



CELEBRATE PI DAY WITH DISCOVERY EDUCATION

Find lesson starters, activities, and jokes to kick off your classroom's math fun.

JOIN THE FESTIVITIES!

This Pi Day, you're invited to join us for a Virtual Party connecting classrooms all across the country in celebration of all things Pi!

Math lovers from all over the world unite each year on March 14 (*3/14*, or *3.14* for those so inclined) to recognize this most illustrious irrational number. The annual celebration normally involves making pies, eating pies, or throwing pies, but at Discovery Education's celebration, there's no need to get messy.

HOW TO JUMPSTART YOUR PI DAY

Print this document which contains several Pi-themed lesson starters, divided by grade level:

- Grades K-5 (Pgs 2-3)
- Grades 6-8 (Pgs 4-5)
- Grades 9-12 (Pgs 6-7)

SHARE IN THE FUN ONLINE

Keep an eye on our [Twitter](#) and [Facebook](#) pages on Pi Day. We'll be sharing free lesson plans, activities, trivia, and jokes all around the significance of the number Pi in mathematical research and its everyday applications.

Look for trivia and jokes like these, starting 3/14:

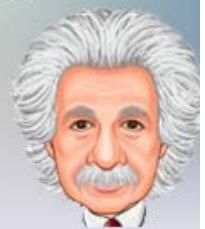
What is special about
"I prefer pi"?

| PREFER PI | IPREFERP I

It is a palindrome!

Did you know...?

Pi Day (3/14) is also
Albert Einstein's birthday?



pictures. When the video segment is complete, have students work with partners or in small groups to discuss which statements are true and which is a lie, providing supporting evidence for each. To conclude the activity, come together as a class to discuss students' conclusions and the evidence they found to support them.

PMI: Books for Everyone

Introduce this strategy to your students by providing them with a sample PMI chart and explaining that they will take notes during two video segments as follows: P ("Plus"): things they like; M ("Minus"): things they do not like; and I ("Interesting"): something they find intriguing. Explain to students that they will draw a PMI chart and categorize their feelings about ideas from the video segments using the chart. Alternatively, you can draw a PMI chart at the front of the room and record student responses for younger students. Play the video segments "United States: Children's Book Week" and "Kenya and the United Kingdom: Books for Africa," pausing a few times to provide students time to take notes. Younger students can write words or phrases or draw pictures. After students have watched the video segments, facilitate a group discussion and have students share what they put in each column. Optionally, students can present the information in their columns in Board Builder, adding media elements to support their ideas.

Target Vocabulary*

- **adjective** – a word that says something about a noun or pronoun
- **alphabet** – the letters of a language arranged in their usual order
- **audience** – the people who watch read, or listen to something
- **edit** – to make changes, correct mistakes, etc., in (something written)
- **explicit** – very clear and complete : leaving no doubt about meaning
- **genre** – a particular type or category of literature or art
- **implicit** – understood although not clearly or directly stated
- **literacy** – the ability to read and write
- **noun** – a word that is the name of something (such as a person, animal, place, thing, quality, idea, or action) and is typically used in a sentence as subject or object of a verb or as object of a preposition
- **prewriting** – the formulation and organization of ideas preparatory to writing
- **revise** – to make changes especially to correct or improve (something)
- **style** – a distinctive manner of expression (as in writing or speech)
- **theme** – the main subject that is being discussed or described in a piece of writing, a movie, etc.
- **tone** – a quality, feeling, or attitude expressed by the words that someone uses in speaking or writing
- **verb** – a word (such as *jump*, *think*, *happen*, or *exist*) that is usually one of the main parts of a sentence and that expresses an action, an occurrence, or a state of being

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created. Have students post their collective questions around the classroom, or share on a website so that your class will be able to refer to the ideas throughout the unit.

Pi and NIST

After students have viewed one or more video segments focused on the National Institute of Standards and Technology (such as “Standard Kilogram” or “3-D Data”), ask them to answer the following questions: What is the National Institute of Standards and Technology? What is some of the work it does? How does the mathematical constant π (pi) figure into the work? How does the work that it does impact our everyday lives? Discuss the answers together as a class. Then, invite students to work in pairs to complete further research about NIST. Encourage students to narrow their focus—they may wish to find out more about NIST history, its mission and programs, its organization and locations, or its role in standards for weights and measures. Then have pairs work in Board Builder to create a print ad for NIST. Instruct students to choose several facts they have learned about NIST to create a visually interesting and informative advertisement for the laboratory. Challenge them to refer to pi somewhere in their ad. After their work is complete, have students share and explain their advertisements with the group.

Target Vocabulary*

- **circle** – a perfectly round shape
- **circumference** – the perimeter of a circle
- **constant** – staying the same, not changing; a quantity or number whose value does not change
- **decimal** – based on the number 10
- **diameter** – a straight line from one side of something (such as a circle) to the other side that passes through the center point
- **pi** – the symbol π denoting the ratio of the circumference of a circle to its diameter
- **ratio** – the relationship that exists between the size, number, or amount of two things and that is often represented by two numbers
- **symbol** – a letter, group of letters, character, or picture that is used instead of a word or group of words

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cards. If one of the players knows the answer, that player blurts it out, earning a point. If the player does not know the answer, the other player gets a chance to answer. If neither knows the answer, no one receives a point. Repeat the questions and answers after they are blurted out, giving the students time to jot down the answers in their notes. The team with the most points wins.

Elements of Literature Vocabulary Stepping Stones

Before class, watch the video segment “Responding to Literature” and select 10 to 15 vocabulary words that are important for understanding the content (for example, *alliteration*, *allusion*, *conflict*, *figurative language*, *imagery*, *interpretation*, *irony*, *mood*, *onomatopoeia*, *style*, *symbolism*, and *theme*). Print enough copies of your selected vocabulary list for every student to have a copy. Distribute copies of the vocabulary list. Have students cut out the words and mix them up. Engage students in vocabulary development activities to review terms, such as a class discussion. In small groups, have students discuss which words are familiar and share their understanding of the meanings. As a whole group, briefly have students share and review the words and their meanings. You can also use this time to clear up any student misconceptions about word meanings. Explain to students that as the video segment plays, they will work with a partner to place the vocabulary words in order as they are heard in the segment. Play the video segment “Responding to Literature.” After the video segment concludes, have students discuss the sequence of topics from the segments, using the order of the vocabulary words, and discuss how they were used in context. Students can create a display of vocabulary words from this activity, providing an example of each, in Board Builder.

Target Vocabulary*

- **adjective** – a word that says something about a noun or pronoun
- **alliteration** – the use of words that begin with the same sound near one another
- **allusion** – an implied or indirect reference, especially in literature
- **alphabet** – the letters of a language arranged in their usual order
- **audience** – the people who watch, read, or listen to something
- **conflict** – the opposition of persons or forces that gives rise to the dramatic action in a drama or fiction
- **edit** – to make changes, correct mistakes, etc., in (something written)
- **explicit** – very clear and complete: leaving no doubt about meaning
- **genre** – a particular type or category of literature or art
- **imagery** – language that causes people to imagine pictures in their mind
- **implicit** – understood though not clearly or directly stated
- **interpretation** – the way something is explained or understood
- **irony** – the use of words that mean the opposite of what you really think, especially in order to be funny
- **literacy** – the ability to read and write
- **mood** – a conscious state of mind or predominant emotion; the expression of mood especially in art or literature
- **noun** – a word that is the name of something (such as a person, animal, place, thing, quality, idea, or action) and is typically used in a sentence as subject or object of a verb or as object of a preposition
- **onomatopoeia** – the creation of words that imitate natural sounds
- **prewriting** – the formulation and organization of ideas preparatory to writing
- **revise** – to make changes especially to correct or improve (something)
- **style** – a distinctive manner of expression (as in writing or speech)
- **symbolism** – the use of symbols to express or represent ideas or qualities in literature, art, etc.
- **theme** – the main subject that is being discussed or described in a piece of writing, a movie, etc.
- **tone** – a quality, feeling, or attitude expressed by the words that someone uses in speaking or writing
- **verb** – a word (such as *jump*, *think*, *happen*, or *exist*) that is usually one of the main parts of a sentence and that expresses an action, an occurrence, or a state of being

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