



**Module Title:** *Exploring the Beaufort Scale in Maritime Art*

**Museum Exhibit Association:** *What's In a Maritime Painting?*

**Subject:** *Physical Science, Scientific Inquiry*

**Standards Criteria:** Understanding structure of the earth's systems: Grades 5-8

During your tour of *What's In a Maritime Painting?*, did you notice that some of the vessels are depicted in motion while others appear to be sitting still? Weather plays a major role in shipping, especially by water. In maritime paintings that portray the 'Age of Sail' the sea state, the shape of sails and the direction of flags reveal a great deal about the weather.

### **Background Description:**

Sir Francis Beaufort served in the British Navy from 1829 to 1855 (see [Teachers Notes pdf](#)). During his career he developed a great love of science, especially hydrology. His work is still used today to define the force of wind at sea and is known as the Beaufort scale (see [Beaufort Scale pdf file](#)). Weather and the ability to quantify and forecast it is very important to all mariners. Weather's premier role in transportation is reflected in maritime paintings.

Over the years scientists and mariners adjusted and added to Beaufort's work. Today there are numerous tools to help read the weather and record it in ways that can be understood internationally. For example, wind arrows are a symbol used by meteorologists to record wind direction and speed on maps. A wind arrow is a simple symbol that looks like an arrow with barbs and/or a pennant at one end (see [Wind Arrow pdf](#)).

**Materials/Data:**

[Beaufort Scale](#)

[Wind Arrows](#)

[Wind Arrows 2](#)

[Science Activity File](#)

[Teachers Notes](#)

**Activities**

1. Print Science Activity pdf and have students fill in the Beaufort force for each of the five paintings.
2. Have students draw wind arrows with barbs for speed as indicated by their answer for the Beaufort Scale force shown in the paintings.

**Optional Activity.**

1. Find a painting for each of the 12 Beaufort forces from the exhibit *What's in a Maritime Painting?*, and/or the Collection
2. Keep a weekly log for one month.
  - a. Calculate the wind force outside the classroom.
  - b. Record wind speed and direction with wind arrows and barbs.
  - c. Record the barometric pressure.
  - d. Note the weather conditions
  - e. Compare the recorded information with current newspapers or internet weather sites.
3. Study more about how Beaufort symbols are used today on weather maps and the effect of barometric pressure on wind strength and direction at
4. <http://www.woeurope.eu/marine/weather?133&LANG=eu&WIND=>
  - a. <http://www.nhc.noaa.gov/>
  - b. <http://www.fema.gov/kids/hurr.htm>