

## HurkleQuest on the Number Line Game 28 at SEAS

The Hurkle Hiders [Bob & George] • HurkleHiders@aol.com

**Summer 2007.** Hurkle and the Hurkle Hiders ran **HurkleQuest on the Number Line** play-by-email games for students in the **Science, Engineering, and Art by the Sea (SEAS)** program at Yaquina Bay Elementary School in Newport, Oregon. We played with SEAS teacher Jody Hanna (jodester91@hotmail.com) and her students who will enter grades 1 through 6 in school year 2007-2008.

SEAS is modeled after the KidSpirit program at Oregon State University and run in partnership with the Lincoln County School District.

- KidSpirit Youth Programs (<http://kidspirit.oregonstate.edu/>)
- Lincoln County School District – Oregon ([www.lincoln.k12.or.us/](http://www.lincoln.k12.or.us/))

There were five SEAS sessions summer 2007.

- June 25-29: Biology
- July 02-06: Biology
- July 09-20: Nature & Wildlife
- July 23-August 03: Chemistry
- August 06-17: Physics/Engineering

SEAS contact person:

- Jody Hanna (jodester91@hotmail.com)

HurkleQuest players learn about whole numbers, natural numbers, the number line, distance on the number line, composite numbers, prime numbers, square numbers, cubic numbers, triangular numbers, factorial numbers, Fibonacci numbers, et cetera, et cetera. They invent search strategies based on "fuzzy feedback" color clues. They learn that MATH IS FUN.

And now – the story of **HurkleQuest on the Number Line Game 28**, played via email by students in grades 1 through 6 at SEAS from 2007-07-30 to 2007-08-03.

**Play together, learn together!**

**2007-07-30 The Hurkle Hiders send an email invitation to play.**

To: jodester91@hotmail.com

**The Hurkle Hiders invite you to play HurkleQuest on the Number Line Game 28.**

**Hurkle's hiding place is a whole number 0 to 150.**

**Begin by sending four guesses to HurkleHiders@aol.com.**

If your first four guesses are 20, 50, 80, and 120, send them like this:

Guess #1: 20  
 Guess #2: 50  
 Guess #3: 80  
 Guess #4: 120

When we receive your guesses, we will send a color clue for each guess:

**RED.** VERY HOT, very close to Hurkle's hiding place.

**ORANGE.** HOT, close to Hurkle's hiding place, but not as close as RED.

**YELLOW.** WARM, not as close as RED or ORANGE, but closer than GREEN, BLUE, or VIOLET.

**GREEN.** COOL, not as close as YELLOW, ORANGE, or RED, but closer than BLUE or VIOLET.

**BLUE.** COLD, far from Hurkle's hiding place.

**VIOLET.** VERY COLD, very far from Hurkle's hiding place.

Below is a color diagram of Hurkle's neighborhood, not necessarily to the scale that we will use in Game 27.

**IMPORTANT HINT!!!**

**If a guess is violet, then it is a distance of 32 or more from Hurkle's hiding place.**

We use a 150-centimeter metric tape measure as one of our number lines. Every centimeter mark (0 to 150) is a possible Hurkle hiding place. Hurkle will love it if you use a 150-centimeter metric tape measure as a number line.

Hurkle is hiding, wanting to be found!

The Hurkle Hiders [Bob & George]

**2007-07-31 Three SEAS teams send their Turn 01 guesses.**

**From:** jodester91@hotmail.com

Ahoy Hurkle Hiders,

We are happy to play! Here are our first guesses.

No Name (3 & 4)	TLLMAN (pronounced "Tillman") (3 & 4)	Lions & Tigers (1&2)
Guess #1: 1		Guess #1: 130
Guess #2: 77	Guess #1: 100	Guess #2: 100
Guess #3: 90	Guess #2: 120	Guess #3: 47
Guess #4: 140	Guess #3: 75	Guess #4: 8
	Guess #4: 20	

As you can see we have a no name group. This is because they couldn't come up with something I deemed appropriate. Thus, they are now "no name." Here's hoping for some good colors!

SEAS Hurkle Questers

**2007-07-31 The Hurkle Hiders respond with the Turn 01 color clues.**

**Subject:** HurkleQuest NL Game 28, Turn 01, 2007-07-31 (SEAS Teams)

Ahoy SEAS Hurkle Questers,

Welcome to HurkleQuest on the Number Line Game 28. Hurkle's hiding place is a whole number 0 to 150. Hurkle loves playing with you! Here are your color clues.

No Name (3 & 4)	TLLMAN ("Tillman") (3 & 4)	Lions & Tigers (1 & 2)
Guess #1: 1 Clue: VIOLET	Guess #1: 100 Clue: VIOLET	Guess #1: 130 Clue: YELLOW
Guess #2: 77 Clue: VIOLET	Guess #2: 120 Clue: GREEN	Guess #2: 100 Clue: VIOLET
Guess #3: 90 Clue: VIOLET	Guess #3: 75 Clue: VIOLET	Guess #3: 47 Clue: VIOLET
Guess #4: 140 Clue: YELLOW	Guess #4: 20 Clue: VIOLET	Guess #4: 8 Clue: VIOLET

REMEMBER: A violet guess is a distance of 32 or more from Hurkle's hiding place.

The Hurkle Hiders [Bob & George]

**2007-08-01 The SEAS teams roar back with Turn 02 guesses.**

Ahoy Hurkle Hiders,

Thank you for the clues. Here are our next guesses.

No Name (3 & 4)

Guess #5: 130  
Guess #6: 143  
Guess #7: 150  
Guess #8: 122

TLLMAN ("Tillman") (3 & 4)

Guess #5: 130  
Guess #6: 135  
Guess #7: 145  
Guess #8: 150

Lions & Tigers (1 & 2)

Guess #5: 120  
Guess #6: 128  
Guess #7: 135  
Guess #8: 140

We look forward to getting our next clues. We are looking forward to some bright colors!

SEAS Hurkle Questers

**2007-08-01 The Hurkle Hiders reply with Turn 02 color clues.**

**Subject:** HurkleQuest NL Game 28, Turn 02, 2007-08-01 (SEAS Teams)

Ahoy SEAS hurkle Questers,

"Hey!" exclaimed Hurkle. "Two teams are in the red ring around my neighborhood."

No Name (3 & 4)

Guess #5: 130 Clue: YELLOW  
Guess #6: 143 Clue: GREEN  
Guess #7: 150 Clue: BLUE  
Guess #8: 122 Clue: GREEN

TLLMAN (Tillman) (3 & 4)

Guess #5: 130 Clue: YELLOW  
Guess #6: 135 Clue: RED  
Guess #7: 145 Clue: GREEN  
Guess #8: 150 Clue: BLUE

Lions & Tigers (1 & 2)

Guess #5: 120 Clue: GREEN  
Guess #6: 128 Clue: YELLOW  
Guess #7: 135 Clue: RED  
Guess #8: 140 Clue: YELLOW

Looking good, SEAS teams. Hurkle eagerly awaits your Turn 03 guesses.

The Hurkle Hiders [Bob & George]

**2007-08-01 The SEAS teams quickly send Turn 03 guesses.**

Ahoy Hurkle Hiders,

Some teams think they've found Hurkle! Here are our guesses.

No Name (3 & 4)

Guess #9: 132  
Guess #10: 135  
Guess #11: 136  
Guess #12: 134

TLLMAN ("Tillman") (3 & 4)

Guess #9: 133  
Guess #10: 134  
Guess #11: 136  
Guess #12: 137

Lions & Tigers (1 & 2)

Guess #9: 133  
Guess #10: 134  
Guess #11: 136  
Guess #12: 137

A Hurkle, a Hurkle, we want a Hurkle! We are eagerly awaiting our next clues!

SEAS Hurkle Questers

**2007-08-02 All three teams found Hurkle's hiding place in Turn 03!**

**Subject:** HurkleQuest NL Game 28, Turn 03, 2007-08-02 (SEAS Teams)

Ahoy SEAS Hurkle Questers,

Amazing! Astounding! Stupendous! All three SEAS teams found Hurkle's hiding place in Turn 03.

No Name (3 & 4)

Guess # 9: 132 Clue: ORANGE  
Guess #10: 135 Clue: RED  
Guess #11: 136 Clue: ORANGE  
Guess #12: 134 Clue: **HURKLE**

TLLMAN ("Tillman") (3 & 4)

Guess # 9: 133 Clue: RED  
Guess #10: 134 Clue: **HURKLE**  
Guess #11: 136 Clue: ORANGE  
Guess #12: 137 Clue: ORANGE

Lions & Tigers (1 & 2)

Guess # 9: 133 Clue: RED  
Guess #10: 134 Clue: **HURKLE**  
Guess #11: 136 Clue: ORANGE  
Guess #12: 137 Clue: ORANGE

Congratulations No Name, TLLMAN, and Lions & Tigers. Finding Hurkle in three turns is excellent.

134 is a composite number. A composite number is a natural number that has 3 or more different factors.

- Three factors of 134 are 1, 2, and 67.

1 is a very special number. It is the smallest **natural number**.

If you add 1 to any natural number – abracadabra! – you get the next natural number.

2 and 67 are **prime numbers**. A prime number is a natural number that has exactly two different factors.

- The two factors of 2 are 1 and 2. The two factors of 67 are 1 and 67.

Hurkle says, "Keep on playing, learning, enjoying the summer, et cetera, et cetera.

The Hurkle Hiders [Bob & George]

### HurkleQuest on the Number Line Game 28: Summary by Team

Clues: R = Red, O = Orange, Y = Yellow, G = Green, B = Blue, V = Violet, H = Hurkle

No Name (3 & 4)	TLLMAN ("Tillman") (3 & 4)	Lions & Tigers (1 & 2)
Guess #1: 1 Clue: VIOLET	Guess #1: 100 Clue: VIOLET	Guess #1: 130 Clue: YELLOW
Guess #2: 77 Clue: VIOLET	Guess #2: 120 Clue: GREEN	Guess #2: 100 Clue: VIOLET
Guess #3: 90 Clue: VIOLET	Guess #3: 75 Clue: VIOLET	Guess #3: 47 Clue: VIOLET
Guess #4: 140 Clue: YELLOW	Guess #4: 20 Clue: VIOLET	Guess #4: 8 Clue: VIOLET
Guess #5: 130 Clue: YELLOW	Guess #5: 130 Clue: YELLOW	Guess #5: 120 Clue: GREEN
Guess #6: 143 Clue: GREEN	Guess #6: 135 Clue: RED	Guess #6: 128 Clue: YELLOW
Guess #7: 150 Clue: BLUE	Guess #7: 145 Clue: GREEN	Guess #7: 135 Clue: RED
Guess #8: 122 Clue: GREEN	Guess #8: 150 Clue: BLUE	Guess #8: 140 Clue: YELLOW
Guess # 9: 132 Clue: ORANGE	Guess # 9: 133 Clue: RED	Guess # 9: 133 Clue: RED
Guess #10: 135 Clue: RED	Guess #10: 134 Clue: <b>HURKLE</b>	Guess #10: 134 Clue: <b>HURKLE</b>
Guess #11: 136 Clue: ORANGE	Guess #11: 136 Clue: ORANGE	Guess #11: 136 Clue: ORANGE
Guess #12: 134 Clue: <b>HURKLE</b>	Guess #12: 137 Clue: ORANGE	Guess #12: 137 Clue: ORANGE

### About Hurkle and HurkleQuest

In 1973, we invented a simple game called **Hurkle** and published the first primitive version of Hurkle as a computer game in *People's Computer Company*, April 1973. You can find Hurkle in its original form on the Internet. Do a search using **hurkle** or **hurkle game** as the search key.

We have invented new versions of Hurkle called **HurkleQuest** that use colors of the rainbow as "fuzzy feedback" clues. We have played HurkleQuest in classrooms, by USPS mail, and by email. We have played on the number line, in 2-dimensional space, on a map of Oregon, and in other spaces.

*The Hurkle is a happy beast that lives in another galaxy on a planet named Lirht that has three moons. Hurkles are favorite pets of the Gwik, the most intelligent denizens of Lirht.*

Paraphrased from "The Hurkle Is a Happy Beast," a story by Theodore Sturgeon.

- The Hurkle Is a Happy Beast Study Guide ([www.bookrags.com/shortguide-hurkle-is-a-happy-beast/](http://www.bookrags.com/shortguide-hurkle-is-a-happy-beast/))
- Theodore Sturgeon – Wikipedia ([http://en.wikipedia.org/wiki/Theodore\\_Sturgeon](http://en.wikipedia.org/wiki/Theodore_Sturgeon))

Read the stories of other HurkleQuest games at:

- Play Together, Learn Together (<http://starshipgaia.net/BobGeorge/PTLT/>)
- Curriki ([www.curriki.org](http://www.curriki.org)). Search for **hurklequest**.

HurkleQuest on the Number Line players learn about whole numbers, natural numbers, the number line, distance on the number line, composite numbers, prime numbers, square numbers, cubic numbers, triangular numbers, factorial numbers, Fibonacci numbers, et cetera, et cetera. They invent search strategies based on "fuzzy feedback" color clues. They learn that MATH IS FUN.

HurkleQuest play-by-email games include:

- |   |  |
|---|--|
| • HurkleQuest on the Number Line          | Customized to grade level foundations/standards. |
| • HurkleQuest in Composite Number Land    | Game 01 was played Summer 2007 at SEAS.          |
| • HurkleQuest in Prime Number Land        | Coming Fall 2007.                                |
| • HurkleQuest in Quadrant 1               | 2-D games designed for grade 4 and up, but have  |
| • HurkleQuest in Quadrants 1, 2, 3, and 4 | been played successfully by 2nd graders.         |
| • HurkleQuest in Oregon                   | Intertwines math & geography.                    |

### Metric Number Lines 0 to 150 and 0 to 300

Fisher Price Science Education – Junior Middle Senior ([www.fishersci.com](http://www.fishersci.com)) sells a 150-centimeter metric tape measure that we will investigate. One side is calibrated in centimeters and half-centimeters. The other side is calibrated in millimeters. Alas, there was no picture on the Fisher Price web site.

- Catalog number: S94312      Pack of 10 for \$14.50

Nasco ([www.enasco.com](http://www.enasco.com)) sells two metric tape measures:

- 150-centimeter tape measure
- Product number: TB15105T Price: \$1.00
- 300-centimeter tape measure
- Product number: TB21292T Price: \$2.20



Play Together



Learn Together