

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## A "Cents" of Floating

### *Rafting Your Way to Problem Solving*

In order to improve critical thinking and problem solving skills, it is often helpful to talk things through with others and picture the problem in your mind. This challenge will require you to solve problems using those important skills.

### **What you will need...**

10 drinking straws (for each team of two)

Masking tape

1 or 2 pans with about 1 inch of water

100 pennies

Scissors

### **The Job...**

*Read and follow the directions listed below:*

1. Locate your partner (as assigned by the teacher)
2. Get 10 drinking straws and 25 inches of masking tape
3. Take 7 minutes to design and build the raft that can hold the most pennies before sinking
  - a. You can only use the straws and tape you were given
4. When time is called, you bring your raft to the pan of water for your 1<sup>st</sup> float
  - a. Team members will place pennies on the raft one at a time
  - b. Pennies can be placed anywhere on the raft
  - c. When the raft goes under water, the total number of pennies becomes your 1<sup>st</sup> total
5. Take the raft back to your work stations
  - a. Using the same 10 straws and a new length of tape, make it better than the first raft you made
  - b. Same rules as before apply



## The Outcome...

Answer the following questions. Some questions will be used as a basis for discussion in Strategies today.

1. 1<sup>st</sup> float total: \_\_\_\_\_  
2<sup>nd</sup> float total: \_\_\_\_\_
  
2. What types of floats, boats, etc... did you design? \_\_\_\_\_  
\_\_\_\_\_
  
3. Was it hard for you and your partner to agree on the design? \_\_\_\_\_  
\_\_\_\_\_
  
4. Did you stay with your original design or make changes for your second float? \_\_\_\_\_  
\_\_\_\_\_
  
5. What about your design made your "better" float the best of the two attempts?  
\_\_\_\_\_
  
6. If you were to do this activity again, what would you do differently? \_\_\_\_\_  
\_\_\_\_\_
  
7. As you experience success or failure, did you look or try to copy what other teams were doing? \_\_\_\_\_ Is that cheating, why or why not? \_\_\_\_\_  
\_\_\_\_\_
  
8. What have you learned about "compromise" as part of this team? \_\_\_\_\_  
\_\_\_\_\_

## Things to think about...

We will use the following three questions as a basis for discussion in Strategies today:

1. How can we relate the lessons learned in this activity to problems we face in real life?
2. Which would you prefer and why:
  - a. A job that require you to make decisions
  - b. A job where you would be told what to do

## References:

Jackson, Tom. More Activities That Teach. : Red Rock Publishing, 1995.