Break Rocks?

Question: How Does Water Break Down Rock?

Prior knowledge questions to ask your students:
What is mass? Can rushing water do damage to the environment?

Materials:
Large rag/cloth, soft rock (ex. Shale, sandstone, chalk), hammer, water, long-handled spoon,
wide-mouthed jar with a lid

Directions/Procedures:
1. Wrap the rock in the cloth, hammer it until broken in fingernail size pieces.
2. Set aside 2 or 3 pieces of rock. Put the rest into a jar ½ full of water. Attach lid tightly.
3. Shake the jar 100 times. Record your prediction of what the water did to the rock.
4. Spoon out 2-3 pieces of rock, compare with unshaken rocks.
5. Put the rocks you removed to the side. Shake the bottle 100 more times.
6. Take out a few more pieces, compare with the rocks taken out earlier.

Data/Observation:
The rock pieces are smaller than the pieces not in the jar.

Journaling Suggestions: What caused the rocks in the jar to get smaller. How would this same process happen in nature?

What Happened?:
The hitting of the rocks broke off small parts of the rocks, decreasing their size and mass. Water pushed the rocks into each other so pieces of the rocks broke off, making the rocks smaller.