



# Deserts

A desiccated life

Part 2

Day One



# Fata Morgana: The Search for Water

Imagine we're in the desert. We're lost. We've been walking for hours. We've run out of water. On the horizon, you see a giant, shimmering puddle of water.

"Yippeeeeeeeee", you shout. We're saved! But...it's not a puddle of water. It's a mirage. Mirages are optical illusions that have fooled many thirsty explorers.

Have students watch the short and fun Fata Morgana [a mirage.]

<https://vimeo.com/channels/frodokuipers>

*Burning in the desert sun, Eduardo - a lemonade seller with a small stand - is fighting the urge to drink his last and final bottle of refreshing lemonade. Then, a thirsty customer comes crawling towards his stand...*





# *Lost & Found: On a mission!*

Now that we've gotten our survival supply list (from the last unit), let's head to the Australian Outback on a mission from Plum! Have students join Cooper, Clementine and Brad as they trek and tumble over rocks and dunes in search of a mysterious, missing lake. (A lake in a desert? It's not as impossible as it sounds!)

[http://pbskids.org/plumlanding/educators/content/101\\_the\\_lost\\_lake.html](http://pbskids.org/plumlanding/educators/content/101_the_lost_lake.html)

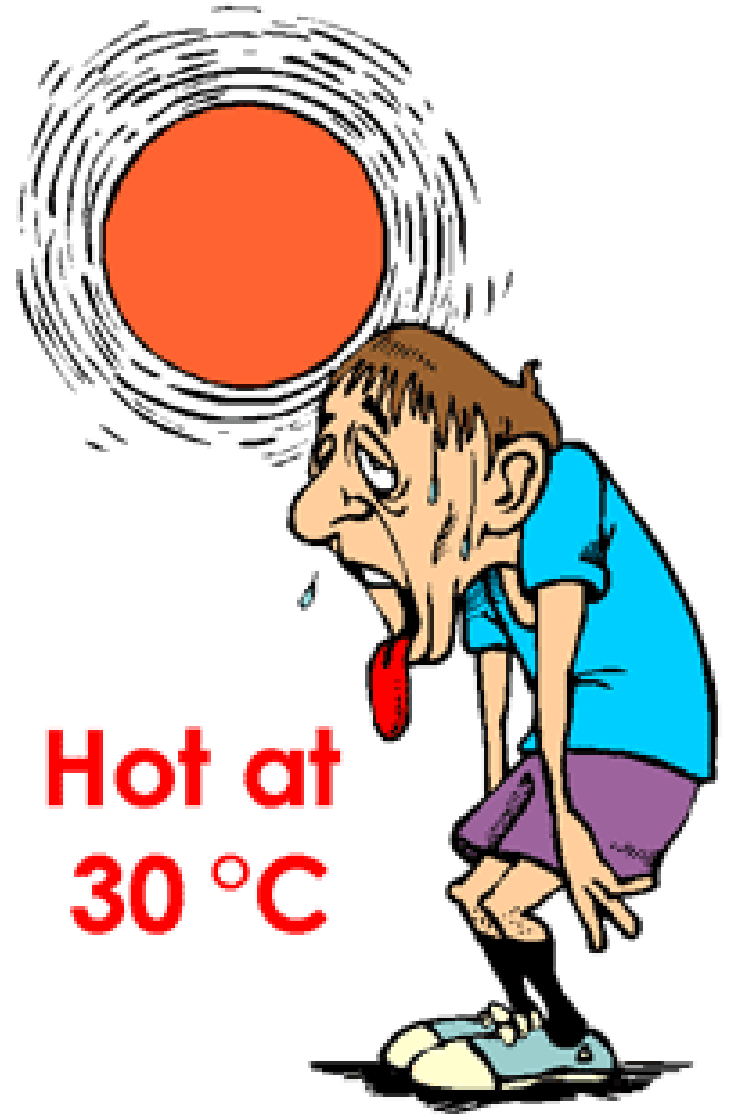
# *Don't Sweat It! How Much Water Do We Need to Survive in the Desert?*

Discuss the importance and role of sweat and how much water human beings really need to survive in the desert ecosystem we're traveling through.



*It's so hot! How hot is it?*

Have students make the conversions of real life math problems involving temperatures in the desert and compare the different temperatures using both Celsius vs Fahrenheit.



# *Sweat It!*

Conduct experiments with cotton balls, thermometers, and rubbing alcohol to see the temperature effects of sweating.




# *How much water should I drink?*

- Discuss how important it is for us to drink lots of water, both in and out of the desert.
- Learn the 8x8 rule of water consumption.
- Now, when deserts give you dry mouth, make Lemonade!







Day Two

# Dry Mouth?

Learn what foods to  
take on a desert hike  
and why!



# *Yucky vs Yummy!*



Students will act as professional taste testers. Purchase three different kinds of power or energy bars. Cut them into pieces and have students do a taste test. Have them put their heads down and vote on which bar they think it most delicious.

Have the students look over the ingredients and calories. Discuss why the bars would be nutritious or help provide a lot of energy.

**Remember tribes need to be trying all survival foods to get points for their team!**

# Rain Sticks

The legend behind the Indian rain stick points to supernatural intervention; the hope is to mimic the soft splash of raindrops in an effort to remind the "spirits" or "Great Spirit" that the people of Earth have need for a drenching rain for their crops, animals and thirst.

Hey, we're getting pretty thirsty while traveling through the desert, maybe if we make some amazing rain sticks we could make it rain!

<http://www.moocowfanclub.com/activities/crafts/rainstick>





Day Three

# *Crossing the Sea of Sand*

Discuss the dangers of the desert



# Slow Motion Ocean

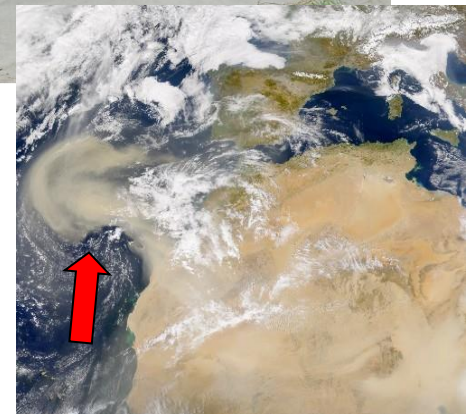
Learn how the force of the wind can literally move mountains and shape landscapes.

Discuss the cause of wind (the heat of the sun), convection currents, and their affect on the Earth.

Find out how and what we'll need to do to survive sandstorms as we travel through the desert and figure out just how far sand can travel.

Videos: Have the students watch as in the Mojave Desert, Bear Grylls demonstrates how to survive in a sandstorm. (Hint: You won't outrun it.) <http://www.discovery.com/tv-shows/man-vs-wild/videos/sandstorm-survival.htm>

Then, watch some amazing footage of how animals handle the approach of a dust storm <http://www.animalplanet.com/tv-shows/animal-planet-presents/videos/wildrussia-animals-weather-sandstorm.htm> ( A giant sandstorm approaches in Russia. Animals dig in to avoid getting swept away. Once it passes, life resumes.)



# *Blow, Aeolis, Blow!*



Rajus2001

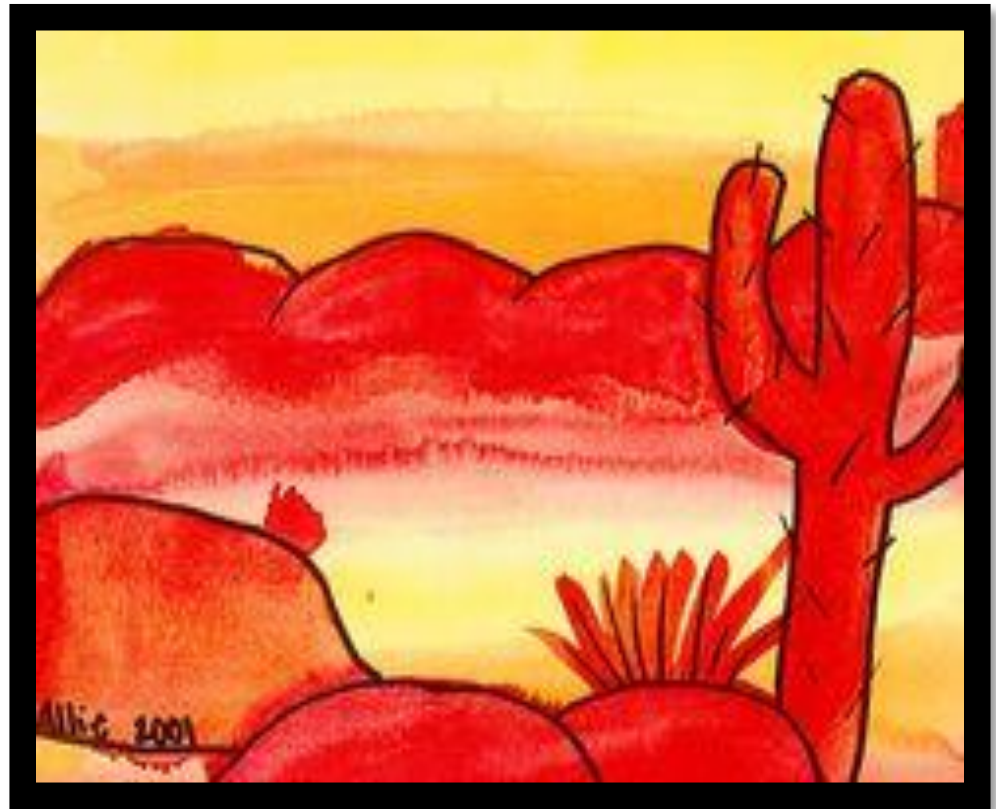
[www.delcampe.net](http://www.delcampe.net)

Aeolian Landscape is project in which students will create a miniature wind-swept desert landscape using straws, or a small fan and finely ground sand. The motion mimics the process of wind picking up and depositing small particles. It vividly illustrates a landscape where wind is the dominant geologic process and huge sand dunes are the most striking feature.



# *Desert Day, Desert Night: Warm and Cool Colors*

Students create beautiful contrasting images of the desert, warm colors representing the day, and cool colors representing the night.





Day Four

# Are We There Yet?: Designing a Desert Dune Buggy

- Students will build a rubber band-powered rover that can scramble across the room test track/sand pit.
- In this challenge, kids follow the engineering design process to: (1) design and build a dune buggy out of cardboard; (2) figure out how to use rubber bands to spin the wheels; and (3) improve their design based on testing results. Oh, by the way, your power source is a rubber band!
- Each team is to build a vehicle, powered solely by the energy of one rubber band supplied by the teacher, that will travel the longest distance.

