

# Expedition Days Online

# URBAN DESERT

## Study Guide

Student name: \_\_\_\_\_



EXPEDITION  
DAYS



MCDOWELL  
SONORAN  
CONSERVANCY

# Urban Desert Knowledge Check

## Instructions

1. Answer the following questions. You may use a list, incomplete, or complete sentences.
2. Listen to the Discussion Corner in the presentation.
3. Revise your answer to include any new ideas. Include examples from the slides and video.

## Questions

- How much rain (precipitation) does a desert get per year?

Bonus! Measure this on a ruler.

- There are 7 continents in the world. How many of these continents have deserts on them?

- Do humans live in deserts?

# Finding the Desert

**Goals:** Decide if places on the map are in a desert. Use the second map to see if these places are in the Sonoran Desert.

## Part 1

1. Open the map by clicking on the link on the presentation slide.
2. You will see 11 different flag locations. Click on one flag to explore. Write the name of the location in the table below.
3. Read the clues about the location you picked. Using what you know about deserts, answer yes or no if you think this location is in a desert.
4. Repeat Steps 2 and 3 with three other flag locations. If you want, explore more flag locations!
5. Go back to the presentation slides before going on to Part 2.

	Location Name	Is this in a desert? (Yes or No)
Flag #1		
Flag #2		
Flag #3		
Flag #4		
Flag #5 (Bonus)		
Flag #6 (Bonus)		
Flag #7 (Bonus)		
Flag #8 (Bonus)		
Flag #9 (Bonus)		
Flag #10 (Bonus)		
Flag #11 (Bonus)		

## Part 2

1. Open the second map by clicking on the link on the presentation slide.
2. You will see the same 11 flag locations as before. This map also shows where different deserts are located.
3. In the table below, record the same flag locations as you did in the first table. Answer yes or no if the flag locations are in a desert or not.
4. There are four deserts on this map. Looking at your flag locations, answer yes or no if these places are located in the Sonoran Desert or not.

	Location Name	Is this in a desert? (Yes or No)	Is this in the Sonoran Desert ? (Yes or No)?
Flag #1			
Flag #2			
Flag #3			
Flag #4			
Flag #5 (Bonus)			
Flag #6 (Bonus)			
Flag #7 (Bonus)			
Flag #8 (Bonus)			
Flag #9 (Bonus)			
Flag #10 (Bonus)			
Flag #11 (Bonus)			

Go to the next page



Looking at the map and your two tables, answer the following questions:

- Did you change any of your answers from the first table?

- Based on the map, do you live in the Sonoran Desert?  
What clues support your answer?

# What Do You Need to Survive?

**Goals:** Decide whether each item is something you need to survive or something you want. Know what all living things need to survive.

## Part 1

1. Check out the Word Bank of items below.
2. Is each item something you need to survive or something you just want?
3. Write the item in the Need or Want column. Cross out each word as you write them in a column.

Cell phone	air conditioning	water	bed	computer
Home	television	breakfast cereal	backpack	
Toothbrush	PlayStation	PB&J sandwich	pet	
Dinner	bike	favorite snack	Nike sneakers	

Need	Want

## Part 2

- Based on what plants and animals need to survive, would you take anything off of your list of needs from page 5? Would you add anything?

- The Sonoran Desert gets only 10 inches of rain or less every year and it is the hottest desert in North America. Why is it hard to survive in the Sonoran Desert?

# Urban Desert Knowledge Check

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## Questions

- What is adaptation?

- What are some adaptations Sonoran Desert plants and animals have?

# Adapting like a Sonoran Desert Species

**Goals:** Draw or write what you might look like if you had one or more Sonoran Desert plant or animal adaptations.

1. Select one or more Sonoran Desert plants or animals.
2. Draw what you would look like if you were able to adapt to the Sonoran Desert like a desert plant or animal. Label the different parts of your adaptation:



# Surviving in the Sonoran Desert

**Goals:** Compare how humans survived in the Sonoran Desert in the past with how we survive in the Sonoran Desert today.

Imagine you lived in Hohokam times over 1,000 years ago, in the area that's now Phoenix. You can write or draw what you imagine:

- How would you find food?
- Where would you find water?
- What would your shelter be like?

Now imagine you are a Western settler who came to Phoenix in a wagon train about 200 years ago. You can write or draw what you imagine:

- How would you find food?
- Where would you find water?
- What would your shelter be like?

Go to the next page



- How do we get water today?

- How do we get food today?

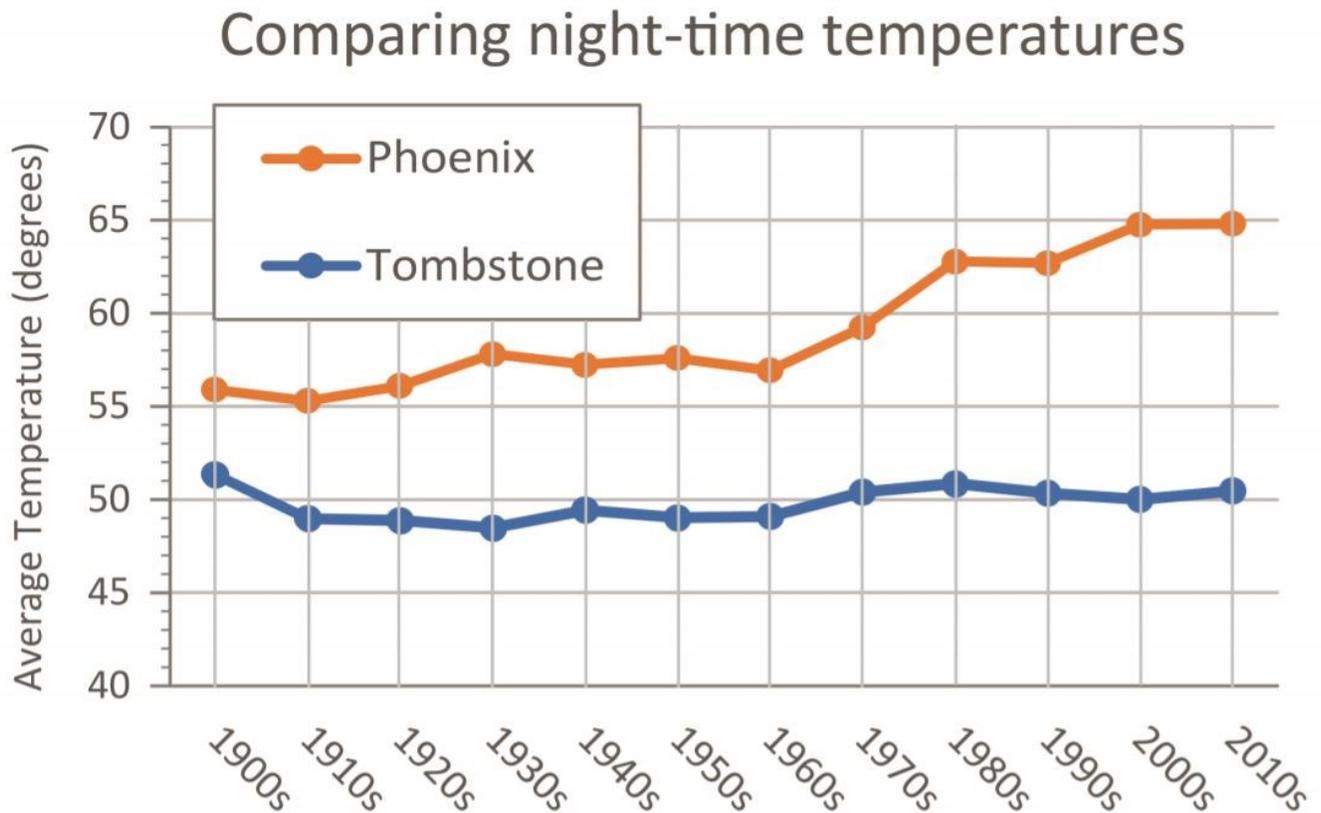
- What does our shelter look like today?

- What similarities do you see between how you find food and water today and how people in earlier times did?

# Changing Cities, Changing Temperatures

**Goals:** Compare two temperature graphs from different cities and come up with possible answers for why there are differences between the two graphs.

1. Study the graph below. This graph is similar—but not the same—as the one we explored in the video. This graph compares the average temperatures at night between the city of Phoenix and the city of Tombstone over 110 years.



2. Using this graph, answer the questions on the next page.

Go to the next page 

- Use the graph to complete the chart. The first year is filled out for you. Hint: Phoenix is the orange line and Tombstone is the blue line.

Year	Phoenix Average Temperature	Tombstone Average Temperature
1900s	56 degrees	51 degrees
1940s		
1970s		
2010s		

- Describe what is happening to temperatures in Phoenix from 1900 to 2010?

- Describe what is happening to temperatures in Tombstone from 1900 to 2010?

- Which city had a greater temperature change in that period of time?

The table below shows the changing populations in Tombstone and Phoenix.

City	Population in 1900	Population in 2010	Change in population
Tombstone	8,100	1,375	decreased by 6,725
Phoenix	5,544	1,445,632	increased by 1,440,088

- Using the table, which city had the greater change in population? Was it an increase or a decrease?

- Bonus: The pictures below show what Tombstone and Phoenix looked like in 1900 compared to what they looked like in 2010. Look at the pictures and the population information from the table above. Why do you think one of the cities had a greater change in temperature from 1900 to 2010 compared to the other city?

**1900**

**2010**



**Phoenix**

**Tombstone**

**Phoenix**

**Tombstone**

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# Desert Inspiration: Inventing with Adaptations

**Goals:** Take what you know about adaptation and human’s impact on the environment and create a new design that will help humans survive in the desert with less impact.

## Instructions

Native plants and animals have adaptations that allow them to survive in the Sonoran Desert. Humans don’t have these physical adaptations, so we’ve come up with other ways to survive in the desert. To make the desert more comfortable for ourselves, humans have changed the desert environment and these changes can sometimes harm the environment.

Choose one (or more) plant or animal adaptations (such as small leaves or spines, the ability to store water for long periods of time, or waxy skin that reflects heat and reduces water loss). Using this adaptation as inspiration, design something new that would help humans survive in the Sonoran Desert. Describe your idea and how it would work below and, as a bonus, draw or build it.

- What is your adaptation-inspired design called?

- How do you use the design—what does it do?

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- How will this new invention lessen the impact humans have on the Sonoran Desert?



- Bonus: Draw or build your idea.

