to have an idea as to what you want to create (**Design a product or solution**).
2. Then, you begin to think about what steps and materials are needed to create this "thing" (**Plan a product or solution**).

Create:

1. You must make sure you are using the right methods and equipment to create your project (**Use appropriate techniques and equipment**).
2. Then, to make your creation, you have to follow your own plan or steps (**Follow the plan**).
3. Then, simply make it (**Create the product or solution**).

Evaluate:

1. When you're done making your creation, you usually look at it and see if you're satisfied (Evaluate the product or solution).
2. As part of the evaluation process, you check to make sure you followed your own steps and see if it made sense by looking at what you created. Did it come out according to your plan? (Evaluate the use of the Design Cycle).
3. If you're not satisfied or if your creation didn't come out the way you wanted, then you can go back to the planning stage (Plan). You can adjust your steps and then re-create your work. Then, see if it came out better. Do you see why they call this the Design **Cycle**?

In Your Own Words

Now, in your own words, complete the boxes below. You may look at the previous page to help you come up with your own description of each of the steps in the Design Cycle. No need to use full sentences.

Investigate	
Plan	
Create	
Evaluate	

The Design Cycle (Lesson for 7th and 8th Graders)

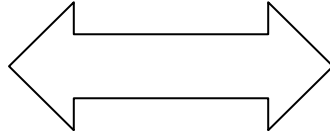
In this part of the lesson, you will create your own Design Cycle. When you are done, you will need to keep this Design Cycle for use in your Science, Art and Technology classes. You must keep it in your Knight binder for future reference.

Materials:

1 white sheet of paper, 1 blue sheet of paper, 1 yellow sheet of paper, scissors, glue, 1 paper plate and a pen or marker.

Directions:

1. Using the round paper plate, draw the outline of the paper plate onto the blue sheet of paper. Make sure it all fits on the blue paper.
2. Using scissors cut the circle just drawn on the blue paper.
3. Taking the blue circle, fold exactly in half. Then fold that half in half again making 4 quarters.
4. Unfold. You should see the folds making quarters on your circle. Cut along the folds to make 4 pie quarters. Set aside.
5. On the yellow paper, draw 5 2-inch double-headed arrows like the one below.



6. Cut out all 5 double-headed arrows and set aside for now.
7. Take one of the blue quarter rounds and glue it to the white paper with the point of the quarter pointing to the center of the paper. The round part should be facing the top of the paper.
8. Take a second blue quarter round and glue it to the white paper with the point of the quarter pointing to the center of the paper. The round part should be facing the right side of the white paper.
9. Do the same for the 3rd and 4th quarter rounds with points pointing to the center and the round parts facing the bottom and left sides of the paper respectively.
10. On the white paper, label each quarter starting at the top going clockwise: Investigate, Plan, Create and Evaluate. Do not write in the blue quarters.
11. Place and glue 4 of the 5 yellow double-headed arrows so that they go between each quarter and point to each quarter.
12. Place the 5th yellow double-headed arrow in the center of the cycle so that the arrow heads point to both the "Evaluate" and "Plan" quarters.

13. Using the table you created in your own words, write the description for “Investigate”, “Plan”, “Create” and “Evaluate” in the center of the appropriate quarters.
14. Write the title “The Design Cycle” at the top of the white paper.
15. Using the hole-punch provided by your teacher, punch holes on the white paper.
16. Place safely in your Knight binder.