2nd Grade Student Guide - King Tides - A

Pre-Assessment/Pre-Discussion Questions:

1) What do you think a king tide is?
2) How do you think the phases of the moon affect tides and flooding?
3) Have you ever experienced flooding on a sunny day? Explain
4) Does flooding occur only during a storm?

Viewing Guide Questions:

1) Describe a king tide.
2) What causes differences in how tides form and create king tides?
3) Describe the shape of the moon's orbit.
4) Explain when the moon, sun, and Earth together and moon phase cause a spring tide.
5) What other factors can impact a king tide & the amount of flooding due to a king tide?
6) Which moon phase typically creates a greater chance of flooding?
7) Describe some negative effects Down East due to king tides.

Answer Key:

1) A very high tide due to moon phases
2) The moon's different phases.
3) The moon's orbit looks like an oval or egg.
4) When the Earth, moon and sun are lined up and there is a full or new moon there is a spring tide.
5) Amount of rainfall, wind and storm surge
6) Full moon
7) Some damages that can occur due to king tides include flooding, increased storm surge and water damage.

After Viewing Questions:

1) What is the difference between a king tide and a normal tide?
2) How can the moon predict what might happen with tides in the future?
3) Does your area often experience flooding near your house? Describe when you have seen flooding where you live.

Answer Key:
(These are based on their knowledge, and there can be multiple different ways to answer.)

1) The amount of water that there is can cause a difference in the tides
2) The moon can show us when the tides will be higher or lower in the future
3) Answers will vary

Vocabulary Activity:
Crossword Puzzle
https://docs.google.com/document/d/1WBHoRZxiHDdEFf4JEXN_MdFEGiQpMQOd-sM9GXvWow8/edit?usp=sharing

Hands-on Activity:
https://docs.google.com/document/d/1pB8_c7oK24X3sVBpQ2zm1-BLRqog-4Te7mRYNkfzOJI/edit?usp=sharing

Final Assessment Questions:

1) Describe some things that have happened or might happen where you live if the number of king tides increases.
2) Are all floods caused by the same thing(s)? Explain.

Answer Key:

1) Answers will vary
2) No, some floods are caused by a lot of rain while other floods can be caused by sea level rise or phases of the moon (tides).

Going Further Questions:

1) What are 4 different ways you can stop damage from king tides?

2) How does flooding affect the Downeast area?

Answer Key:

1)
   a) Building seawalls near the coast
   b) Not building in flood zones
   c) Building on solid ground
   d) Having points where rain can run off instead of flooding

2)
   a) Coastal flooding
   b) Affects houses

Other Resources:

King Tides Explained: https://www.youtube.com/watch?v=-obweZwvyCI

OTHER IDEAS

- Write a story about
- Draw a picture of
- Find the difference between- pictures/paragraphs
- Which words match/not match topics
- Poster explaining topic
- Pamphlet to explain topic