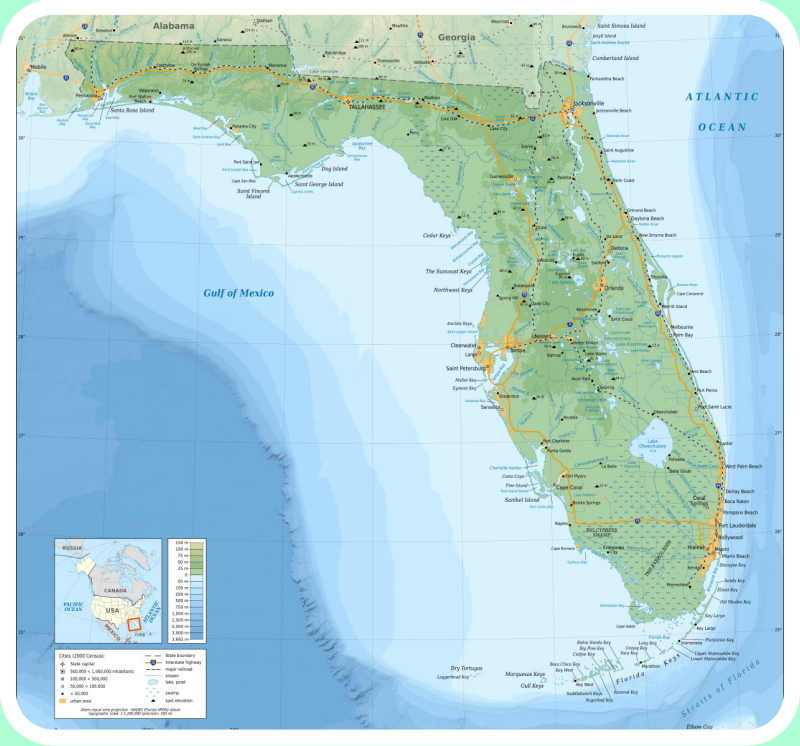
STEM Sims™

Landforms



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Do you need an idea for a scientific study?
Try out one of our ideas or make one of your own.

The land on Earth comes in a variety of forms. Some wet, some dry, and some icy. Take the following brief quiz to see how much you already know about different landforms. See the bottom of page 4 to check your answers.

1. What is the elevation above sea level of the highest point in Florida?
   a. 34.5 feet
   b. 345 feet
   c. 3,450 feet
   d. 34,500 feet

2. Florida has unique topography characterized by sinkholes and underground rivers. What is the name of this unique Florida topography?
   a. lime
   b. shale
   c. sandy
   d. karst

3. Florida's landscape is constantly changing due to various natural processes. Which of these processes is NOT a significant factor in shaping Florida's landforms?
   a. erosion by wind
   b. deposition of sediments by rivers
   c. volcanic eruptions
   d. erosion by water

4. Which is the BEST definition of "littoral drift?"
   a. moving water from one location to another
   b. moving plants from one location to another
   c. moving animals from one location to another
   d. moving sand from one location to another

5. What percentage of Florida's 825 beaches are currently classified as being "critically eroded?"
   a. 5%
   b. 15%
   c. 30%
   d. 50%

Florida in a Box: Building a Landform Diorama

Florida's landscape is a fascinating mix of beaches, rivers, swamps, and more! Today, you'll become landscape artists, creating 3D dioramas to showcase the Sunshine State's unique landforms. Get ready to sculpt mountains, carve rivers, and build beaches as you explore how these features shape Florida's environment and our lives!

Materials Required

- Shoeboxes or similar sized cardboard box
- Construction paper, cardboard, or other materials for creating landforms
- Paint, markers, colored pencils
- Glue, tape, scissors
- Natural materials (e.g., sand, pebbles, twigs, leaves)

Safety First!

- Make sure to have adult permission before completing this activity.

Procedure

1. Research the various major landforms found in Florida.
2. Brainstorm and sketch a plan for your diorama, including the landforms you want to include and how you will represent them.
3. Be creative in your design and pay special attention to the detail in your diorama.
4. Make sure you use a variety of materials and techniques to create realistic and engaging representations of Florida's landforms.
5. Include labels or captions to identify each landform and explain its significance.

Questions

1. In a paragraph or so, describe the diversity and interconnectedness of Florida's landforms..

2. Discuss the importance of preserving and protecting Florida's natural environment for future generations.

3. Describe one or two ecological relationships likely to be found in your dioramas.

Landforms

The Incredible Shrinking Beach

Imagine a beach slowly shrinking, with waves stealing away the sand and threatening homes and businesses. That was the problem in Miami Beach a few years ago. But, in 2022, they launched a massive beach renourishment project to fight back against erosion and protect their beautiful shoreline.

This wasn't just a small sandcastle project – it was a huge undertaking! The Army Corps of Engineers teamed up with the city to restore over 11,000 feet of beach. First, they had to find a mountain of sand, about 835,000 cubic yards of it, from offshore. Then, they used giant dredges, like underwater vacuum cleaners, to suck up the sand and pump it through pipes that stretched all the way to the beach.

On the beach, it looked like a scene from a sci-fi movie! Huge machines sprayed sand onto the shore, and bulldozers spread it out to create a wider, more resilient beach. They even rebuilt the dunes, which act like natural barriers against storms.

This project wasn't just about making the beach look pretty. It was about protecting people and property from the powerful forces of the ocean. Wider beaches and stronger dunes help to absorb the energy of waves and storm surge, preventing flooding and damage to buildings.

The Miami Beach renourishment project is a great example of how we can use science and engineering to protect our coastlines. It also shows how important it is to work together to keep our beaches healthy and beautiful for everyone to enjoy!

Please visit our site for more helpful information:
STEMsims.com

Answers: Page 2 Answers: 1) b, 2) d, 3) c, 4) d, 5) d. **Page 3 Answers: Florida in a Box: Building a Landform Diorama** 1) Answers will vary. 2) Answers will vary. 3) Answers will vary.