

PLTW Launch

Launch Log Materials Science: Form and Function

Name:

Table of Contents

Page	Title	Date
1	Activity 1: Form and Function	
3	Activity 2: Pollen	
5	Activity 3: Seeds	
7	Project: Properties of Matter	
9	Problem: Dispersing Seeds	

Activity 1: Form and Function

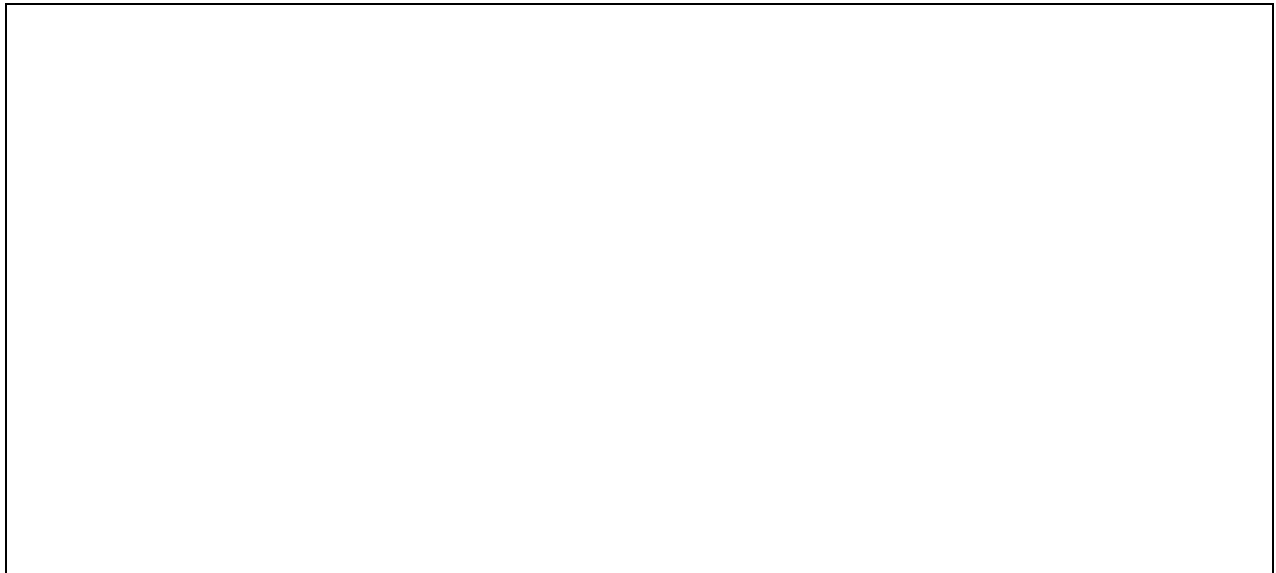
Part 1: Observing a Natural Object

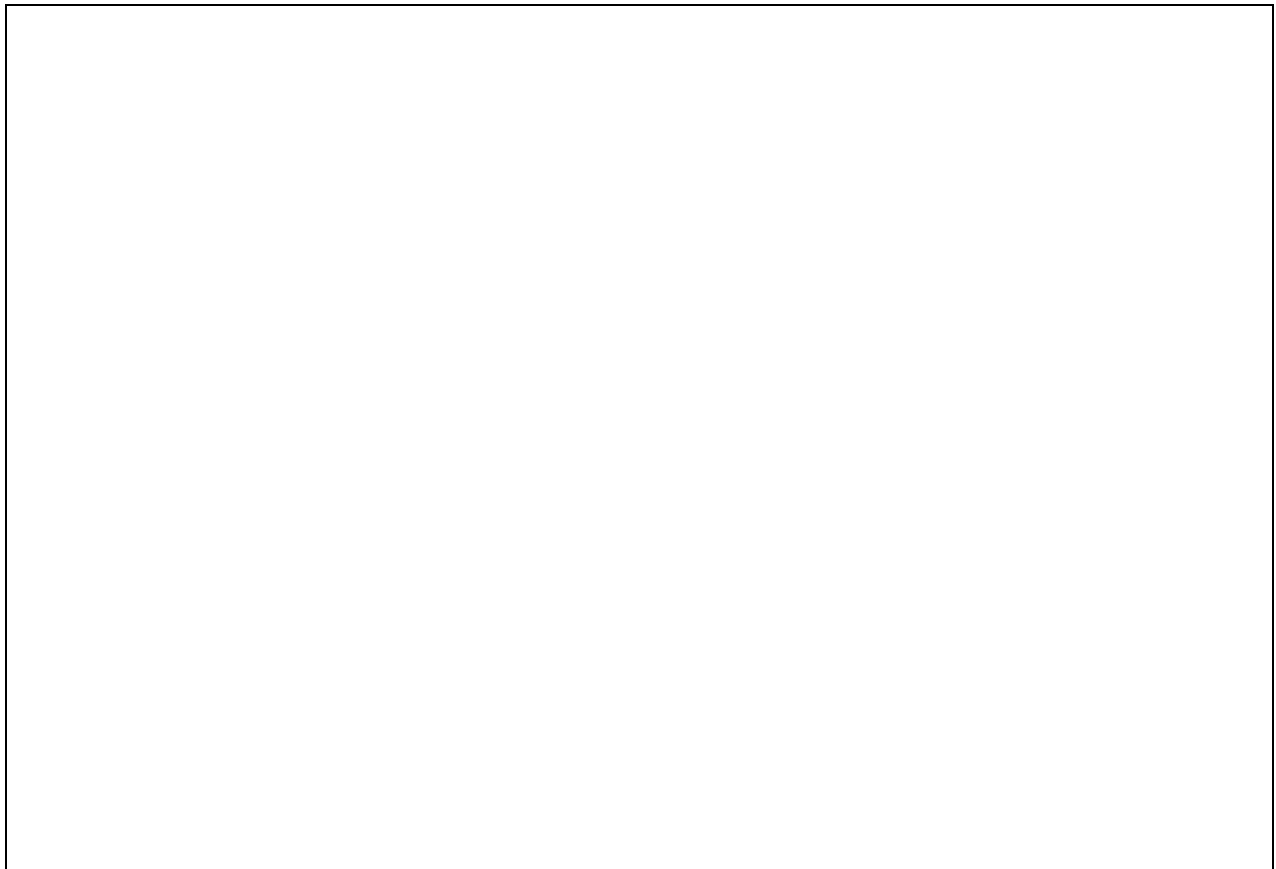
Draw and color the flower you observed.



Part 2: Observing a Man-made Object

Draw and color the kitchen utensil you observed.





Activity 2: Pollen

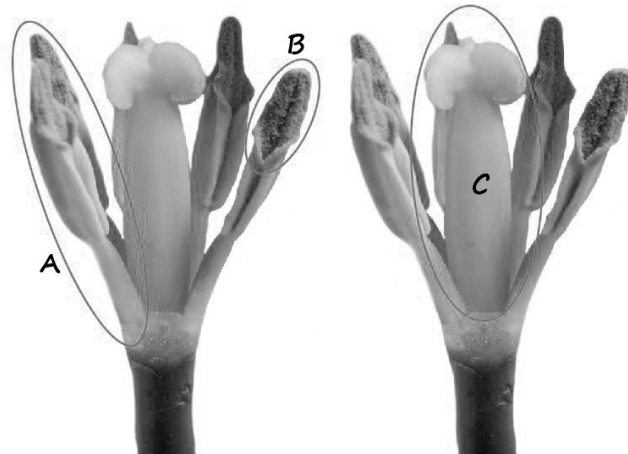
Part 1: Pollen Study

Identify the circled parts of the flowers.

A _____

B _____

C _____

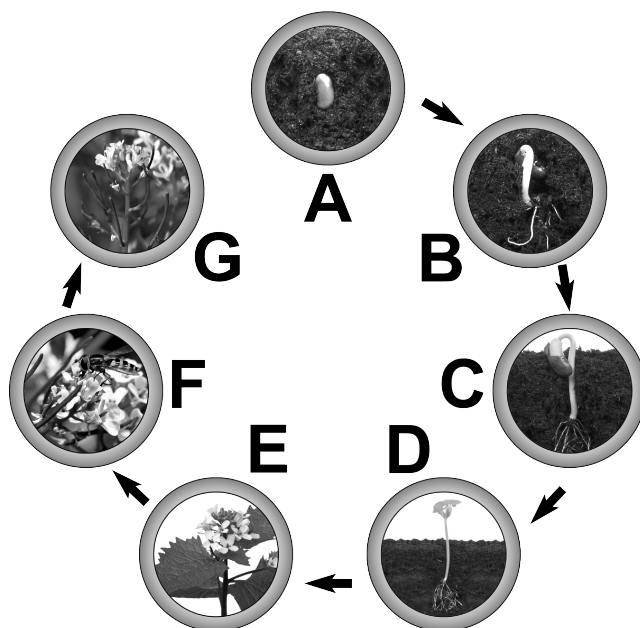


Activity 3: Seeds

Part 1: Seeds and Plant Growth

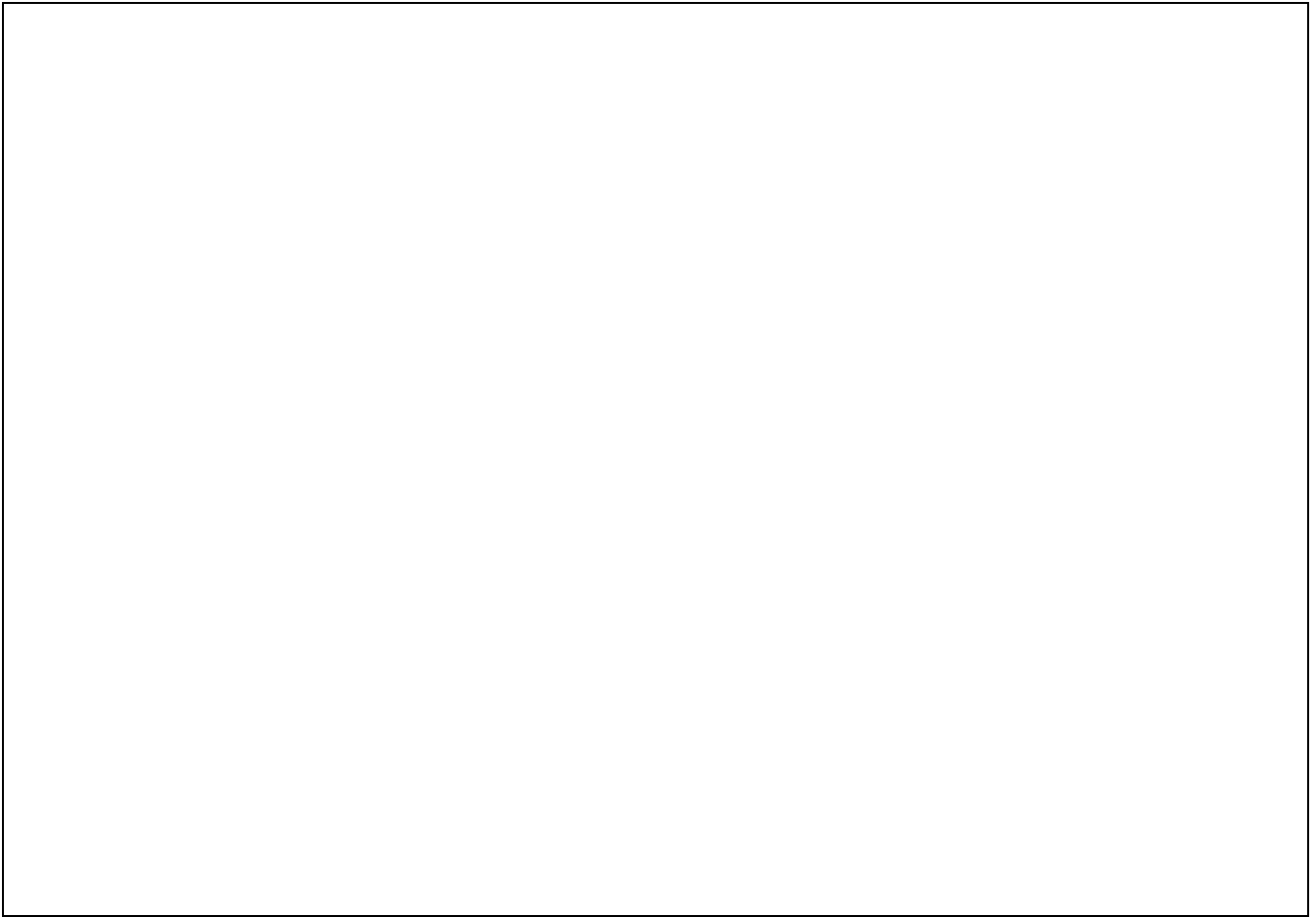
Identify the labeled parts of the seed cycle.

- A _____
- B _____
- C _____
- D _____
- E _____
- F _____
- G _____



Part 2: Seed Germination and Plant Growth

Day	Plant Parts Developed	Function of Plant Part
1		
2		
3		
4		
5		
6		
7		
8		



Project: Properties of Matter

Part 1: Flexibility, Hardness, and Strength

Rank the utensils for each property:

1 = Most flexible, hardest, or strongest

2 = Material that is not the most or the least flexible, hardest, or softest nor strongest or weakest

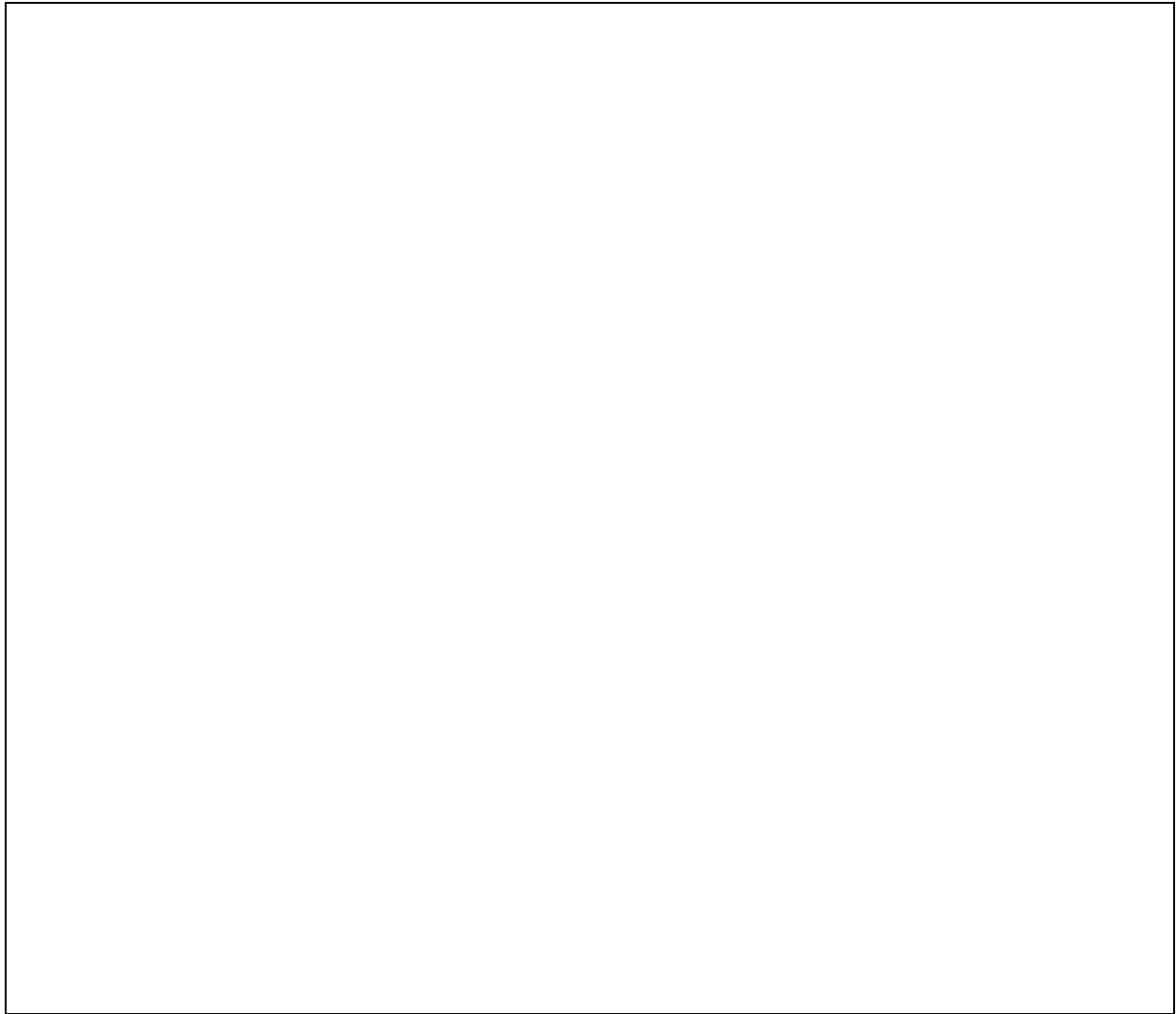
3 = Least flexible, softest, or weakest

Utensil Material	Flexibility	Hardness	Strength
Wood			
Metal			
Plastic			

Utensil Material	Form Draw a small picture of the utensil.	Function Describe how the utensil is used.
Wood		
Metal		
Plastic		

Part 2: Absorbency

Utensil / Material	Did the material absorb water?
Cloth oven mitt	
Silicone oven mitt	
Kitchen utensil (spoon)	
Sponge	



Problem: Dispersing Seeds

Ask: What is the problem?

Reflection

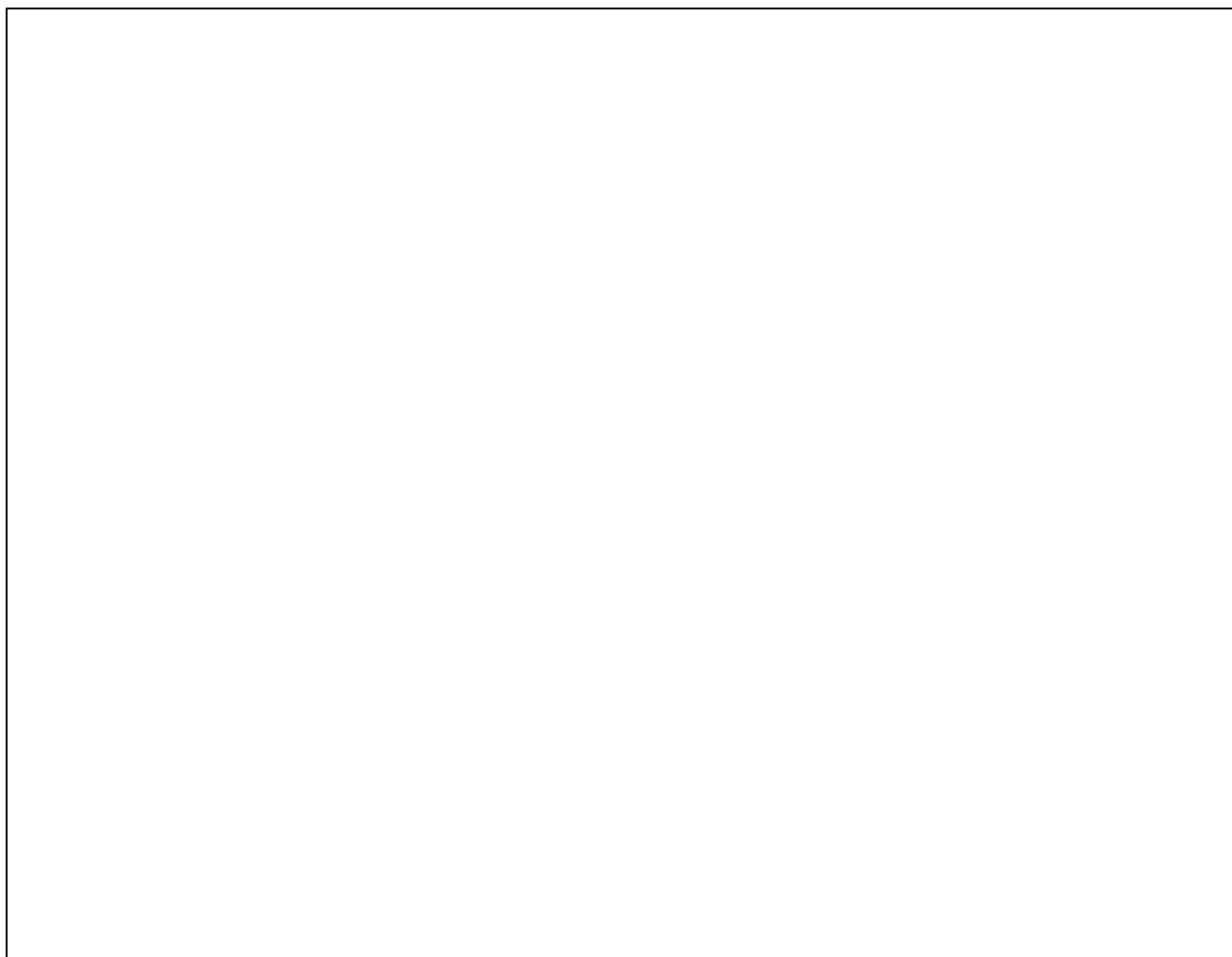
Ask	
• I can explain the design problem.	
• I can find information that I need to solve the problem.	
Teacher Notes	

Explore: How can you try to solve the problem? Write or sketch ideas below.

Reflection

Explore	
• I can research to find out about ways to solve the problem.	
• I can brainstorm ideas for how to solve the problem.	
Teacher Notes	

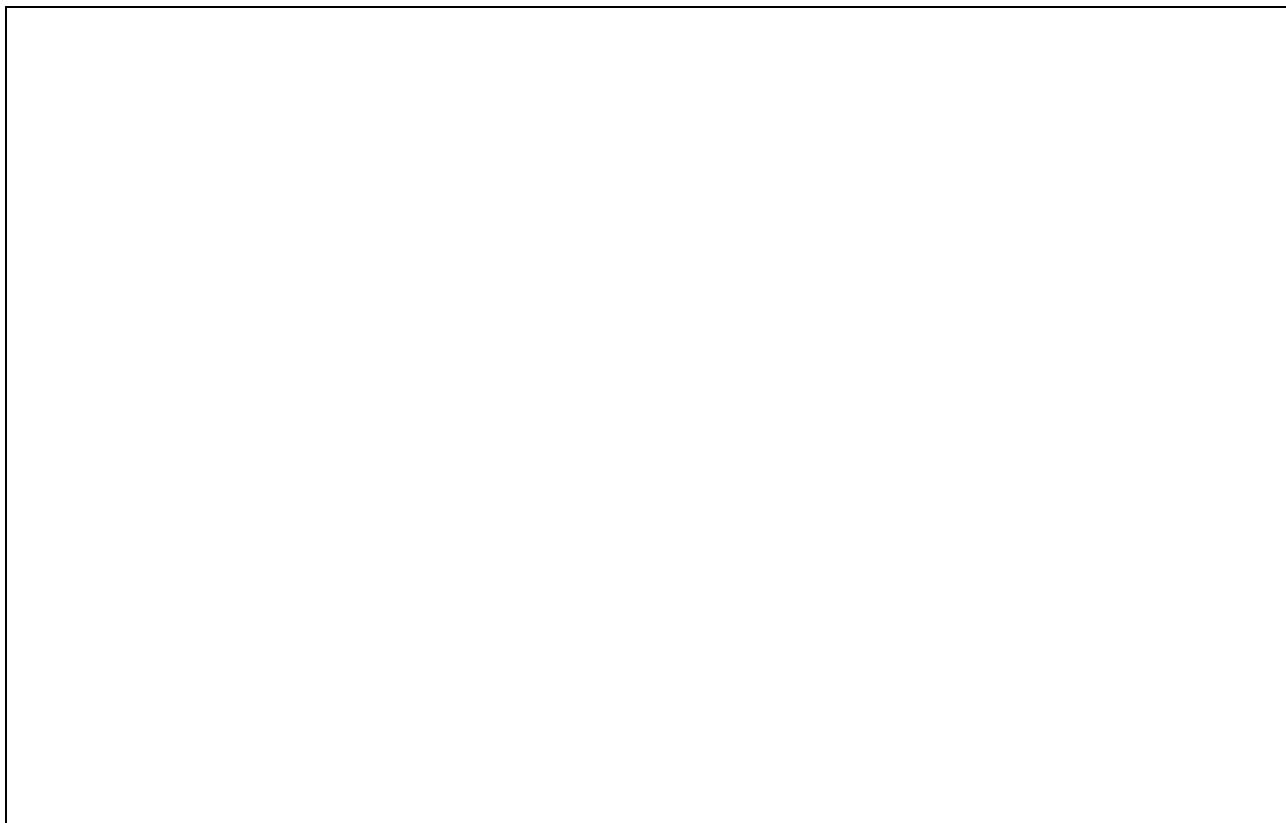
Model: Draw or attach a picture of your final design.



Reflection

Model	
• I can draw a sketch of my plan.	
• I can explain my sketch and my plan.	
• I built a model that solves the design problem.	
Teacher Notes	

Evaluate: Draw or attach a picture of your partner and you testing the design.



Evaluate: Explain one strength and one weakness of your model.

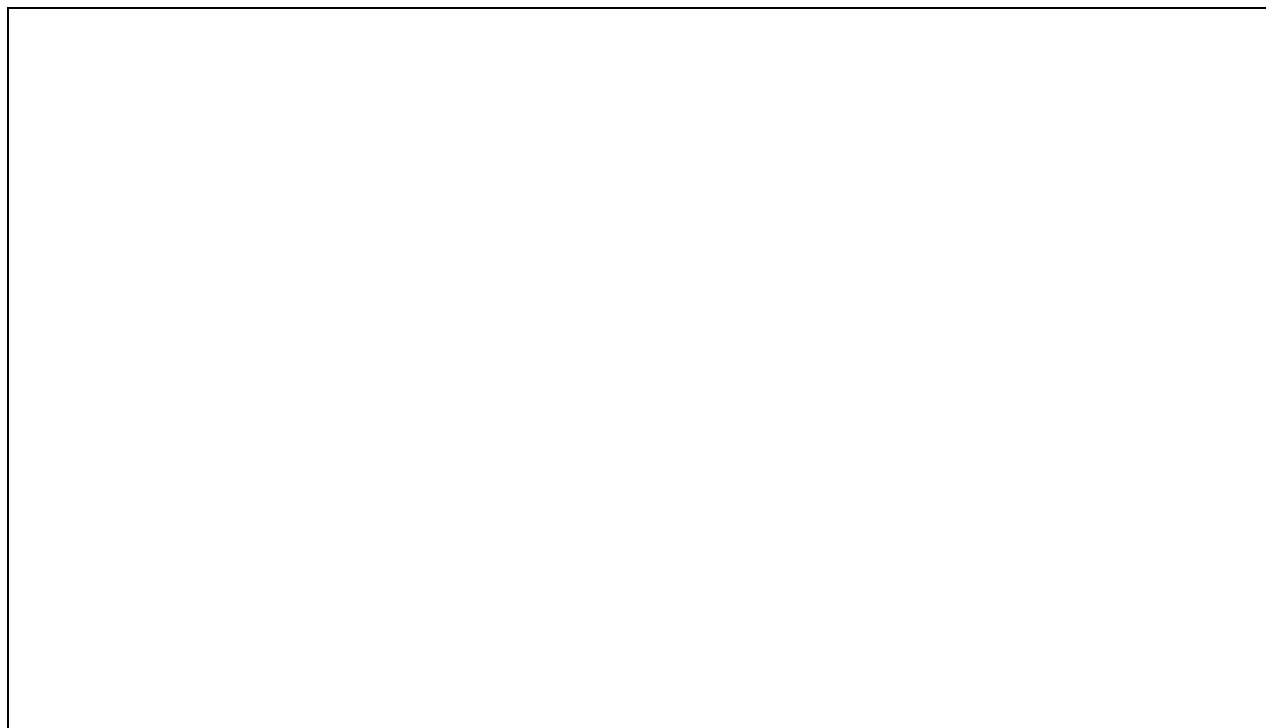
Reflection

Evaluate	
<ul style="list-style-type: none">I can explain the strengths and weaknesses of my model.	
<ul style="list-style-type: none">I can compare how my model performed against other models.	
Teacher Notes	

Use this space if you need more room for drawing.

Explain: How would you change your design? How would these changes improve your design?

Draw a sketch of your idea for improving your design.



Reflection

Explain	
• I can explain how my model works and how it solved (or did not solve) the problem.	
• I can suggest ways to improve my design.	
• I can predict how my improvements will solve the problem.	
Teacher Notes	

Use this space if you need more room for drawing.

