

## Designing a Structural Wonder

Follow the instructions to complete the activity.

NAME

DATE

Imagine you are designing a brand new structural wonder. Where would you put it? What materials would you use? What features would you include? What would inspire its design? If you were to include a geometric pattern, what would it look like? Write a description of your structural wonder, and draw a picture of it.

### DESCRIPTION



**Structural Wonders of the World**

**Palm Islands**

Reference: All Pages

Page  
1 of 1

**LIGHTBOX**  
LEARNING

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## Picture Description Match

Follow the instructions to complete the activity.

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Look at these pictures relating to the Palm Islands. Label each picture correctly.


☐

**A**

Monorail


☐

**B**

Deira Islands


☐

**C**

Boardwalk


☐

**D**

Breakwaters


☐

**E**

Beachfront

Complete the statements by filling in the correct number.

Workers moved this many million tons of rock to build Palm Jumeirah's breakwater.

**11**

The Palm Jumeirah breakwater is this many miles long.

**25**

In this year, construction of Palm Jumeirah's breakwater began.

**3,000**

The Palm Jumeirah breakwater is this many feet deep at its lowest point.

**7**

When complete, the Deira Islands will add this many miles of beaches to Dubai.

**2001**

Sheikh Mohammed bin Rashid Al Maktoum was born in this year.

**34**

Approximately this many people use the monorail every day.

**1949**



## True or False

Follow the instructions to complete the activity.

NAME

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Using information found in the book, verify whether the following statements are true or false. Check your answers in the book. List the page number where you found the information beside your answer.

Statement 1	There are different kinds of loads.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number <div></div>
Statement 2	Sanjay Manchanda is the crown prince of Dubai.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number <div></div>
Statement 3	Ships called dredgers sprayed the sand for Palm Jumeirah into place. The process is called "sunshining."	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number <div></div>
Statement 4	The UAE is a federation of five emirates.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number <div></div>
Statement 5	Palm Jumeirah is the seventh-largest artificial island in the world.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number <div></div>



## Test Your Knowledge

Follow the instructions to complete the activity.

NAME

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Test your knowledge of the Palm Islands by answering these questions.

1. How many of the Palm Islands have been completed to date?

2. The Palm Islands are located off the shores of which city?

3. When did construction of the Palm Jumeirah tunnel end?

4. How many rooms does Atlantis, The Palm have?



## Quiz

Test your knowledge by answering these quiz questions.

NAME

DATE

**1** In which country is the city of Dubai located?

**2** Which leader of Dubai was the mastermind behind the Palm Islands project?

**3** How many tons (metric tons) of rock were used to build the breakwater at Palm Jumeirah?

**4** How many breakwater islands does Palm Jumeirah have?

**5** What parts of Palm Jumeirah are linked by an undersea tunnel?

**6** How wide is Palm Jumeirah Boardwalk?

**7** Which company developed Palm Jumeirah?

**8** How much did it cost to build Palm Jumeirah?



## Key Words Match-Up

Write the words from the list below in the box above the correct definition for each word.

NAME

DATE

### KEY WORDS



%

canal  
coordinates  
diversify  
emirates

erode  
federation  
loads  
Middle East

peninsula  
sediment

1.   
countries or states ruled by monarchs called emirs
2.   
the collection of forces acting on an object
3.   
an artificial waterway that has been made for boats to travel along
4.   
a set of numbers that indicate an exact position
5.   
a piece of land that is nearly surrounded by water but still connected to land
6.   
to increase variety
7.   
material, such as sand and soil, that settles on the bottom of the seafloor
8.   
the countries of southwestern Asia and northern Africa
9.   
an organization made up of smaller groups, parties, or states
10.   
to gradually wear away



## Key Words Match-Up

Write the words from the list below in the box above the correct definition for each word.

NAME

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### KEY WORDS

artificial  
breakwater  
compacted  
diameter  
dikes

engineering  
land development  
mythology  
recession  
tripartite

- |   |   |
|---|---|
| <p>11. <input type="text"/><br/>a barrier that breaks the force of waves</p>                                | <p>16. <input type="text"/><br/>a period of decreased economic activity</p> |
| <p>12. <input type="text"/><br/>using scientific principles to design and build machines and structures</p> | <p>17. <input type="text"/><br/>the longest distance across a circle</p>    |
| <p>13. <input type="text"/><br/>constructed by humans, not by a natural process</p>                         | <p>18. <input type="text"/><br/>made up of three parts</p>                  |
| <p>14. <input type="text"/><br/>traditional stories about gods and heroes</p>                               | <p>19. <input type="text"/><br/>firmly packed</p>                           |
| <p>15. <input type="text"/><br/>the conversion of raw land into construction-ready building sites</p>       | <p>20. <input type="text"/><br/>walls used to hold back water</p>           |





## Quiz Answer Key

Compare your quiz answers with the answer key below.

NAME

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- 1** UAE
- 2** Sheikh Mohammed bin Rashid Al Maktoum
- 3** 7 million tons (7.1 million metric tons)
- 4** Three
- 5** The crescent and trunk
- 6** 20 feet (6.1 m)
- 7** Nakheel
- 8** About \$12 billion

