



IGNITE MY FUTURE

LESSON TITLE

Abbrevs

Guiding Question: What does happiness mean?

Ignite Curiosity

- Why do you communicate in abbreviations?
- Where do the words we use come from?
- Why is the written word important? Is it getting more or less important over time?
- Does communicating with others over text and social media make us as happy as connecting face-to-face?

In this lesson, students will use the computational thinking strategies of collecting data and decomposing to answer a research question: are people happier when they communicate over text and written language or when they communicate face-to-face? In **THINK**, students will act as software engineers who are developing a new mobile phone. They have recently collected feedback from a group of test users that the phone is difficult to use for typing. The engineers are working to devise a design solution to the problem, but they have to decide between two approaches: develop a keyboard that uses a shorthand system of words and abbreviations that make it easier to type quickly, or remove the keyboard altogether and rely on recording software that sends video messages instead of texts. In **SOLVE**, students will look at some of the most common abbreviations in use today and decompose how they morphed from the original word or phrase to their current form. Students will also identify their most commonly texted words. In **CREATE** students use their research to design a new custom keyboard that uses their most-texted abbreviations instead of letters. In **CONNECT**, students identify how communicating with others impacts happiness and well-being and explore a series of careers in the communication industry.

Students will be able to:

- **Evaluate** common words and their origins,
- **Analyze** data by identifying common features and breaking down complex thoughts into abbreviations, and
- **Create** a new keyboard design that makes it faster and easier to communicate via text.

SUBJECTS

English/Language Arts

COMPUTATIONAL THINKING PRACTICE

Collaborating Around Computing

COMPUTATIONAL THINKING STRATEGIES

Collecting Data
Decompose
Abstract

MATERIALS

Computers with access to the internet (optional)
Chalkboard or whiteboard
Paper and pencils
Large-format sticky paper



Students act as software engineers who are developing a new mobile phone. The phone will feature a new keyboard that makes it easier to type by using abbreviations instead of letters.

1 Read the following scenario to students:

Imagine that you are a software engineer who is working for a top technology company. Your company is always developing the latest and greatest mobile phones and using the latest technology. Your most recent phone prototype was just tested by a group of users and they provided the following feedback: the phone makes it hard to type quickly! Users are frustrated by this and want a way to communicate fast. Your team is wondering if the best approach is to develop a keyboard that uses a series of words and abbreviations to save time while texting or to remove the keyboard altogether and use video messages instead of the written word. It's up to you to determine the answer. Let's see how you do!

2 Distribute students into groups of three. Each student group should have access to a laptop or mobile device (if internet-accessible devices are not available in your classroom, you can complete the following activity using printed-out articles, paper and pencil).

3 Direct students to the following articles:

- [Is English Changing? \(Linguistic Society of America\)](#)
- [How Social Media is Changing Language \(Oxford Dictionaries\)](#)

4 Have each group draw a T-chart with paper and pencil. One side of the chart should read "pros for text abbreviations" and the other side should read "cons for text abbreviations".

5 Provide students with time to read the articles and work as a group to identify pros and cons.

6 When groups have completed their work, draw a T-chart on the board with "pros" on one side of the chart and "cons" on the other. Check for understanding by having student groups report out different pros and cons to text abbreviations that they've identified in the articles and in their real life. Ask the following questions:

- How do you learn about a new popular phrase?
- How would you go about determining the most popular abbreviations used in text messages and on social media?
- Do you think it's a good thing that language is changing? Why or why not?



Students study the origins of many common words. They will then decompose the words into abbreviations that accurately communicate the meaning of the word. Students will then analyze their own writing to determine their most commonly used text phrases.

- 1 Disperse** students into new groups. Provide each group with a piece of large-format sticky paper and markers.
- 2 Provide** each group with five common words (you can use [this list](#) of the most common words in the English language for reference).
- 3 Have students write down each word** on the large-format paper, making sure to leave room under each word.
- 4 Using dictionaries** or an [online root word dictionary](#), have students identify the following elements of each word:
 - The root
 - The meaning
 - Any prefixes or suffixes
 - An abbreviation of the word that is easily recognizable and retains its meaning
- 5 Once each group has completed** their word research, provide them with a fresh sheet of large-format paper. Give each group three common phrases to write on their paper, leaving space between each (you can use [this list](#) of common English phrases for reference).
- 6 Instruct** students to perform the same procedure, identifying the following elements of the phrases:
 - The root words
 - The meaning of the phrase
 - Any prefixes or suffixes
 - An abbreviation of the phrase that is easily recognizable and retains its meaning
- 7 Direct** students to take out their mobile devices (if mobile devices are not allowed in your classroom, you can direct students to brainstorm with their group members). Provide students with time to look through their text history and identify the 50 most common phrases and words they use in texts and social media posts. Students may also choose to copy and paste social media posts in [this word counter](#).
- 8 Once each student** has individually identified their most common phrases, have them work with their group members to combine the lists. Student should highlight any words that overlapped and combine the top 50 phrases from all of the lists into one master list of 30.



- 9 Summarize** and check for understanding with the following critical thinking questions:
- What did you learn when you decomposed common words and phrases into their root words and then abstracted them into abbreviations? Did the word keep its meaning?
 - Did your top 50 phrases surprise you? Why or why not?
 - Why do you think it is so common to use abbreviations in text and social media formats? How do these written language formats change our spoken language?
 - What would make it easier to type on a mobile phone?



Students work in groups to design a new keyboard that uses phrases instead of letters.

- 1 Instruct** students to remain in their groups. Provide each group with paper and pencils.
- 2 Direct each group** to draw a copy of a typical keyboard they would find on a mobile phone. The drawing should include all of the functions of the keyboard as well as the letters (space, return, etc.)
- 3 Have each group draw** a new keyboard, leaving the inside of each key blank.
- 4 Provide** students with time to input their top 30 phrases into their keyboard design. They may also choose to improve the keyboard function by adding in additional features (voice recording, spell check, emoji, etc.). Remind groups that they have limited space on the keyboard and it must include the basic functions of space, backspace and send.
- 5 When each group has designed their new keyboard**, have them present it briefly to the class. once all groups have presented, ask students the following questions:
 - Were your keyboards mostly the same or mostly different?
 - Do you think this keyboard would save you time when you're typing on a smartphone? Why or why not?
 - Now that you've developed this abbreviation keyboard, do you think it's the best way to communicate the true meanings of words? Why or why not?
 - In your mind, what form of communication brings you more happiness: texting or talking in person? Why?



Select one of the strategies listed below to help students answer these questions:

- How do this problem and solution connect to me?
- How do this problem and solution connect to real-world careers?
- How do this problem and solution connect to our world?

- 1 Write** the three questions on PPT or flip chart slides and invite students to share out responses. Display chart paper around the room, each with one question written on it. Ask students to write down their ideas on each sheet.
- 2 Assign** one of the questions to three different student groups to brainstorm or research, and then share out responses.
- 3 Direct** students to write down responses to each question on a sticky note, and collect them to create an affinity diagram of ideas.

How does this connect to students?

Students use abbreviations every day and likely do not realize it. The English language is shifting under the forces of text messaging and social media. In this lesson, students will engage in the debate over whether language evolution is good or destructive and will think critically about the importance of communication.

How does this connect to careers?

Telecommunications Engineers are electrical engineers who focus on communication systems. They design circuits, cables, networks and other data transmission systems.

User Experience (UX) Designers study how users interact with technology in order to make products that are easy to use. UX designers study human behavior and test products before they launch in order to ensure that they are intuitive to use.

Linguists study patterns in written and spoken word. They may work in the computer industry on projects like speech recognition, language processing or machine learning related to language. Linguists may also choose to work as translators, interpreters or language preservation specialists.

How does this connect to our world?

More and more communication is taking place via text message. Though we might be communicating more than ever before, the way we're communicating is changing. An emphasis is being placed on short posts and texts with lots of abbreviations to save time. In this lesson, students will explore whether or not it is possible to retain meaning in abbreviations and discuss the benefits and drawbacks of text communication.

National Standards

COMMON CORE STATE STANDARDS: ENGLISH/LANGUAGE ARTS

CCSS.ELA-LITERACY.CCRA.L.6

Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

CCSS.ELA-LITERACY.RST.6-8.4

Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

CCSS.ELA-LITERACY.RL.8.4

Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

CCSS.ELA-LITERACY.RL.8.5

Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.

CCSS.ELA-LITERACY.RI.8.7

Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

K-12 COMPUTER SCIENCE FRAMEWORK

Practice 2: Collaborating Around Computing

Collaborative computing is the process of performing a computational task by working in pairs and on teams. Because it involves asking for the contributions and feedback of others, effective collaboration can lead to better outcomes than working independently. Collaboration requires individuals to navigate and incorporate diverse perspectives, conflicting ideas, disparate skills, and distinct personalities. Students should use collaborative tools to effectively work together and to create complex artifacts.