

Mars for Earthlings

LESSON 14: Water World***In-Class Activity 1******Spits on Mars*****Purpose:**

- Understand the concept of longshore drift and the geomorphic features it creates.
- Search for and identify sand spits/tombolos on Mars

How do sand spits form?

View the following video of Spit Formation in the UK and consider the following questions (You may need to use some of your knowledge about Earth science in addition to the information in the video to answer the questions):

http://www.youtube.com/watch?v=Fe9YBuK_qEo&feature=endscreen&NR=1

1. Where would the coarsest grain sizes be deposited on a beach?
2. What determines the location of particular grain sizes?
3. What governs the growth of a spit?

Finding sand spits on Mars

Using a MOLA colorized elevation map, complete the following:

1. Mark or point to areas on Mars where spits could be present.
2. How did you make your choices?
3. If longshore drift was present in your chosen regions, what direction is the longshore drift heading? (Hint: You might want to look for elongate spit development.)



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Looking into sand spits

1. What do you think deposits of longshore drift look like in cross-section?
Draw/sketch your ideas below.
2. What determines the size of grains that are deposited?

