Instructions:

Read the notecard with background information about your stream or river.

Roll the dice by gently emptying the dice from the bag. Identify and place a check mark next to each type of macroinvertebrate you find. Multiply the number of check marks in each category by 3, 2, or 1. Add the numbers you calculated in each column to get your score. Compare your score to the water quality ratings to determine if your stream is excellent, good, fair, or poor.

SENSITIVE	LESS SENSITIVE	TOLERANT
_____ Caddisflies (except net spinners) _____ Mayflies _____ Stoneflies _____ Watersnipe flies _____ Riffle beetles _____ Water pennies _____ Gilled snails	_____ Dobsonflies _____ Fishflies _____ Common net spinning Caddisflies _____ Crane flies _____ Damselflies _____ Dragonflies _____ Alderflies _____ Crayfish _____ Scuds _____ Sowbugs (aquatic) _____ Clams _____ Mussels	_____ Aquatic worms _____ Black flies _____ Midge flies _____ Leeches _____ Lunged snails and orb snails
_____ # of √s x 3 =_____	_____ # of √s x 2 =_____	_____ # of √s x 1 =_____

TOTAL: _____

What's the water quality in YOUR stream?

_____ Excellent (> 22) _____ Good (17-22) _____ Fair (11-16) _____ Poor (< 11)

Each person in your group should get a chance to roll the dice!

Fill in the table with information about your stream. We'll add information about the other streams as a class.

Water Source	Human Impact Factors	Macroinvertebrates Identified	Total Points	Quality of Water
Jefferson Creek				
Red-Tailed Creek				
Bowie Creek				
Green River				

Answer the following questions:

1. Which factor determines water quality?
    - The number of organisms
    - The types of organisms found in a water source
2. Why are macroinvertebrates used to analyze water quality?

3. Which water source was considered to have the best water quality?

    Why?

4. Which water source has the worst water quality?

    List the human factors that might be causing the water source to be of low quality?

    What are some things that could be done by humans to improve water quality?