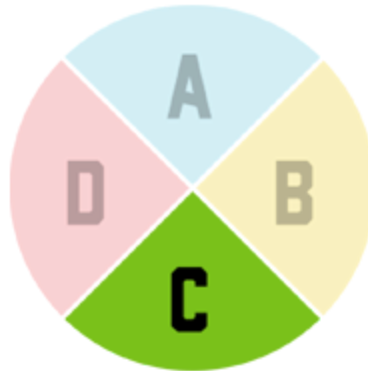


Engineering - Paper Water Tank

Criterion C - Creating the Solution

Students plan the steps to create the solution based on the best idea, build the solution while documenting the process, and justify any modifications to the plan.



C.1 - Construct a Logical Plan

Outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution.

C.1.1 - Table Team's Newspaper Water Tank Plan

With your team, draft on poster paper one tank plan based on the best ideas from each group member. Create any combination of 3D and 2D sketches to communicate the team's tank design fully and clearly. You will also draft steps to build the tank, and the steps to test the tank.

From the poster, insert photographs of your team's:

- 1) water tank planning sketch(es)
- 2) the steps to build the tank, and
- 3) the steps to test the tank

Need Help? [How to Write Instructions](#) (video, 3:04) | [Instruction Documents: Writing Effective Steps](#) (video, 5:27)

C.1.1.1 - Table Team Poster - Tank Sketch(es)

C.1.1.2 - Table Team Poster - Tank Building Steps

C.1.1.3 - Table Team Poster - Tank Testing Steps

C.1.2 - Individual Building Plan - Finalize the Steps

Individually, rewrite the building steps from C.1.1.2 in a clear and logical manner. DO NOT SIMPLY COPY THE TEAM DRAFT. YOUR WORK MAY LOOK SIMILAR TO YOUR TEAMS' BUT IT MUST NOT LOOK IDENTICAL.

Review the GRASPS to make sure that you are working properly toward the goal.

DO NOT write the steps to test the tank.

Step #	Building Steps Insert some basic pencil sketches if desired; however, sketches here shall not replace written steps.	Materials, Tools, and/or Other Resources Needed	Group Member(s) Responsible	Time Required in seconds or minutes
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

<[add more rows](#) as needed>

C.1.3 - Individual Testing Plan - Finalize the Steps

Individually, rewrite the testing steps from C.1.1.3 in a clear and logical manner. DO NOT SIMPLY COPY THE TEAM DRAFT. YOUR WORK MAY LOOK SIMILAR TO YOUR TEAMS' BUT IT MUST NOT LOOK IDENTICAL.

Review the GRASPS to make sure that you are working properly toward the goal.

One step shall describe the test area setting and arrangement of the resources for the test: members and their roles, beaker of water, graduated cylinder, tray, paper tank, filming computer, etc.

One step shall describe how to properly remove the water from the tank after three minutes without cutting, tearing, or damaging the tank.

Need Help? Observe a [video of a test](#) (3:43) to learn about the process.

Step #	Testing Steps Insert some basic pencil sketches if desired; however, sketches here shall not replace written steps.	Materials, Tools, and/or Other Resources Needed	Group Member(s) Responsible You can include your teacher here	Time Required in seconds or minutes
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

<[add more rows](#) as needed>

C.2 - Demonstrate Excellent Technical Skills &

C.3 - Follow the Plan to Create the Solution

Demonstrate excellent technical skills when making the solution and thoroughly document essential steps during the creation process.

The Tank Build Photograph the process of building your water tank. Insert photos for all steps with as many different views as possible. All team members should take and share photographs to make sure that the entire tank building process is fully documented.	
Building Steps	Documentation (Images) - Insert two different photos per building step (up to five per row). - Make the photo widths as wide as this column.
i. The Preparation (Materials, Resources, and Group Members)	
ii. The First Steps	
iii. The Middle Steps	
iv. The Finishing Steps	

v. The Final Tank (Include a ruler in these photos)	

C.4 - Justify Changes Made to the Plan

Understand the importance of monitoring progress and thoroughly identify and justify modifications to the plan.

Changes Made to the Building Plan
Copy the Building Steps (from C.1.2) and paste the information into the second column. In the third column, explain changes made to the plan.

Use the photographs of the tank building process in C.2 & C.3 to help you remember what you actually did (or didn't do).

If nothing changed write "nothing changed"; however, DO NOT put "nothing changed" for every step. Be detail-focused about identifying changes (consider time and resources as well).

Step # (from C.1.2)	Building Steps (from C.1.2 - exact copy)	What Changed in this Step?
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

[<add more rows](#)
as needed>