Name:_____
08_worksheet Iterative Design Process

Materials:

- One bucket of water (NO SPLASHING!)
- One roll of pennies (x50)
- Four slices of aluminum foil

Rules:

- You can only use two slices of aluminum foil per boat build.
- You can't touch or fix the boat once it's in the water.
- You can only add 1 penny at a time.

Directions, Boat v1:

Develop a Plan

What kind of boat does your group plan to make? Write a description or draw a picture below.

What are the strengths of this design? What possible weaknesses might this design have?

Test Your Boat

How many pennies did your boat hold?

Why did your boat eventually sink? What needs to be improved?

Evaluate and Improve

What are the most common problems you see among the boats tested?

What ideas seem to be working well?

Directions, Boat v2:
Develop a Plan
What kind of boat does your group plan to make? Write a description or draw a picture below.

What are the strengths of this design? What possible weaknesses might this design have?

Test Your Boat
How many pennies did your group's new design hold?

Why did your boat eventually sink? What needs to be improved?

Reflect
How did working in a team make this activity easier?

How did it make the activity more challenging?

What helped your group overcome these challenges?

The Iterative Design Process:

STEP 1- BRAINSTORM:

Brainstorming is the first step in the design process. During this phase, game designers ask themselves what kind of game they can make with the materials at hand to meet their design constraints and goals. You might come up with a few kernels that You can develop into a game, and by testing it out, running it by other people, and pushing your creativity, you can come up with something great! It's essential to come up with many ideas during the brainstorming phase - don't edit yourself, and certainly don't write anything off just yet!

STEP 2- PROTOTYPE:

Once you've brainstormed many ideas, it's time to select one or two favorites to push forward and start building. Prototyping is all about trying to get your idea on paper to create something playable so that you can test out your idea and get feedback. You want to think about which ideas seem the most possible, given the time you want to spend, the materials you have, and the design challenge. Create a sketch of your idea if you'd like, then start to use the materials to build your game. Index cards and post-its are great prototyping tools! It's ok to change your idea once you build it - that's part of the process.

STEP 3 - TEST

Once you've built a playable prototype, tested it, and refined it yourself or with your team members, you're ready to have someone else play to help you determine how to make it the best possible game. Find one or more people to play your game and ask what they think. It helps if you ask them specific questions about their experience, such as:

+ How fun was this game? What did you like about it? What didn't you like?
+ What suggestions do you have for improving it?

Record some notes so you can use them later to improve your design. You'll learn a lot by watching them play the game. Did they understand the rules? Did they interact with the game in the way you intended?

STEP 4 - ITERATE

Iteration is a fancy word for making changes to your game to make it better and more fun. What changes need to be made to your game based on the playtest? How can you improve your game? Using playtester feedback, pick one or two ideas that you think are best for making a change to your game to improve it, then implement those changes by redesigning your game. You can test it again and get more feedback until you feel you are done with it.

STEP 5 - REFLECT

Reflection is a vital part of the game design process. As game designers, we constantly evaluate our work and strategies and get feedback to improve. Think about what you learned during your game design process. It's essential to think about what you liked and what you would change if you were going to do this again.