

Just a Spoonful

Procedure

- 1. Collaborate** Work with a partner. Fill one cup with 100 mL of sand. Label this cup *Natural Resource*. Fill a second cup with 100 mL of sand. Label it *Resource Supplier*. Record your observations in the chart below. **Safety:** Wear goggles for this activity.

Use of Resources	Result
One student removing natural resource and one student supplying natural resource	
One student removing natural resource	

- 2. Use Models** One partner will be the “resource user” and will use a tablespoon to remove sand from the *Natural Resource* cup. The other will be the “resource supplier” and use a teaspoon to add sand to the cup. Spoon sand in and out of the cup at the same rate for 30 seconds.
- 3. Measure** Measure and record the amount of sand remaining in the cup.
- 4. Use Models** Refill the cup with 100 mL of sand. Repeat steps 2 and 3, but this time, only the resource user should spoon sand out of the cup. Do not add sand to the cup.

Conclusion

Write the answers to the questions.

1. **Compare** What is the difference in the amount of sand in the Resource cup for the two trials? Explain the differences.

2. **Hypothesize** Based on the data, what do you think would happen in step 2 if both students were using the same size spoons?

3. **Use Models** What do the results show about natural resources?

Investigate More!

Design an Experiment Repeat the activity, this time varying the speeds that you add or remove the sand. How does changing the rate affect the final amount of sand in the cup.