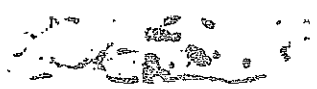
Grade 6 8.2.C and 8.2.D

8.2.8.C.1, 8.2.8.C.2, 8.2.8.C.3, 8.2.8.C.4, 8.2.8.C.5, 8.2.8.C.6, 8.2.8.C.7, 8.2.8.C.8
8.2.8.D.1, 8.2.8.D.2, 8.2.8.D.3, 8.2.8.D.4, 8.2.8.D.5, 8.2.8.D.6

Name: _____ Date: _____

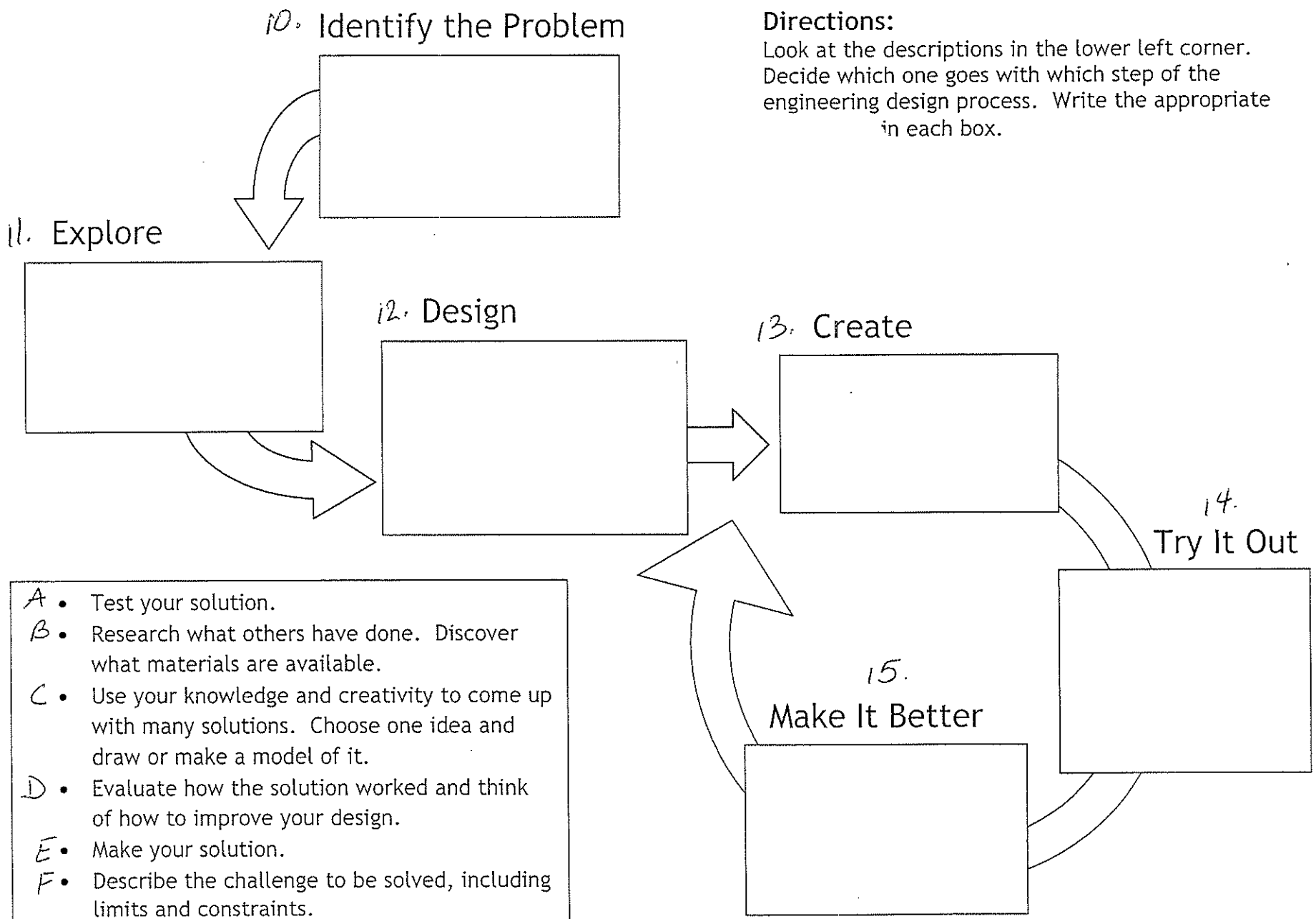
Engineering Design Quiz

1. **In engineering, the design process begins when...**
   a. information about an existing product is gathered by an engineer
   b. an engineering design team comes up with ideas for a new product
   c. a design engineer recognizes the need for a solution to a problem
2. **Identifying the "target population" or "target audience" occurs during which step of the engineering design loop?**
   a. Identify the Need
   b. Research the Problem
   c. Develop Possible Solutions
3. **Engineers must understand the difference between requirements and constraints. Let's say a team of engineers is asked to design a pair of kids' tennis shoes for less than $20. They determine that the only way to manufacture shoes for this price is to use recycled materials. What is the team's *constraint*?**
   a. The shoes must be designed for kids
   b. The shoes must be made out of recycled materials
   c. The shoes must cost less than $20 to manufacture
4. **During a brainstorming session we want to focus *more* on:**
   a. quantity of ideas rather than quality
   b. quality of ideas rather than quantity
5. **Which step of the engineering design loop distinguishes an engineer from a technician?**
   a. Construct a Prototype
   b. Test and Evaluate a Prototype
   c. Redesign
6. **Although the terms "model" and "prototype" are often used interchangeably, they are not the same thing. A _____ is used to test different aspects of a product before the design is finalized. A _____ is used to demonstrate or explain how a product will look or function.**
   a. model, prototype
   b. prototype, model
7. **When following the engineering design loop, the different stages can occur in which direction?**
   a. clockwise
   b. counter-clockwise
   c. both clockwise and counter-clockwise
   d. in any direction, including shortcuts
8. **The engineering design process is iterative. This allows engineers to...**
   a. become proficient at different engineering software applications
   b. find the most optimal solution to a design problem
   c. Incorporate both math and science concepts into a design problem
9. **When finding the solution to an engineering design problem, there is/are usually...**
   a. only one possible correct solution
   b. a very limited number of possible correct solutions
   c. many possible correct solutions



The Engineering Design Process

Directions:
Look at the descriptions in the lower left corner. Decide which one goes with which step of the engineering design process. Write the appropriate in each box.



- A • Test your solution.
- B • Research what others have done. Discover what materials are available.
- C • Use your knowledge and creativity to come up with many solutions. Choose one idea and draw or make a model of it.
- D • Evaluate how the solution worked and think of how to improve your design.
- E • Make your solution.
- F • Describe the challenge to be solved, including limits and constraints.

Grade 6 8.1.C

Video Podcast

Create a 8-15 minute video podcast that informs your audience of an interest or hobby that you have or are interested in developing. You may have 1 partner if you choose.

1. Pick a topic for your podcast: _____
   Ideas: Sports, Video Games, Traveling, Movies, Music, Books, Clothing, Travel, Crafts, Cars, Things to do, Tech Tips
2. Outline your podcast (i.e. interviews, personal reflection, music, stories/examples, history, etc...) Be very specific regarding timeframe and detailed notes for each section. See below for an example:
   Topic: Fly-fishing
   a. Day and Date, - 15 seconds
   b. Introduction (personal and topic) – 1 minute
   c. Intro music queue – 15 seconds
   d. Main podcast
      i. History of fly-fishing – 3 minutes
      ii. Famous books and brief description of each – 2 minutes
      iii. Interview with grandfather – 6 minutes
      iv. Description of gear and equipment – 2 minutes
      v. Excerpt from the river Why – 2 minutes
      vi. Favorite personal fishing story – 3minutes
   e. Promotional Message or Sponsor Ad – 2 minutes
   f. Closing Remarks – 1 minute

I realize this podcast time adds up to more than 15 but I wanted to include a lot of ideas.

3. Logistics
   a. Write out your script (elements such as an interview cannot be scripted, but rather edited after recorded). Use the Podcast worksheet for this.
   b. You podcast should be practiced from your script before recording so that you can stay within your time table.
4. Record your podcast
   a. Using a video recorder and/or an audio recorder, record the podcast you wrote and scripted. You can use a camcorder or use the video camera on your computer. You may also include still pictures during parts of your podcast and voice over them.
   b. Edit your podcast using imovie and if needed you can use garageband for more audio control. **ALL audio must be created by you, found in garageband or imovie, or royalty free. Do not use any copyrighted music!**
   c. Share your podcast with others in your class.

Podcasts should be completed and ready to share on _____

Name _____

These parts can be combined or reordered	
	Day and Date
	Pre-Intro
	Intro music queue
	Full Intro
Main Podcast	
	Use back of sheet if necessary
Sponsor or Promotion (This could come before main podcast if you wish)	
Closing Remarks	
Contact Info/Web Site Info	

6th

Name _____ Date _____ Period _____

CURRENT EVENT

Find a current event that is interesting to you. Complete this sheet and present your information to the class.

Circle one: World National (U.S.) Local (ME) Other_____

Who is the article about? (group of people, organization, one person)

_____

_____

When did the event in the article take place? _____

Where did this event happen? _____

What is the **source** of information for this event? _____

In your own words, write an accurate **summary** of the article.

_____

_____

_____

_____

_____

_____

_____

_____

How do you think this issue impacts your community? Our country? The World?

_____

_____

_____

_____

What do you think the future significance of this event will be?

_____

_____

_____ Presentation to the class has been completed.

_____ Presentation to the class has been completed.