

**Goal:** Rate your day, a book, or something else on a scale from -2 to 2

**Grades:** K–6+

**Minimum number of participants:** 4

**Suggested grouping:** individual

**Time:** 10 minutes or less

**Math:** working with 0 and negative numbers

**Materials:**  
none

**Prerequisites:** none

**Books about negatives and positives:**

*Alexander and the Terrible, Horrible, No Good, Very Bad Day.* Viorst, Judith. (Aladdin, 1987).

*Less than Zero.* Murphy, Stuart. (Harper Collins, 2003).

### Before beginning

Choose something children will rate, such as the weather, a certain book, or the day so far.

#### 1 Introduce the rating system

Explain that everyone will rate the chosen event on a scale of -2 to 2.

*2 means it was great. 1 means it was good.  
What does 0 mean?*

Talk About...

0 means it was just OK—neither good nor bad.

*What does a rating of -1 mean? -2?*

#### 2 Rate it

Children take turns giving their ratings and explaining their thinking.

My day was a 2.  
I got a puppy!



#### 3 Summarize the ratings

*What was the highest rating someone gave? the lowest? the most common?*



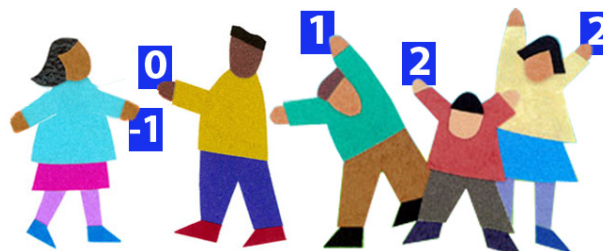
Talk About...

### Variations

**Rate it on a graph (easier).** Write the numbers from -2 to 2 on a number line. Children put a sticker above the number that shows their rating.

**Number stories (harder).** Children write stories in which they rate daily events. A visit from a friend might be a “2,” a lost dollar “-2,” and a game of jump rope “0.”

**Number cards (same as main activity).** Children make “rating cards” numbered -2, -1, 0, 1, and 2. They line up in order, by number.





### Negative numbers

Young children begin connecting numbers and amounts: 2 means two fingers; 5 means five fingers on one hand; 10 means 10 fingers on two hands. Children also learn that 0 means nothing—no fingers and no hands.

Negative numbers are different. You can use them to show “less than.” You can’t have  $-2$  fingers, but you can:

- take a temperature reading of  $-2$ , or, 2 below 0;
- take two steps backward, to go in a negative direction;
- owe two dollars, and have a negative amount of money;
- go two floors below ground level (in some countries, level below ground are marked with negative numbers.).



### Below a goal

Negative numbers can show an amount below 0. They can also show an amount below a certain point.

Dandelion After School needs an enrollment of 50 children to break even on costs for staff, space, materials, snacks, and insurance. They use negative and positive numbers to show enrollment status:

Month	# Enrolled	Compare to 50	Notes
August	41	-9	Time to advertise
September	49	-1	Almost covering expenses
October	65	+13	Getting crowded
November	70	+20	Start a waiting list