Designing for Wildlife
7th Grade Project Worksheet

Name: ---------
Class: Tech Engineering

The purpose of this project is to design a solution to a problem facing wildlife on Cape Ann. Your solution will be something that people can build and install that will help wildlife. You will be planning, then sketching, and then building a model, of your designed solution. This should be your own original work based on your own ideas.

1. Target species:

Raccoons

2. Problem addressed (check one)
   - ❑ Habitat fragmentation
   - ❑ Hazardous road crossings
   - ❑ Structures trapping animals
   - ❑ Declining specialized habitat. Kind of declining habitat: _____
   - ❑ Dams blocking upstream travel
   - ❑ Subsidized predators
   - ❑ Other-Your own idea_____

3. Your solution (*summarize what you planned to design/build to solve the problem*):

We plan to make a dome around the animals habitat fragments to protect them and we want to add tunnels and bridges so that they can cross over to other habitat fragments safely without getting scared or hurt.

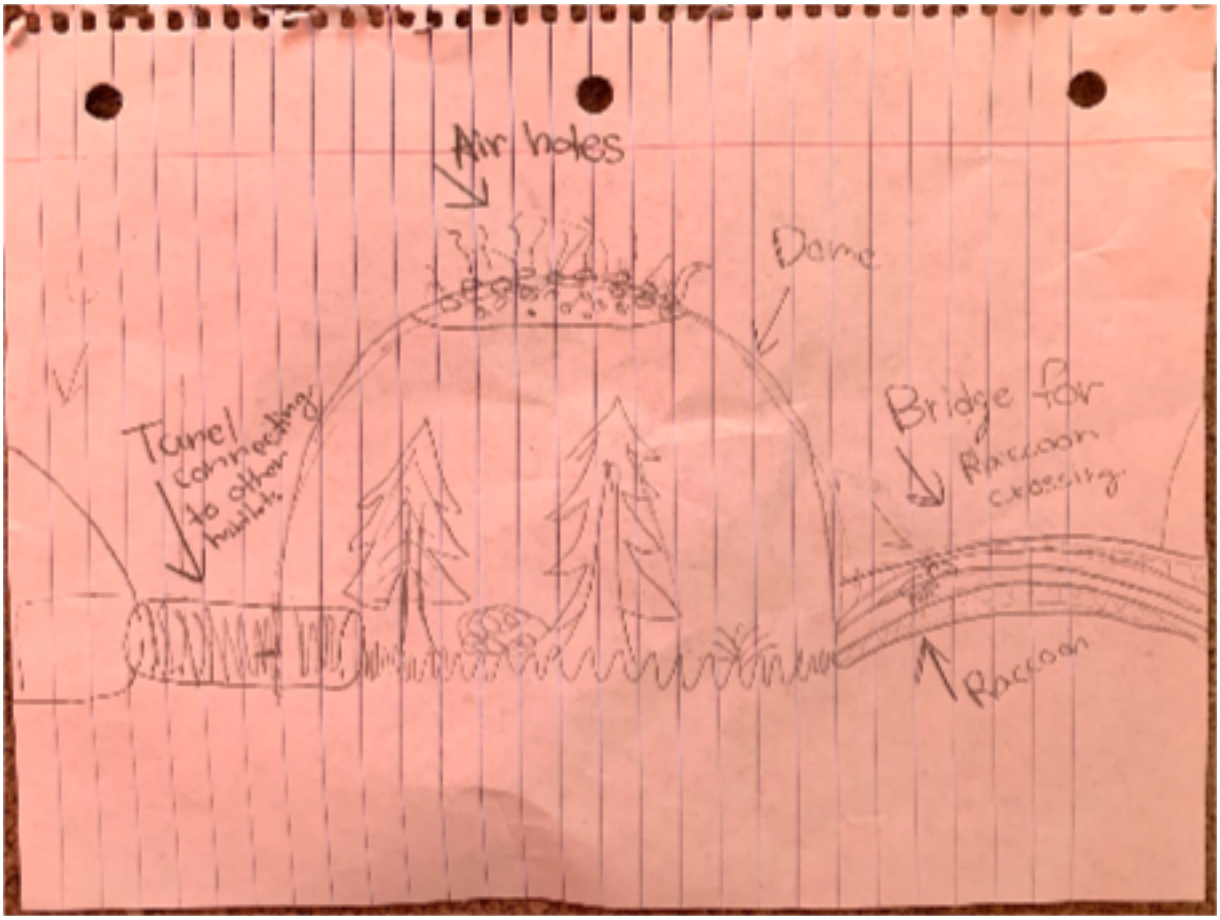
4. Explain in 2-3 sentences how your solution will help solve the problem?

This will help keep the deer and raccoon habitat fragments safe and protected and this will let them be able to cross over to other habitat fragments safe from the things that may scare or harm them.

5. What impacts will the solution have on the natural environment? Think about how it will affect other wildlife, or the land or water.

It will protect the trees and other animals around it and keep human interaction that will harm the raccoons or wildlife around it away.

6. Sketch your design here. Label all the parts:



9. Choose 2 or more features of your design and explain how they work together to make your design work effectively.

- Features:
    - Glass dome will protect each animal habitat fragment and keep them safe from harm
    - Tunel will connect to other habitats fragments so raccoons can go to other habitats
    - Bridges will connect to other habitats fragments so that raccoons can travel to other animal habitat fragments

How these features work together:

These features will protect and keep the raccoons safe and contained in their separate fragments from the dangers of humans/predators.

10. Materials needed. On the left, write which materials you'll use to build the model. On the right, write what materials you'd use if actually building the full scale project. For example, for the model, you might use clay in the model to represent what would be concrete if the project was actually built.

For Model	**Real World Material**
Dome: Paper	Glass
Tunel: Toilet Paper roll	Metal
Bridge/roof: Popsicle Sticks	Wood
Glue Stick	Really Strong Glue
Model Magic	Cements

11. Based on feedback, what would you need to change to make your design more effective *or* easier to implement? List at least two changes.

I would need to change that cost of the materials and I would need to change the amount of the materials.

12. Imagine that you have to convince your town to help you build and install your designed solution. Explain below:

- How your design will work
- How it will help wildlife
- At least two limitations (things your design *cannot* do).

My design will protect raccoons habitat fragments and will keep them safe, protected from harm and will keep them away from your trash cans. This design will help wild life by protecting not only the raccoons but the environment around them like trees and other plants from being destroyed. My design will not allow people inside only the scientist and the people who watch over them and this design will not allow hunters or people that want to kill the raccoons inside. And it will not allow cars to travel inside it.

Image of Model: