

Making a Tide Chart

Objective: To read a tide table, identify three tidal curves, determine tidal range, and plot a tidal curve.

Teacher

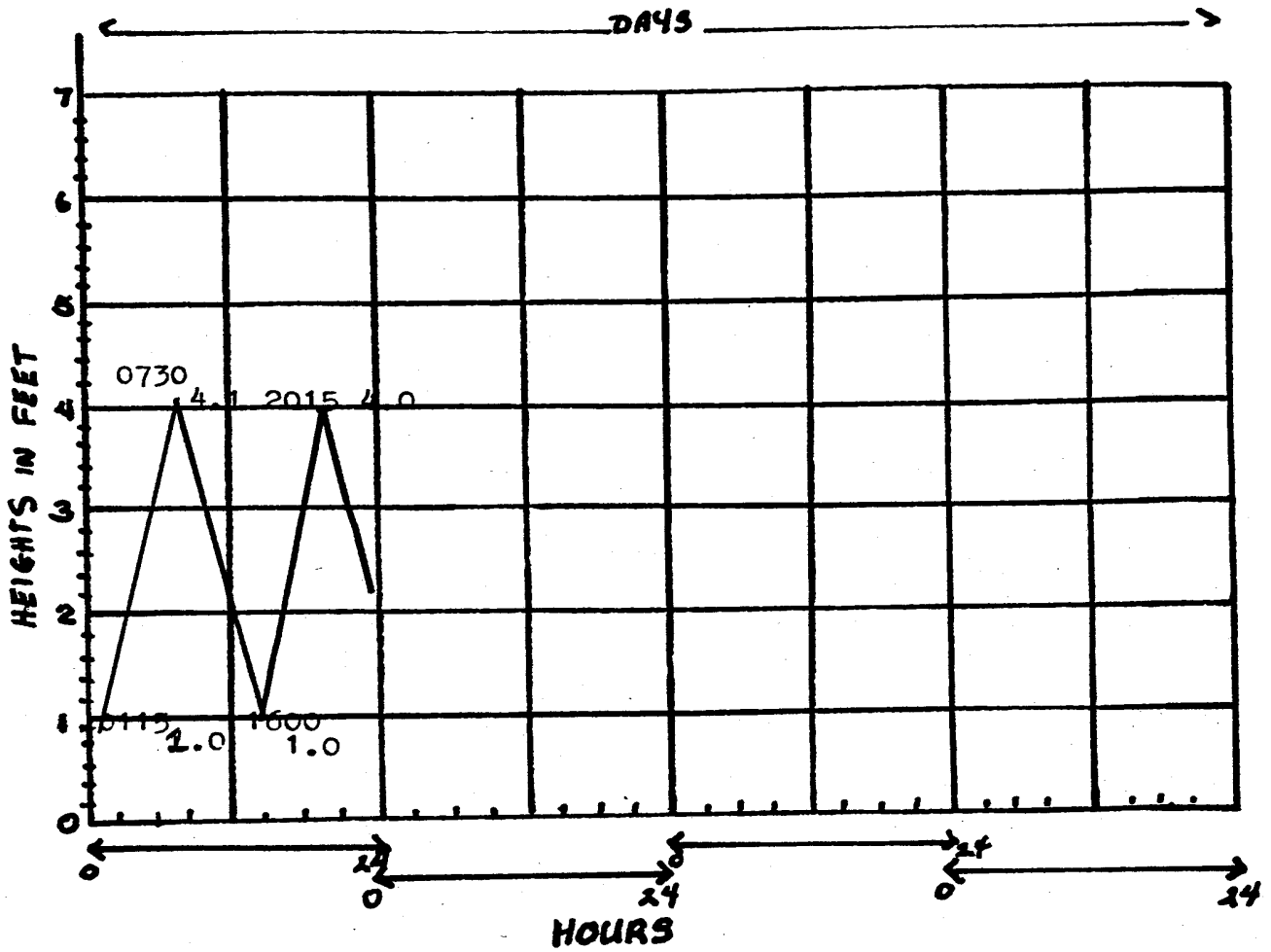
Preparation: Prepare sufficient tide charts (Figure 5) for each student.

Procedure:

Using the tide table, plot tidal highs and lows for four days.

1. Answer the following questions after having connected consecutive points from the tidal curve.
 - a. When does the highest tide occur and how high is it?
 - b. When does the lowest tide occur and how high is it?
 - c. Which would be the better time to look for driftwood on the beach- Monday morning or Monday afternoon? Why?
 - d. Which would a better time to go surfing- Monday afternoon or Wednesday afternoon? Why?
 - e. During which day is the tide diurnal?
 - f. During which day is the tide semidiurnal?
 - g. During which day is the tide mixed?
 - h. During which day is the tide mixed?
 - i. During which day is the largest diurnal inequality How much is it?

FIGURE 5;



Day	Time		Height Feet
	Hours	Minutes	
Mon. 1	01	15	1.0
	07	30	4.1
	16	00	1.0
	20	15	4.0
Tue. 2	02	00	1.0
	08	30	6.5
	14	15	2.0
	21	00	5.0
Wed. 3	04	15	0.0
	16	00	7.0
Thur. 4	04	30	1.0
	10	00	3.0
	16	00	1.0
	22	00	2.9

Source: Frankenberg, D., Mauldin, L. (1978). North Carolina Marine Education Manual. Raleigh, North Carolina: UNC Sea Grant Publication.

Discover How Tides are Formed!

South Carolina Science Curriculum Standards (Grades 7,9)

National Science Education Standards* Grade 7	S.C. Components*
Identify process skills that can be used in scientific investigations	
Observe	1
Classify	2
Infer	1
7	6
Design and conduct a scientific investigation	A, H
Develop descriptions, explanations, predictions, and models using evidence.	B
Think critically and logically to make relationships between evidence and explanations	A
Communicate scientific procedures and explanations	C

Grade	Area	Unit of Study	National Science Education Standards *		S.C. Components
7	III. Earth Science	The Abiotic Environment	A. Structure of the Earth System	1. Landforms are the result of a combination of constructive forces (e.g., deposition of sediments) and destructive forces (e.g., weathering and erosion).	C

*Refer to South Carolina Science Curriculum Standards, adopted by the S.C. Board of Education January 12, 2000, for complete national standards and S.C. components.