

# MY KING TIDE SCIENCE JOURNAL



Name: \_\_\_\_\_

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## ABOUT KING TIDES

**What are king tides?** “King tides” refers to very high tides which happens when the sun, moon and earth align creating a stronger gravitational pull on the ocean and its tides.

**Why are king tides important?** When king tides occur during storms or floods, the damage to the coastline and coastal property can be significant. They give us a window into the future when sea levels are expected to rise.

**How are king tides related to sea level rise?** King tides are not caused by sea level rise but they give us the opportunity to see what we to expect in the future due to climate change from the burning of fossil fuels. King tides typically are about 2 feet higher than normal high tides.

**What is the King Tide Project?** The [California King Tide Project](#) is a community/citizen science project to visualize the future of sea level rise by observing the highest tides of the year.

**How can I participate in the King Tide Project?** During king tides take photos (best to take them at low and highest tides) at the coast and lagoons and submit them online. The photos are uploaded to the King Tide photo map which creates a vision of how climate change and sea level rise will impact California. For more information visit [www.california.kingtides.net](http://www.california.kingtides.net).

Tide table for La Jolla-Oceanside:

Date	High time/height	Low time/height
11/15/20	8:20 AM/6.83 ft.	3:19 PM/-1.27 ft.
11/16/20	8:58 AM / 6.81 ft.	4:09 PM / -1.30 ft.
12/13/20	7:20 AM / 6.79 ft.	2:29 PM / -1.40 ft.
12/14/20	8:00 AM / 6.91 ft.	3:15 PM / -1.61 ft.
12/15/20	8:42 AM / 6.83 ft.	4:01 PM / -1.57 ft.

## USING THIS JOURNAL

1. Review the instructions and safety guidelines with an adult.
2. Gather your materials – this journal, a clipboard, pencil and coloring pencils if you want.
3. Complete ‘Before you go’ activities.
4. During high tide on a king tide day visit a beach, wetland or lagoon that is accessible. Refer to the tide table on the previous page.
5. Observe the king tide using all your senses. What’s different? The same? Look at the water, animals, humans. Draw and write what you see. You can observe on one day or multiple days. It helps, if possible, to compare the high tide to the low tide at the same spot.
6. As a bonus, ask an adult to send pictures of your drawings and notes to [kingtides@coastal.ca.gov](mailto:kingtides@coastal.ca.gov).

## SAFETY GUIDELINES

1. Dress for the weather. Wear layers and sturdy shoes. Bring rain gear and sun protection, as needed.
2. Walk, don’t run. The ground may be slippery!
3. Face the waves if you are at the coast. Don’t turn your back on the ocean!
4. Watch big waves from far away if you are at the coast
5. Practice social distancing and wear a mask if less than 6 ft from people not from your household.

*Before you go...*

**WHAT DO I KNOW ABOUT TIDES OR KING TIDES?**

*Before you go...*

**WHAT QUESTIONS DO I HAVE ABOUT KING TIDES?**

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

**WHAT DO YOU SEE?**

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What do you notice or wonder? What is the water doing? What are animals doing? What are people doing?

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

**WHAT DO YOU SEE?**

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What do you notice or wonder? What is the water doing? What are animals doing? What are people doing?

**WHAT DID I LEARN ABOUT KING TIDES?**


## KING TIDE WORD SEARCH

H G I H W N T P X A M Y J G B  
 O P K O G G B Q X L H A E V Z  
 R U L B W L X D A G R H H L R  
 A G P E M X K V A K X K B A W  
 K I N G T I D E S N E E A N M  
 R E Y M R A T O P S A G N O K  
 H C A E B A T R T Z W E O U Y  
 E C S R O O V U V Z E N C S S  
 P I U T H U A I Y T T J N O Q  
 N B X P O R G G T F L O O D C  
 J O N R Y R E R W Y A Z I P I  
 Y F Y E A B M W A I N F V U C  
 M S A T G P Q K V B D W C Q T  
 U I B A C C U L E N T L D Y I  
 J S J W R N R N M Q D Z V W X

<b>Word Bank</b>			
Bay	High	Gravity	Sun
Beach	Low	Ocean	Wave
Estuary	King Tides	Photo	Water
Flood	Moon	Storm	Wetland