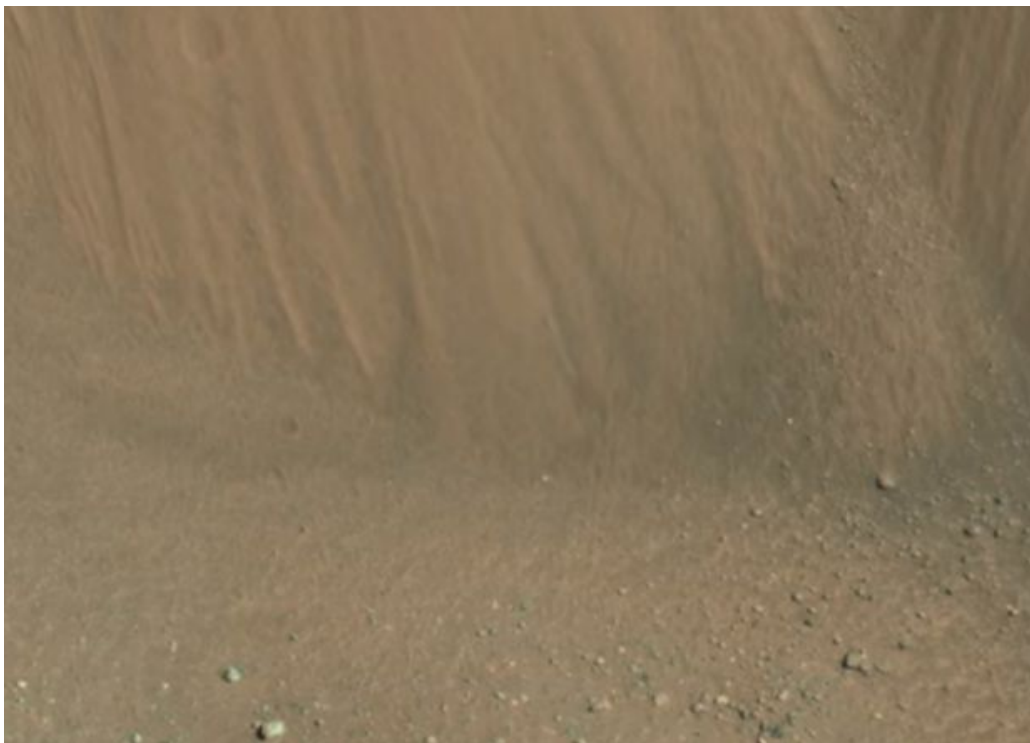


Appendix B

Martian Landform Cards



Astrum. (2018, July 21). 0:29.



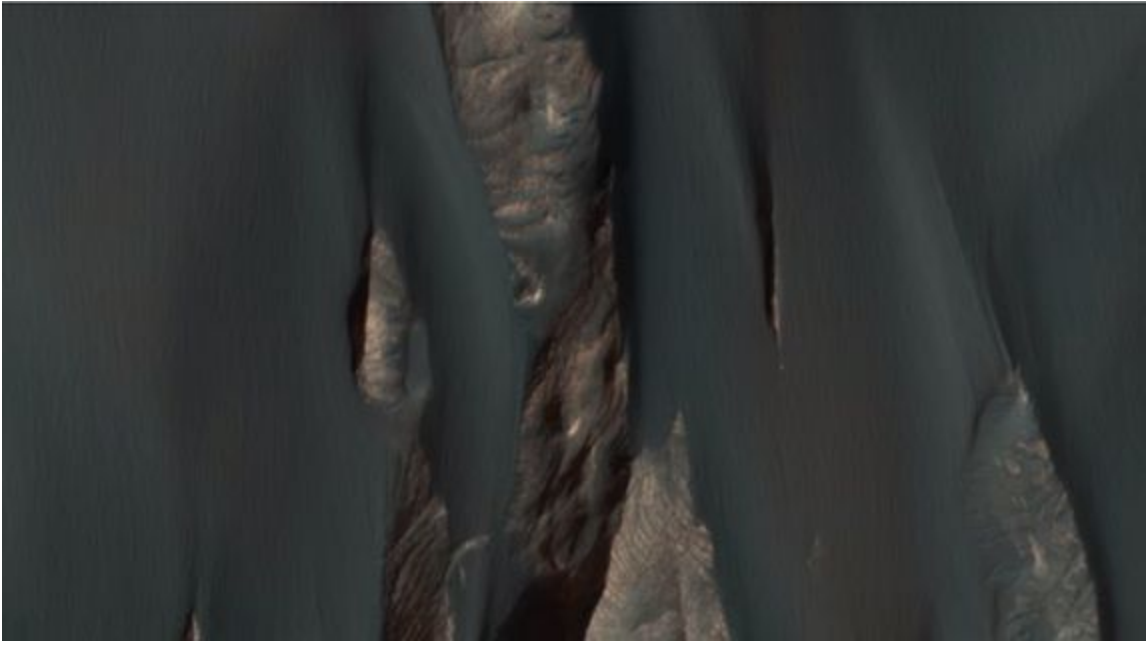
Astrum. (2018, July 21). 2:06.



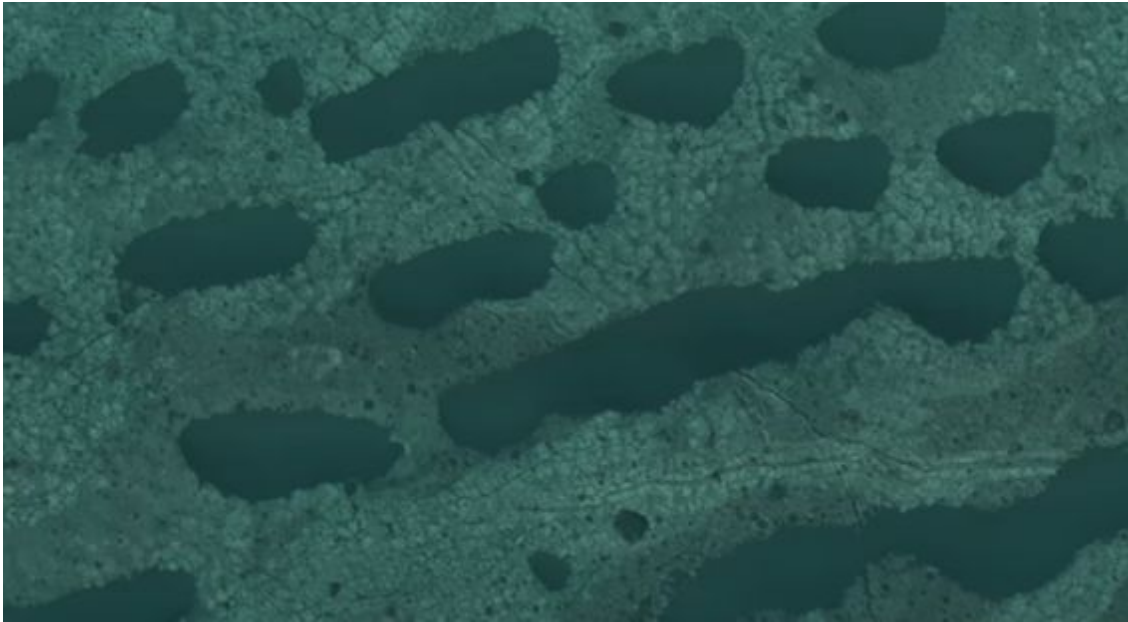
Astrum. (2018, July 21). 2:39.



Astrum. (2018, July 21). 2:58.



Astrum. (2018, July 21). 3:28.



Astrum. (2018, July 21). 4:03.



Astrum. (2018, July 21). 4:19.

Appendix D

Weathering Smarties

Chew one Smartie. Do not swallow until it is completely dissolved. Have a partner time how long it takes to dissolve the Smartie. Write your observations and the time below.

Put one Smartie in your mouth and do not chew. Do not swallow until it is completely dissolved. Have a partner time how long it takes to dissolve the Smartie. Write your observations and the time below.

Which dissolved faster? Explain why you think this happened.

What do the Smarties represent?

What is the difference between chewing and not chewing when we are using this activity as a model for weathering/erosion?

What things have you done during this activity that could help explain weathering or erosion?

Appendix E

Eroding Sand

Attention: For this model, all group members need to be wearing safety goggles until all sand is cleaned up.

Pile up one cup of dry sand on a paper plate. Have one group member carefully blow across the top of the sand pile. Write your observations below. Clean up all sand that left the plate and return it to the plate or the trash can.

Pile up one cup of wet sand on a paper plate. Have one group member carefully blow across the top of the sand pile. Write your observations below. Clean up all sand that left the plate and return it to the plate or the trash can.

In which model did more sand move? Explain why you think this happened.

What do the wet and dry sand piles represent?

What is the difference between wet sand and dry sand when we are using this activity as a model for weathering/erosion?

What things have you done during this activity that could help explain weathering or erosion?

Pile up the one cup of dry sand on a paper plate like your had it originally. Open gauze until you have it open to a single layer (it should just look like mesh and be very see through). Lay it across the sand pile carefully covering the whole pile, but thin enough so your breath can get through. Dampen your gauze if you are having a hard time getting it to lay across the top. Have one group member carefully blow across the top of the sand pile. Write your observations below. How was it different from the first time without the gauze? Clean up all sand that left the plate and return it to the plate or the trash can.

Pile up the one cup of wet sand on a paper plate like your had it originally. Open gauze until you have it open to a single layer (it should just look like mesh and be very see through). Lay it across the sand pile carefully covering the whole pile, but thin enough so your breath can get through. Dampen your gauze if you are having a hard time getting it to lay across the top. Have one group member carefully blow across the top of the sand pile. Write your observations below. How was it different from the first time without the gauze? Clean up all sand that left the plate and return it to the plate or the trash can.

What could the gauze be modeling?

What is the impact of the gauze on weathering/erosion of the two sand piles?

Why might people want to prevent erosion?
