

Surf Soup® SAND

A STEM Adventure on Plastic Island – Exploring the Micro-World of Sand, Shells, and Tiny Ocean Treasures

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Surf Soup® SAND – Reader Guide & Teacher/Parent Notes

Title: Surf Soup® SAND: A STEM Adventure on Plastic Island – Exploring the Micro-World of Sand, Shells, and Tiny Ocean Treasures

Target Age: 4-8 years

Focus Areas: STEM, Observation, Classification, Critical Thinking, Environmental Awareness

Reader Guide / Teacher-Parent Notes

Learning Objectives

Encourage curiosity and close observation of the natural world.

Teach basic classification skills (size, color, type).

Introduce early STEM concepts through hands-on discovery.

Build environmental awareness with micro-plastic and ocean conservation lessons.

Strengthen conversation and reflection skills through discussion questions.

Discussion Questions

What did Koa notice first about the sand on Plastic Island?

How can tiny shells tell us stories about the ocean?

Why is it important to look closely at small things?

What is micro-plastic, and why should we try to keep beaches clean?

What experiments could you do to learn more about sand and shells?

Hands-On Activities

Magnifying Glass Investigation: Kids examine sand grains with a magnifying glass and record observations in a journal.

Sand Sorting Activity: Sort grains and shells by size, color, or type using jars, trays, or scoops.

Tiny Ocean Diorama: Create a mini-ocean world using sand, shells, and small objects. Sketch or photograph it.

Beach Cleanup Challenge: Discuss ways to reduce litter and keep sand or beaches clean.

Classroom or Outschool Extensions

Science Journaling: Record daily observations of sand or small natural objects.

Compare sand from multiple locations: count shells, measure grains, observe color.

Math Integration: Graph number of shells by type or color; practice counting and categorization.

Story Connections: Ask students to imagine what stories each sand grain could tell.

Sand Scientist Journal



Record & Reflect

What to Do:

Every scientist keeps notes!

Draw your favorite sand discovery.

Finish the sentences:

“I noticed that sand can be...”

“My favorite tiny ocean treasure was...”

“I want to learn more about...”

Bonus Challenge:

👉 Compare sand from two different places (sandbox, beach, playground).

Skills Built:

Reflection • Science communication • Early writing

Materials:

Paper, crayons/pencils

❤ Extend the learning:

Join live Surf Soup® STEM and creativity classes on
Outschool with Donna Kay Lau Author/Animator
<https://bit.ly/3L4LDL9>

Surf Soup Activity books (Field Journal)

<https://mybook.to/activity-books>