# QUICK FACTS ABOUT BATTLESHIP NUMBERLINE

- It uses a number line-based estimation task to help students **approximate the size of different numbers**.
- It helps address multiple **Common Core State mathematics standards**.
- Total game time is approximately **15 minutes.**
- Teachers can test specific items by using the **custom level builder**.
- **Adobe Flash** and an **Internet connection** are required.
- The **sound effects** in this game are hilarious! **Headphones** are recommended!
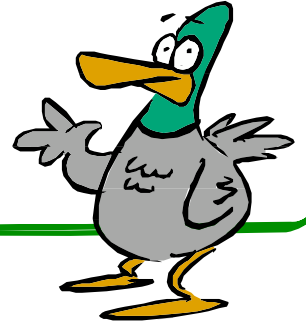
GAME DESCRIPTION

Battleship Numberline (BSNL) uses a number line and a fun game scenario to address multiple core standards in the elementary and middle school grades, including those relating to integers, negative numbers, decimals, fractions, percentages, operators, and measurement.
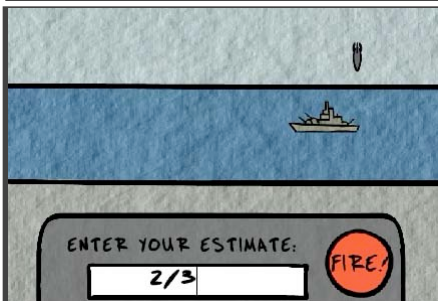
HOW TO PLAY!

In *BSNL,* players explode paper ships by estimating their positions on a number line. Total game time is approximately 15 minutes. There are two main modes: **Ship mode** and **Submarine mode**.
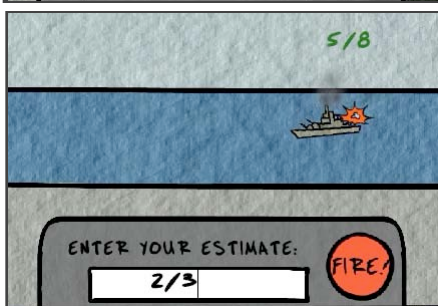
SHIP MODE:

1. Estimate where the ship is located on the number line.
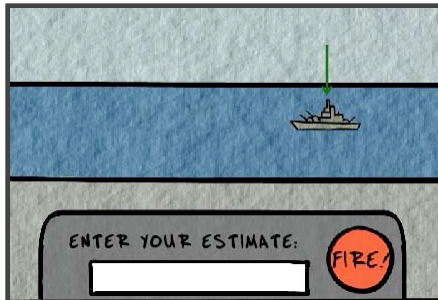
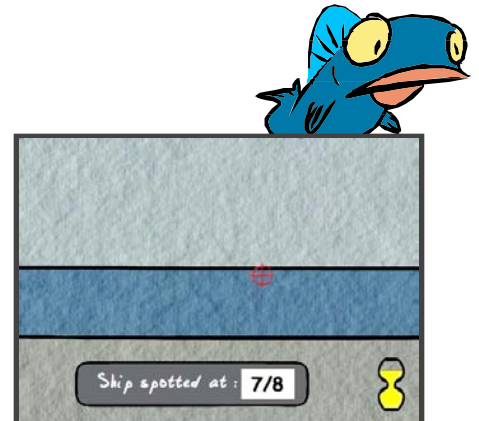**2. Enter that number and click on Fire! or press the return button.**

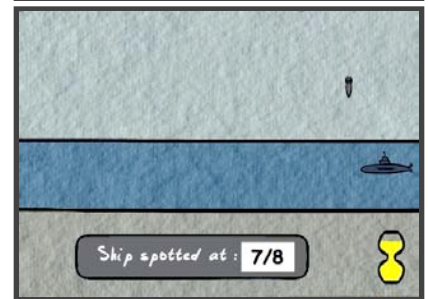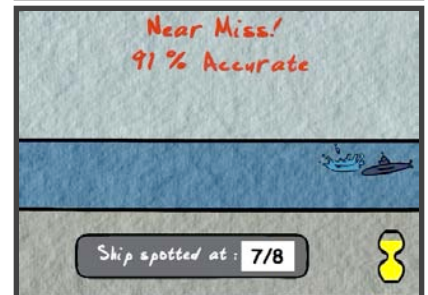**3. Players get points for perfect or partial hits.**

SUBMARINE MODE:

1. The location of the hidden submarine is given (7/8).

2. Click a location on the number line corresponding to the given location.

3. Players get points for perfect or partial hits.

CONNECTION TO STANDARDS

The Fractions level of *BSNL* is designed to help students **quickly and confidently estimate the size of different fractions**. Playing this level helps address the following <u>Common Core State mathematics standards</u>:

Grade 3 (3.NF)	Grade 4 (4.NF)
3.NF.2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.	4.NF.2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
3.NF.3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	4.NF.3. Understand a fraction *a*/*b* with *a* > 1 as a sum of fractions 1/*b*.
	4.NF.5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. *For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.*
	4.NF.6. Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.*
	4.NF.7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

WAYS TO USE BSNL IN THE CLASSROOM

• **As an in-class group activity.** Present the game on a smart board or a computer screen and have students come up and take turns answering.
• **In pairs at a computer.** Pairing children of somewhat different abilities together can be a good way to help them practice their communication and collaboration skills while reinforcing their knowledge of fractions.
• **As homework.** Have students play at home or wherever they can access a computer with Internet access. Give them a goal to reach (Ex: "Get at least 1160 on the Fractions level" or "Play the Decimals and Fractions levels at least twice.").

If you have any questions or comments, please give us a holler at
<u>feedback@playpower.org</u>

NUMBALAND!