September Homeschool Day

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Our Animal ambassadors, Frida and Triton are going to help you learn all about coastal ecosystems through fun activities about erosion, tropical storms and building your own ecosystem.

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Dune Defenders

What is a Dune?

Effects of Hurricane Matthew:

Look what happens to the dunes when a large storm comes in...

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Dune Defenders Con.

Dune Composition	Time:
Sand	
Sand & Plants	
Sand, Plants & Water	

Let's see if we can now answer some questions about dunes!

1. How do plants help the dunes stay in place?

2. How do humans impact the dunes?

3. How can you help protect the dunes?

Now let's look at different storms that can affect coastal areas!

Hurricane STEM Activity

Draw a Hurricane, Typhoon, & Cyclone

Once you understand the different types of storms, let's see if you can build a structure that can withstand hurricane winds. Use the tools provided and then we will test it out with different wind speeds!

Number of Tries	Wind Speed	How did your structure do?

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Ecosystem Engineer: Coastal Version

Before you begin building the coastal habitat, answer the following questions. The more you know about the animal, the easier it will be for you to build a proper habitat!

Animal: _____

Circle the option that best describes your animal.

Will the animal grow to be large, medium, or small?	Large Medium Small
Does the animal live in water, on land, or does it spend time in both water and on land?	Water only Land only Both
Does the animal breathe air or breathe in water?	Air Water
Does the animal travel long distances?	Yes No
Do individuals live in groups, or by themselves?	In groups By itself
Is the animal active, or does it like to rest in one place?	Active Rest
What climate does the animal live in?	Warm Cool
Is the animal an herbivore, carnivore, or omnivore?	Herbivore Carnivore Omnivore
Does the animal have a form of camouflage?	Yes No
Does the animal like to hide or be out in the open?	Hide Open Both
Is it an invasive species?	Yes No
Does the animal shed/molt?	Yes No
Extra notes:	

Worksheet adapted for K-5

Ecosystem Engineer: Coastal Version

Before you begin building the coastal habitat, answer the following questions. The more you know about the animal, the easier it will be for you to build a proper habitat!

Animal: _____

Circle the option that best describes your animal.

Will the animal grow to be large, medium, or small?	Large Medium Small
Is the animal terrestrial, marine, or semi-aquatic?	Terrestrial Marine Semi-aquatic
What biome does the animal live in?	Freshwater Marine Desert Forest Grassland Tundra
What climate does the animal live in?	Polar Temperate Arid Damp Tropical Mild Mediterranean Cold tundra
From where does the animal get its oxygen?	Air Water
Does the animal migrate long distances?	Yes No
Does the animal exhibit any form of camouflage?	Yes No *If yes, what form:* Countershading Mimicry Disruptive coloration
Is the animal social or solitary?	Social Solitary
Is the animal active, or does it prefer to be at rest?	Active Rest
Is the animal an herbivore, carnivore, omnivore?	Herbivore Carnivore Omnivore
Does the animal prefer to hide, or to be out in the open?	Hide Open Both
Is the animal an invasive species?	Yes No
Does the animal shed/molt?	Yes No
Extra notes:	

Worksheet adapted for 6-12

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Ecosystem Engineer Coastal Version: Questions

If a storm came through your ecosystem, what do you think would happen to it?

Would your animal need to adapt? If so, how would your animal adapt?

Is there anything you would build differently about your habitat to help it survive a storm?

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Animal Observations

Choose one animal at Marineland on which to do a physical and behavioral observation. You may pick any animal you'd like, but you must stick with that individual, so be sure you've identified a distinguishing characteristic about it that will help you keep it in view, even if it lives with a group of other animals that look just like it.

Animal: _____

Draw your animal here:

List 5 physical characteristics/adaptations (body shape, coloration, number of limbs, etc):

What do these adaptations help the animal do? (Avoid predators, catch prey, camouflage, etc)

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Observe your animal's behavior for three minutes. Fill out the following behavioral observation chart. Put a tally mark next to the behavior every time you see it. If you see any behaviors other than the ones listed, please add them in the blank spaces provided:

Animal: _____

Behaviors Seen	Minute 1	Minute 2	Minute 3	Total Tallies
Eating				
Chasing				
Hiding				
Playing				
Breathing				
Sleeping				

What behavior did you see your animal do the most?

What kind of conclusions can you make from your observations? (Keep in mind that your three-minute observation does not represent a full day of the animal's life.)