

# SPARTINA BEACH ACTIVITY

The **GOAL** of this activity is to **improve the resilience of Spartina Beach**.

The federal government has given the City of Spartina Beach **\$1,000,000** to improve resiliency and decrease flooding. The Mayor of Spartina Beach has invited stakeholders- small business owners, environmental scientists, public works professionals, homeowners, and large developers- to a special meeting to decide how to use these funds.

## TEACHER INSTRUCTIONS:

1. Prior to activity, prepare (A) stakeholder cards, (B) solution cards, and (C) money.
2. Introduce activity by stating the **GOAL** – to improve the *resilience* of Spartina Beach. Start a discussion with students about what they have learned so far about resilience.
3. Display maps of Spartina Beach for the class:
  - i. First, show the maps without “RISK ZONES” and review only **LAND USE TYPES: Shoreline – Wetlands – Forest – Highlands – Residential – Businesses** (*Two versions of the map are available: color and black & white with patterns.*)
  - ii. Next, show the map with **RISK ZONES** (*circled areas 1-5*). Explain that these are different regions of the community, with some areas more prone to flooding and/or extreme weather than others.
4. Review stakeholder roles and solutions with students. Mention that each stakeholder group has certain areas they should be most concerned about. (*For example, environmental scientists should be most concerned about natural areas, like wetlands.*)
5. Assign stakeholder groups; Assign each group a risk zone (1-5).
  - i. Within each stakeholder group, assign a recorder, a spokesperson, and a negotiator (active listener) and make sure students understand their roles within the group, as well as within the class/community.
6. Pass out money (1 page per group) and either have students cut money into cards or use pre-cut money, if available, to save time.
7. Pass out **WORKSHEETS 1 and 2**.
8. Give groups 15 minutes (more if needed) to discuss their role in the community and to pick the best solutions for their stakeholder group and assigned risk zone. Tell students all money must be spent on the solutions available.
9. Have the spokesperson from each stakeholder group present their group’s choices to the rest of the class (~3 min. each). Have them explain why they made certain choices and have them share the number of water droplets their group earned.
10. Remind negotiators from each group to listen thoughtfully to all opinions and perspectives of the other groups.

11. Have students get back into their small groups to discuss if/how they want to revise their individual plans. Remind students that even though they are members of a specific stakeholder group, the goal is for everyone to agree on a plan for the whole community.
12. Tell students that as Mayor of Spartina Beach, you are required to report back to the federal government about how the money was spent and what improvements were made to Spartina Beach.
13. Have each group present their final decisions (~3 min. each).
14. Use the white board to record how many times each solution is used (write down the solutions and place tick marks beside each as groups report out).
15. If any solutions are “overused,” the class can decide as a community how to reallocate some of the funds. The class should ultimately agree on how the full \$1,000,000 should be spent.
16. At the end of the activity, display the “resilience ratings,” which are based on the number of water droplets groups earned toward “environmental quality.”
17. Give students a few minutes to reflect on the questions provided at the end of the **STUDENT INSTRUCTIONS** worksheet.
18. Provide an opportunity for students to share their reflections.

## RESILIENCE RATINGS

0 - 50 = Poor

51 - 100 = Fair

101 - 150 = Good

151 + = Excellent

## STUDENT REFLECTION QUESTIONS:

Which solutions were the most used?

Which solutions gave the highest environmental quality rating? Why do you think this is so?