

# Grade 6 Resource Packet

Hello Students,

This packet includes a range of activities that you can work on independently at home. Resources are categorized into 2 types:

- Independent Projects
  - These projects cover a range of different topics and skills. They may be spread out over multiple days.
- Enrichment Activities (including digital options)
  - These activities are organized into *Read, Write, Move, Design, and Solve* categories so that you can engage in many different ways while at home.

You may work through these resources over multiple days and in any order.

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Read

Write

Move

DESIGN

Solve

# Independent Projects

Project 1: Independent Civic Action Project- Census 2020	
<b>Estimated Time</b>	10 hours
<b>Caregiver Support Option</b>	Household member interviews
<b>Materials Needed</b>	Notebook or journal
<b>Question to Explore</b>	How will you make sure everyone is counted in the 2020 census?
<b>Student Directions</b>	This guide is designed to help you engage in an independent civic action project, and follows the CPS Informed Action Framework. You will understand, investigate, reflect, and act to answer the question, "How will you make sure everyone is counted in the 2020 census?"

The 2020 U.S. Census **begins NOW**. **EVERYONE** can have a real impact in the census by using their expertise and knowledge of their community to make sure everyone is counted.

## How will you make sure everyone is counted in the 2020 census?

This project has three phases of research and reflection before you take a final action. The project phases are:

- Phase 1: Understand and connect to the Call to Action question.
- Phase 2: Investigate the topic and any barriers to census completion.
- Phase 3: Plan and take action.

### PHASE 1: Understand and connect to the question, "How do we make sure everyone is counted?"

Document your answers/information collected for each step in a journal.

#### Phase 1, Step 1: Explore what the census is and why it is important.

Watch this video (<https://youtu.be/HMaaH6Suf98>) OR read [Document A](#) included in this packet and then answer the following questions in your journal:

- What do you know about the U.S. Census now that you didn't know before?
- Have you or your family ever participated in the Census? Why or why not?
- How will the census impact you or your family?
- What other information would be important to know/understand in order to answer the project question?"

**Here are a couple of key dates to keep in mind:**

<p><b>March 12 - 20:</b> First mailing - You will receive an invitation to respond online to the 2020 Census; some households will also receive paper questionnaires</p> <p><b>March 16 - 24:</b> Second mailing - You will receive a reminder letter</p> <p><b>March 26 - April 3:</b> Third mailing - If you have not responded, you will receive a reminder postcard</p>	<p><b>April 1:</b> National Census Day!</p> <p><b>April 8 - 16:</b> If you have not responded, you will receive a reminder letter and paper questionnaire</p> <p><b>April 20 - 27:</b> If you have not responded, you will receive a final reminder postcard before an enumerator visits your home</p>
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### Phase 1, Step 2: Connect with and collect information from others.

Now, interview two or more family or community members by phone, email, or social media. Focus on different ages over 30 years old. Use the questions below, and other questions you want to ask. Write down the responses to each question.

Sample questions for interviews:

- What is the U.S. Census?
- Have you ever completed the Census? Why or why not?
- How will the census impact you or your family?

After you finish your interviews - complete the reflection below.

#### Reflection

- What do you know now that you didn't know before?
- Did the responses from any of the people you interviewed surprise you? Why or why not?
- Why do you think these individuals have had these experiences with the U.S. Census?
- Do you think other people in your community have had similar or different experiences from those you interviewed?

## PHASE 2: Investigate the topic and any barriers to Census completion

### Phase 2, Step 1: Research Community Impact.

Use the maps provided in Source C to answer the questions below:

- What do the colors/shades on the map mean? What patterns do you notice?
- Was the percentage for your school/neighborhood/part of the city higher or lower than what you would have expected? Explain.
- Looking at the overall map, why do you think some areas of Chicago are harder to count than others?
- Is this data similar to what you learned from your family/community survey data?

### Phase 2, Step 2: Focus and narrow your research.

Here you will work to better understand the Census, and any causes to issues you've learned about in the previous steps. Document your answers in your journal, and make note of NEW questions that you come up with.

- Why is the Census important?
- What is the U.S. Census information used for?
- Who does and doesn't get counted in your community and why?
- Why don't some people complete the census?
- Why are some communities harder to count than others?

Use **Sources A and B** to answer the questions. You should also use your research from Phase 1 interviews, and Phase 2 map analysis to help you answer the questions.

#### Reflection:

- What surprised you about some of the research you did?

- Are there **barriers** (obstacles or things that get in the way) that you identified that are more important than others? Explain.
- How will knowing who doesn't get counted help develop a way to get everyone counted in your community?

### Phase 2, Step 4: Analyze the issue(s) and assess possible solutions.

List all the reasons you found why some people don't complete the U.S. Census.

- Which barrier seems the most important to address and why?
- Is there a barrier you have identified that doesn't seem to have a solution? Explain.

## PHASE 3: Plan and Take Action

### Phase 3, Step 1: Plan and Take Action

Here you will take action to ensure everyone is counted in the census!

You will **create awareness** for what the census is and why it is important, and get as many people as you can to complete the U.S. Census. Follow these steps to organize your awareness campaign.

**Step 1:** Reflect upon and summarize what you have learned about the U.S. Census and why it's important. Decide on the information that is most important or has the biggest impact.

**Step 2:** Identify WHO needs to know this information and WHY they need to know it.

**Step 3:** Identify WHAT you want to say and HOW you want to say it. What could you say to this audience that will make them complete the Census?

**Step 4:** Next, choose the best way to reach people to make sure they complete their Census. A letter or email? A tweet? A tik tok? A social media campaign? Phone calls? Why is this the best way to reach them?

**Step 5:** Finally, construct your MESSAGE. Consider what you have already decided, and how to bring that all together.

**Step 6:** Implement your plan and make sure to document your action along the way! Track your outcomes if you can - did anyone complete the census because of your action?

### Phase 3, Step 2 - Reflect and Share!

After completing your action, share with others what you learned about the Census and why it's important to engage in civic life!

- What did you learn throughout the process?
- What did you learn about yourself and your community?
- Why should young people be civically engaged?
- Why should everyone complete the census?

As a final action - connect with other CPS students working to get their communities counted by sharing your experience, ideas and thoughts either on social media @CPSCivicLife #EngageCPS or email us at [SSCE@cps.edu](mailto:SSCE@cps.edu).

## **SOURCE A: [2020census.gov](https://www.census.gov)**

What Is the 2020 Census? The 2020 Census counts every person living in the United States and five U.S. territories. The count is mandated by the Constitution and conducted by the U.S. Census Bureau, a nonpartisan government agency. The 2020 Census counts the population in the United States and five U.S. territories (Puerto Rico, American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands). Each home will receive an invitation to respond to a short questionnaire—online, by phone, or by mail—between March 12-20.

Why We Conduct This Count: The census provides critical data that lawmakers, business owners, teachers, and many others use to provide daily services, products, and support for you and your community. Every year, billions of dollars in federal funding go to hospitals, fire departments, schools, roads, and other resources based on census data.

The results of the census also determine the number of seats each state will have in the U.S. House of Representatives, and they are used to draw congressional and state legislative districts.

It's also in the Constitution: Article 1, Section 2, mandates that the country conduct a count of its population once every 10 years. The 2020 Census will mark the 24th time that the country has counted its population since 1790.

## **SOURCE B - Berube, Alan. Stakes are high for cities and regions ahead of an unsettled 2020 census.**

Brookings Institute "The Avenue." Thursday, February 7, 2019

A little over one year from now, the United States will participate in a democratic tradition that stretches back to the founding of the republic: the once-a-decade census of its population.

From 1790 (U.S. population: 3.9 million) to 2010 (U.S. population: 309 million), the once every ten years census has changed alongside the nation itself. From the territory it covers, to the questions it asks, to how it collects the information, the census has reflected evolution in technology, the role of the federal government, and the size of the country itself.

As we approach 2020, however, both technical and political changes in the census are introducing new challenges. The stakes are high for cities and regions, which depend on a full and accurate count of their populations to ensure their financial health and political strength. Three areas of concern stand out.

**The Census is Moving (Partially) Online:** For the first time in 2020, the U.S. Census Bureau plans to allow households to respond to the census survey via the internet. This move could help reduce the costs of the census (e.g., fewer paper forms to collect and process) and improve response rates among a U.S. population that's increasingly online, all the time.

Yet a digital census could cause complications for participation, particularly in areas with limited

internet access. [My colleague Adie Tomer and co-authors find](#) that in 2015, almost one in four Americans (74 million people) lived in neighborhoods where fewer than 40 percent of households have internet access. It's not only rural areas where broadband's reach is limited; major metro areas with large Hispanic populations—and/or significant areas of concentrated poverty—exhibit troubling internet access gaps as well. [As CityLab's Kriston Capps reports](#), many cities are leaning on libraries to connect those populations to the online census, but tests thus far suggest the fix won't be easy.

The massive online data collection effort also introduces significant data quality, privacy, and security challenges for the Census Bureau. Viruses, impersonator websites, data breaches, and internet service disruptions could threaten the accuracy of the count. While the Bureau is investing in addressing potential security weaknesses, [the Government Accountability Office recently flagged](#) significant challenges and risks the Bureau still faces to mounting a successful online 2020 census.

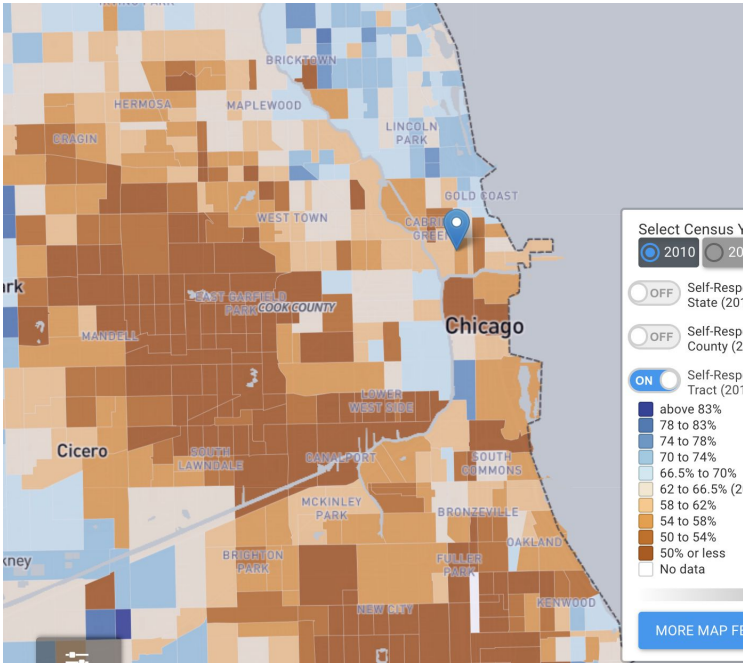
THE CENSUS MAY BE UNDER-RESOURCED: The Census Bureau has estimated the full “life cycle” cost of the 2020 census at \$15.6 billion. Much of its ramp-up funding over the past few years [came in below projected needs](#), leading to reduced testing of new operations and procedures. As [Capps from CityLab details](#), the Bureau cut two of its planned dress rehearsals, conducting only one end-to-end test in Providence County, R.I. Moreover, the Census Bureau went without a permanent director for 18 months during this critical period, with Congress finally confirming federal statistical agency veteran [Steven Dillingham](#) to the position in early January.

Signs are looking up that Congress will provide adequate funding for the 2020 census in the coming year. Still, other preparation challenges confront the Bureau, including the need to hire more than 500,000 enumerators—the workers who go door-to-door to make sure that people who don't respond online or by mail to the survey get counted. Last time around in 2010, the U.S. unemployment rate was hovering near 10 percent, and workers looking for a decent-paying temporary gig were relatively easy to find. Now with the rate south of 4 percent, it may be harder to find such workers, and as a result more difficult to ensure that harder-to-count communities are accurately captured in the census.

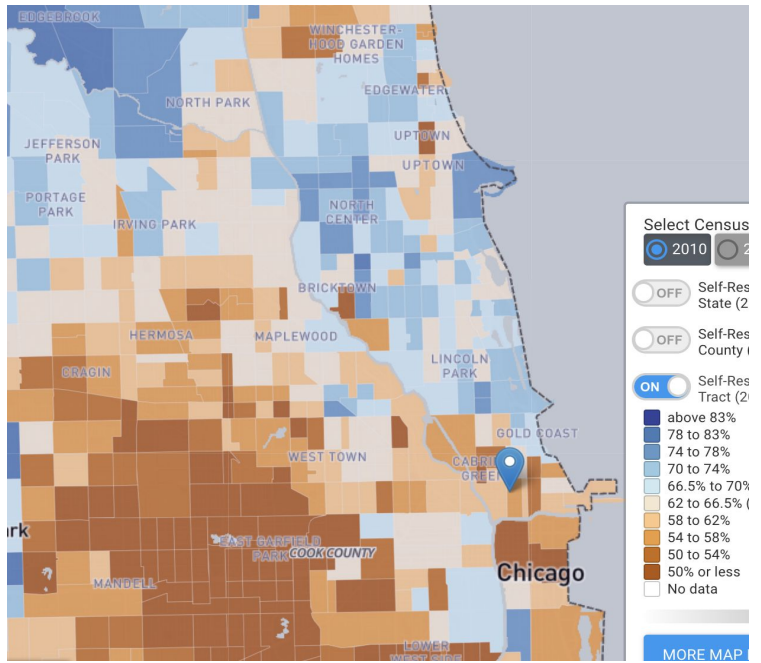
## SOURCE C - Census Hard To Count Maps, 2020

The following images show the rate of people in CHICAGO that were counted in the last U.S. Census in 2010. The rates represent the number of households that filled out the census on their own. So 50% or higher means 50% of the people or more in that neighborhood completed the Census in 2010.

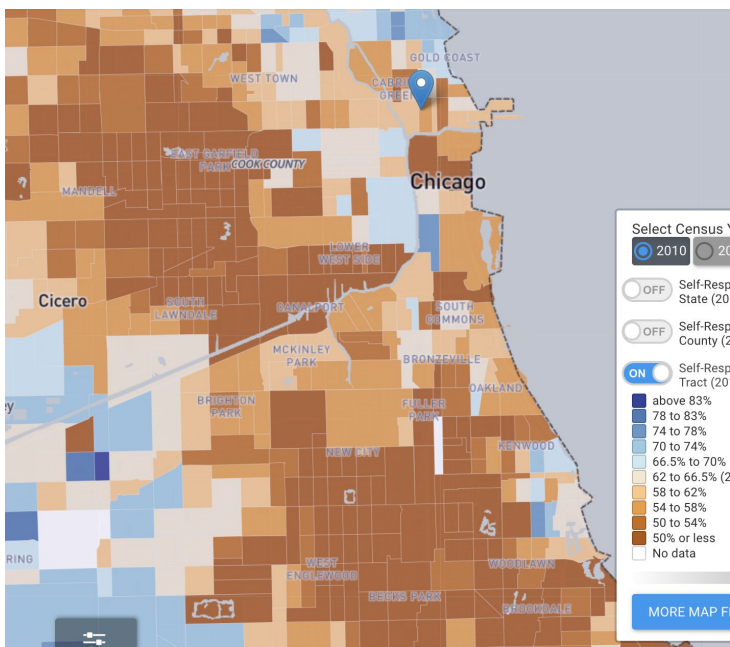
### WESTSIDE



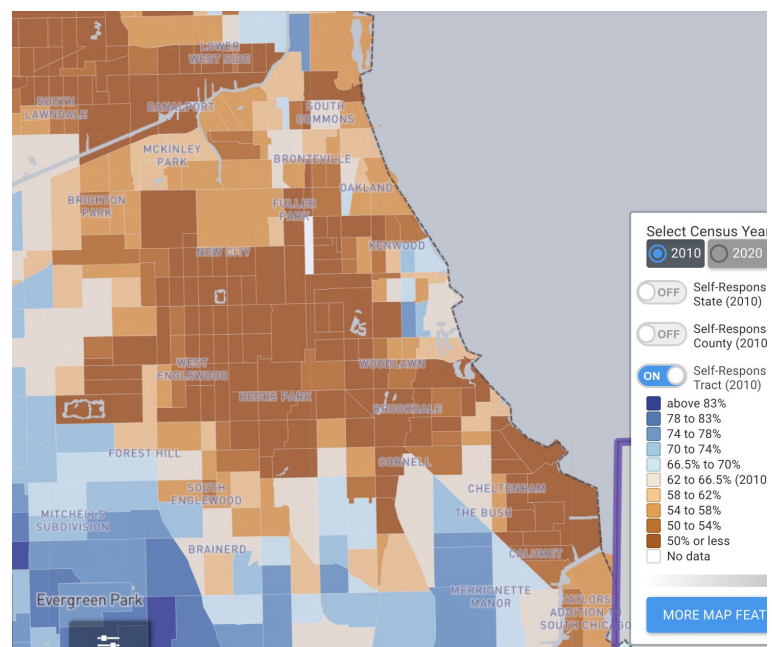
### NORTH-SIDE



### SOUTHSIDE

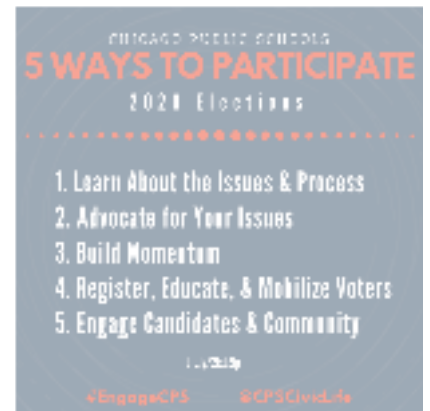


### SOUTHEAST SIDE



<b>Project 2: Independent Civic Action Project - Elections 2020</b>	
<b>Estimated Time</b>	10 hours
<b>Caregiver Support Option</b>	Interviews of household members about voting.
<b>Materials Needed</b>	Notebook or Journal
<b>Question to Explore</b>	How do we get people to vote in Chicago?
<b>Student Directions</b>	This guide is designed to help you engage in an independent civic action project, and follows the CPS Informed Action Framework. You will understand, investigate, reflect, and act to answer the question, "How do we get people to vote?"

2020 will bring about a major election in the United States. We will be voting for the U.S. President and Congress, as well as state and local offices. EVERYONE can have a real impact on the election by using their expertise and knowledge of their community to increase the voter turnout, even if they are not eligible to vote themselves.



### How do we get people to vote in Chicago?

This project has three phases of research and reflection before you take a final action. The project phases are:

- Phase 1: Understand and connect to the Call to Action question.
- Phase 2: Investigate the topic and any barriers to voting.
- Phase 3: Plan and take action.

### PHASE 1: Understand and Connect to the question "How do we get people to vote in Chicago?"

#### Phase 1, Step 1: Explore what the elections are and why voting is important.

Watch the following videos <http://bit.ly/ELECTIONSVIDEO1> OR <http://bit.ly/ELECTIONSVIDEO2> OR read **Source A** included in this packet below and then answer the following questions in your journal:

- What do you know about elections and voting that you didn't know before?
- Have people you know, or people in your family ever voted? Why or why not?
- Why should people vote?
- What other information would be important to know/understand in order to answer the project question?"

#### Phase 1, Step 2: Connect with and collect information from others

Now, interview two or more family or community members by phone, email, or social media. Focus on different ages if possible, 18 and older. Use the questions below, and other questions you want to ask. Write down the responses to each question.



Sample questions for interviews:

- Did you vote in the last election?
- Do you plan to vote in the upcoming election?
- Why do you / do you not vote?
- What do you know about the upcoming elections?
- What do you know about the voting process?

After you finish your interviews - complete the reflection below

### Reflection

- What do you know now that you didn't know before?
- Did the responses from any of the people you interviewed surprise you? Why or why not?
- Why do you think these individuals have had these experiences with the voting/elections?
- Do you think other people in your community have had similar or different experiences from those you interviewed?

## PHASE 2: Investigate the topic and any barriers to voting

### Phase 2, Step 1: Research Community Impact

Use the maps provided in Source D below to answer the questions below:

- What do the colors/shades on the map mean? What patterns do you notice?
- Was the percentage for your school/neighborhood/part of the city higher or lower than what you would have expected? Explain.
- Looking at the overall map, why do you think some areas of Chicago voted more than others?
- Is this data similar to what you learned from your interviews?

### Phase 2, Step 2: Focus and narrow your research

Here you will work to better understand elections and voting, and any causes to issues you've learned about in the previous steps. Document your answers in your journal, and make a note of any NEW questions that you have as you investigate.

- Why are elections and voting important?
- Who is **eligible** (**eligible**: to have the right to do something) to vote in Illinois elections?
- How does someone **register** (**register**: to sign up) to vote in Illinois?
- Why do some people vote while others don't?
- Are there some **barriers** (obstacles or things that get in the way) to voting in some communities that don't exist in others? Why do these barriers exist?

Use **Sources A, B** and **C** below to answer the questions. You should also use your research from Phase 1 interviews, and map analysis to help you answer the questions.

### Reflection:

- Did anything you learned surprise you?
- Do you feel any barriers are more important than others? Explain.
- What information would be the most helpful in convincing those who can but don't vote, to vote?

**Phase 2, Step 4:** Analyze the issue(s) and assess possible solutions.

List all the reasons you found why some people don't vote.

- Which **barrier** seems the most important to address and why?
- Is there a **barrier** you have identified that doesn't seem to have a solution? Explain.

### PHASE 3: Plan and Take Action

#### Phase 3, Step 1: Plan and Take Action

Here you will take action to ensure your community gets out and votes!

You will **create awareness** for the 2020 election and why it is important, and get as many people as you can to commit to voting. Follow these steps to organize your awareness campaign.

**Step 1:** Think about and summarize what you have learned about the election and why it's important. Decide on the information that is the most important and why people should vote.

**Step 2:** Identify WHO needs to know this information and WHY they need to know it.

**Step 3:** Identify WHAT you want to say and HOW you want to say it. What could you say to this audience that will make them get out and vote?

**Step 4:** Next, choose the best way to reach people to make sure they turn out and vote. A letter or email? A tweet? A tik tok? A social media campaign? Phone calls? Why is this the best way to reach them?

**Step 5:** Finally, construct your MESSAGE. What is the most powerful way to convince the people in your community to vote?

**Step 6:** Carry out your plan and make sure to document your actions along the way! Track your outcomes (what happened as a result of your actions?) if you can.

#### Phase 3, Step 2 - Reflect and Share!

After completing your action, share with others what you learned about the elections and why it's important to participate in elections, even if you're not old enough to vote!

- What did you learn throughout the process?
- What did you learn about yourself and your community?
- Why should everyone vote or participate in the voting process, even if they are not old enough to vote?
- How can young people participate in elections, even if they are not old enough to vote?

As a final action - connect with other CPS students working to get out the vote by sharing your experience, ideas and thoughts either on social media **@CPSCivicLife #EngageCPS** or email us at [SSCE@cps.edu](mailto:SSCE@cps.edu).

**SOURCE A: CIRCLE: Broadening Youth Voting Overview:**

<https://circle.tufts.edu/our-research/broadening-youth-voting>

Participating in elections and voting are some of the most important and powerful ways young people can contribute to their communities, their country, and the democratic process. It's one of many forms that youth **engagement (engagement: the act of participating in one's community or country)** can take, and a powerful way for youth to make their voices heard and have an impact on issues that affect them and their communities. The votes of young adults and participation of young people who are not yet old enough to vote can even help decide who wins an election. And, because elections happen often and everywhere, young people regularly have the opportunity to help decide who wins elections.

Yet, historically, young people have voted at lower rates than older adults. That may be starting to change: in 2018, youth turnout was the highest we have ever recorded for a **midterm election** (midterm elections in the United States are the general elections that are held near the midpoint of a president's four-year term of office). Historically, these elections have lower voter turnout than **general elections (general election: voters cast their ballots for members of the national or state legislature. There is a general election every four years to choose the president.)**, and young people's participation increased (compared to 2014) more than that of older voters. That said, our research shows that many young people do not receive training or support to become informed voters. As a result, there are differences in voting rates by race/ethnicity, education level, and **socioeconomic level** (how much money or income a person has). As a result, certain groups have more influence on what happens during elections. When certain groups have more say than others, we fall short of the democratic values of our country, which rely on the participation of everyone, and we miss an opportunity to improve our communities.

**SOURCE B: Rock the Vote - Voter Rights in Illinois** <https://www.rockthevote.org/voting-information/illinois/#>

**Pre-Registration:** 17-year-olds who will be 18 by the next general election can pre-register to vote. On your 18th birthday, your voter registration application will be fully processed.

**Same Day Registration:** Illinois offers the opportunity to register to vote on Election Day at your home precinct. To register, voters must bring two pieces of identification: one must have their current address, and the other should be another form of ID.

**Automatic Voter Registration:** Automatic Voter Registration was passed in 2017, but the program has yet to be implemented.

**If You've Moved:** Illinois requires registrants to live in the state for at least 30 days before registering to vote.

**Documentation Requirements:** When submitting a voter registration application, no additional documents are required for your registration to be processed. The state confirms your citizenship and eligibility through the information provided on your registration form, such as your state-issued license/ID number or the last 4 digits of your SSN. However, grace period registration applications (submitted after Illinois' voter registration deadline) require two forms of identification, one of which must have the applicant's current address.

**Voting Rights Restoration:** Voting rights of convicted persons are restored upon one's release from incarceration. Returning citizens must re-register to vote after their rights are restored.

**Interstate Voter Rolls Accuracy & Maintenance:** Illinois is a member-state of the Electronic Registration Information Center (ERIC) and participates in the Interstate Crosscheck program to compare voter rolls with other states for maintenance purposes.

**SOURCE C - Chicago Elections Mapped: Voter Turnout High, But Low In Minority Neighborhoods**

WBEZ , Elliott Ramos, November 8, 2018

Chicago voter turnout for the midterm election Tuesday was the highest in decades — 56 percent citywide — but that was not the case in many minority communities.

That's according to an analysis of data from the Chicago Board of Elections.

While the turnout was the highest in 32 years for a **midterm election (midterm election:** Midterm elections in the United States are elections that are held near the midpoint of a president's four-year term of office. Historically, these elections have lower voter turnout than general elections) , it was significantly lower than the city turnout in the 2016 **general election**, which was 71 percent. (**general election:** voters cast their ballots for members of the national or state legislature. There is a *general election* every four years to choose the president.)

On Tuesday, neighborhoods such as Lake View, Lincoln Park, Edgewater, and North Center, which are generally wealthier and more white than other Chicago neighborhoods, saw high turnouts averaging or exceeding 70-75 percent.

Precincts in lower income neighborhoods that are largely African American or Hispanic, such as East and West Garfield Park, Humboldt Park, Hermosa, and Belmont Cragin averaged turnouts at or below 40 percent. Those percentages were similar to South Side neighborhoods such as South Deering, Riverdale, and West Englewood.

But some South Side neighborhoods did not follow that trend, with Englewood, Chatham, Greater Grand Crossing, and parts of Pullman above 65 percent.

There was one notable oddity, and that was the 37th Precinct in the 5th Ward, which is in the Hyde Park neighborhood showing a 119 percent voter turnout.

Jim Allen, the communications director for the Chicago Board of Elections, said it was a known error.

"Part of that precinct was incorrectly coded to a different precinct." Because of that, he said the number of registered voters was lower than the amount cast there, which is why they reportedly ran out of ballots yesterday.

He said the turnout for that precinct is likely closer to 60 percent.

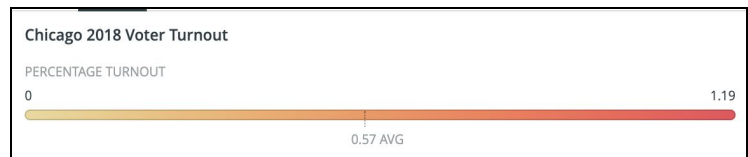
There appeared to be stark differences in turnout between yesterday's election and the midterm election of 2014.

Much of the turnout Chicago's South and West sides were down dramatically compared to four years ago. A lot of that appears to be because the same areas also experienced dramatic drops in numbers of registered voters.

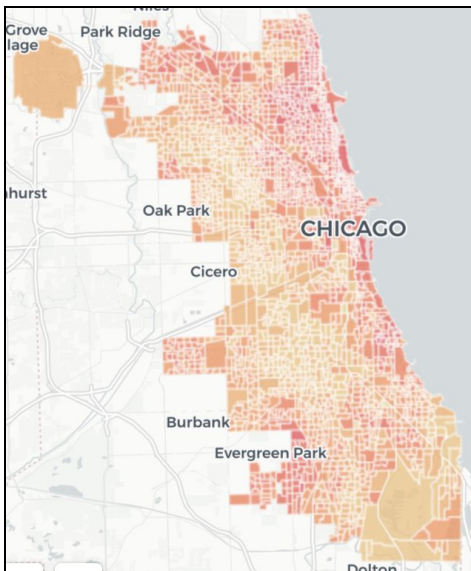
Some of these areas have seen the greatest loss of population, according to latest census figures.

### SOURCE D - WBEZ Voter Turnout Map - 2018 election

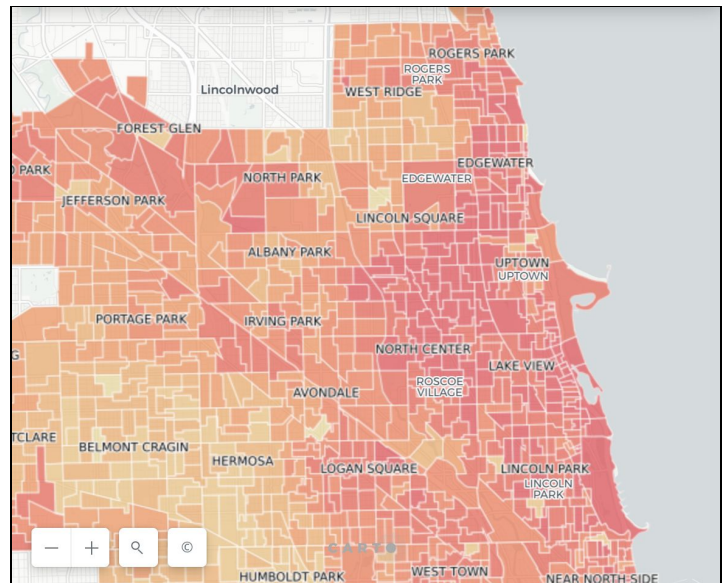
The following images show the rate of people in CHICAGO that voted in the 2018 election. The rates represent the number of people who voted. So darker red indicates more people in that neighborhood who voted in 2018.



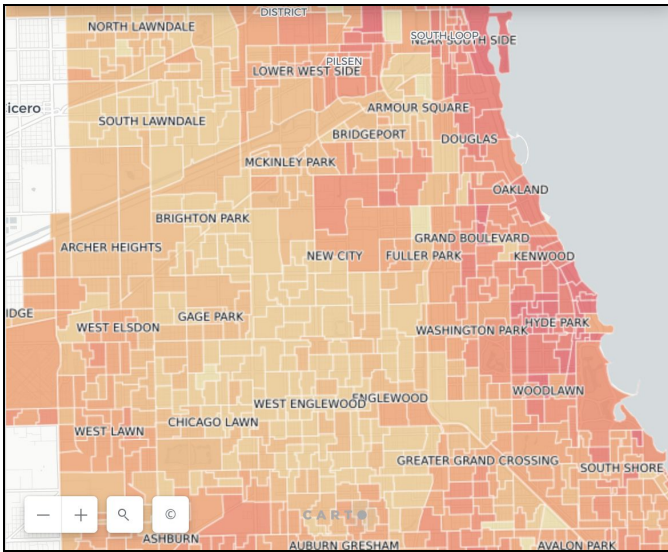
### CHICAGO



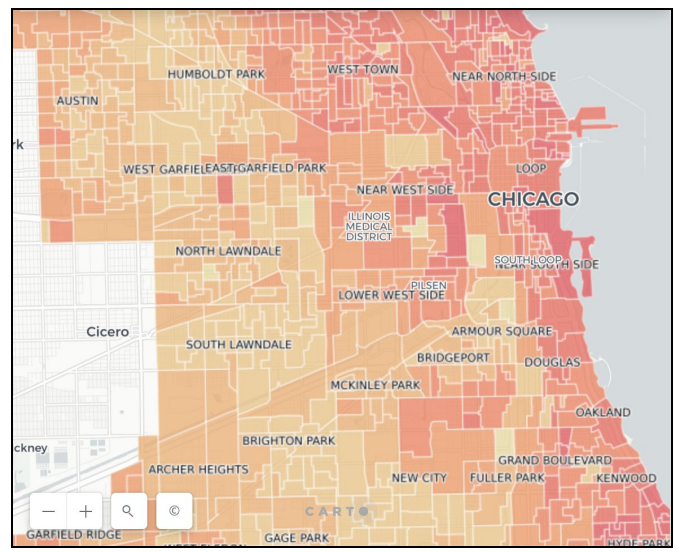
### NORTH-SIDE CHICAGO



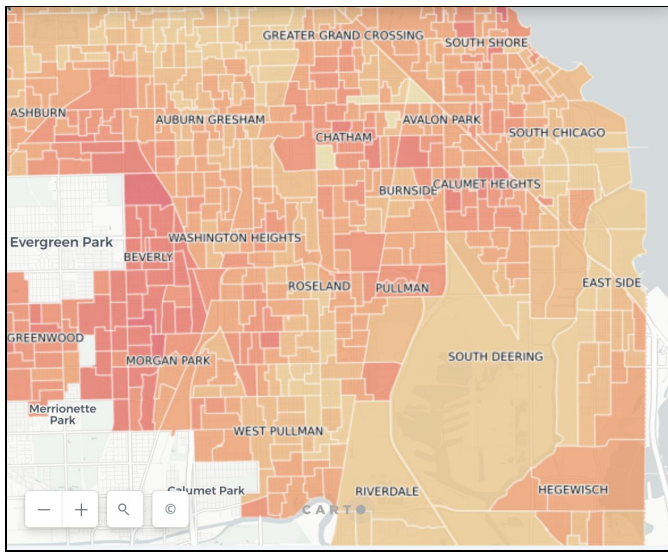
## SOUTH-SIDE Chicago



## LOOP and WEST-SIDE CHICAGO



## SOUTH-EAST CHICAGO



<b>Project 3: Design a City</b>	
<b>Estimated Time</b>	3 60 minute sessions - 8 Activities
<b>Caregiver Support Option</b>	Families and caregivers can support this project by brainstorming ideas with their students as they design their cities. They can also be the audience for their students when they are ready to present their designs and give feedback.
<b>Materials Needed</b>	<ul style="list-style-type: none"> <li>• Scratch Paper</li> <li>• Something to write and draw with</li> <li>• Something that can be used as a straight edge (ruler, book, piece of cardboard)</li> </ul>
<b>Question to Explore</b>	If you could design the best possible city to live in, what would it look like?
<b>Student Directions</b>	Using the 4 phases below, design a unique city!

## PHASE 1: Conduct research

### Activity 1: What does a city planner do?

#### What is Planning?

By Cynthia Bowen, FAICP<sup>1</sup>

**What is planning?** Take a moment to wonder about your community. Why are homes located in a specific area? Why are businesses or factories located in another? How did someone decide where the roads would go — and how many lanes each road would have? How much park or open space is available to play in? Can you easily walk to a bus or train to get to your destination?

These questions are what planners think about and are at the heart of planning as a profession. The goal of planning is to maximize the health, safety, and economic well-being of residents in ways that reflect the unique needs, desires, and culture of those who live and work within the community.

**Planning considers the big picture.** While architects often focus on a single building, a planner's job is to work with residents and elected officials to guide the layout of an entire community or region. Planners take a broad viewpoint and look at how the pieces of a community — buildings, roads, and parks — fit together like pieces of a puzzle. And, like Daniel Burnham and Edward Bennett did with the 1909 *Plan of Chicago*, planners also work to imagine what can and should happen to a community: how it should grow and change, and what it should offer residents 10, 15, or even 20 years into the future.

Each community is divided into parcels, or pieces of land. The use of each parcel of land is guided

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<sup>1</sup> Bowen, C., 2020. *What Is Planning?*. [online] American Planning Association. Available at: <<https://www.planning.org/educators/whatisplanning/>>.

by the community's zoning code. The zoning code is a set of rules that defines what each land parcel could or should be used for (such as housing, manufacturing or open space). Zoning codes try to keep different uses from being in conflict with one another. For example, imagine a company wants to buy the apartment building next door to you and convert the building into a factory, but the rest of the street is residential housing. A factory can have significantly different characteristics from a residential apartment: a large number of workers coming and going; freight deliveries; noise; and even the risk of hazards such as fires or chemical spills. Such a drastic change of land use would impact the character, quality, and feel of your street and your home. By zoning your street as a "residential" area, factories can be kept separate from housing.

**Planning involves the entire community.** Beyond trying to prevent land use conflicts, planning also entails providing community members with choices. Consider your home. Is it an apartment? Condo? Single-family house? How do you get around your community? Walk? Ride your bike? Take public transit? Is there any green space nearby? Are there any stores? Planning helps to ensure that you have choices when it comes to what type of home you want to live in, how you move around the community, and what is available nearby.

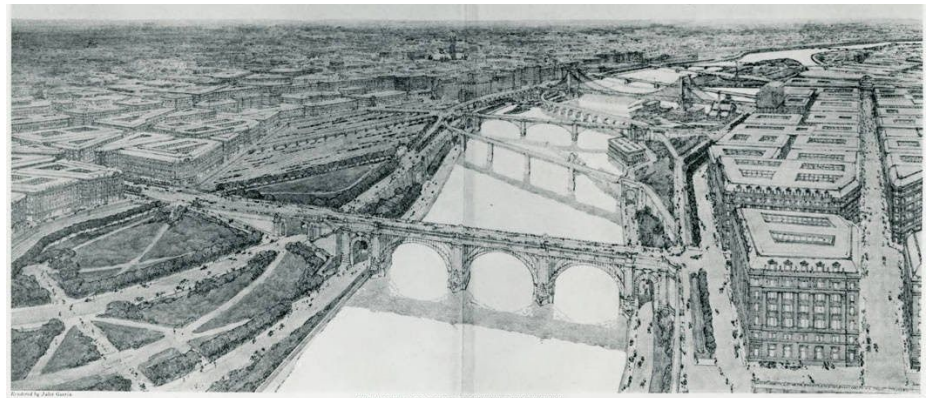
Planning includes considering ways to make communities safe and healthy for all ages. Safety includes factors such as ensuring you have areas to walk, ride your bike, or play. Can you safely cross the street to reach your grocery store? Can your grandparents? Beyond everyday risks, planners also look at larger hazards that could impact the safety of a community. Disasters such as floods and wildfires can devastate a community. Planners look at the potential risk a community might face if a river rises beyond its banks. How close are buildings that could be flooded? What can be done today, before a disaster happens, to minimize the risk and damage if the river overflows in the future?

**Planning looks ahead.** Planners are always thinking about today, but also about what tomorrow might bring. A community plan must meet the needs of its residents today, but also keep the future in mind. A community plan, often called a comprehensive plan, is a kind of map or blueprint for what a community aims to achieve in the future. Perhaps your ancestors moved around their communities by walking or by horse and carriage. Trains and automobiles came along and changed how people traveled — and the landscape itself by requiring roads and tracks. What's next that could potentially impact your community and how you live, work, and socialize? Next time you walk around your community consider some basic questions: Who planned that? How was that decision made? What will happen to this neighborhood in the future? If these questions seem interesting to you, you might want to be a planner!

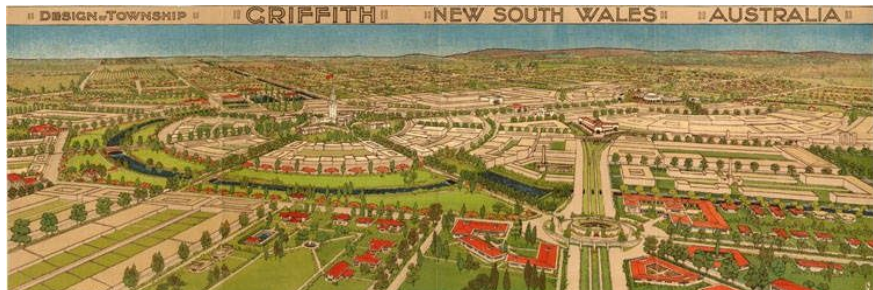
### **Activity 2: Critique some historic city designs:**

Below, you'll find some plans and drawings that have been used to design some of the world's cities. Write down what you like about these plans/drawings and what you don't.





Left: Chicago, Above: Minneapolis  
Below: New South Wales, Australia



Which city planning drawing do you think is the best?  
Cite specific evidence on why it is your favorite.

### PHASE 2: Brainstorm

What do you think the most important elements are that make up a city? Use the activities to brainstorm.

### Activity 3: Common Elements of All Cities

All cities, no matter where they are in the world or how big they are, have certain things in common.

Below, list all of the things that **every** city should have, including yours. Think about places and functions that everyone needs. List how you're going to make sure your design has these elements.

Every City Must Have These Elements	
Brainstorming Elements	What I'll Put In My City
<p>Example:</p> <p><b>Ways to Get Around</b></p> <ul style="list-style-type: none"> <li>• Public Transportation</li> <li>• Cars</li> <li>• Bikes</li> </ul>	<p>Example:</p> <ul style="list-style-type: none"> <li>• Bike Paths</li> <li>• Highways</li> <li>• A Subway System</li> </ul>

<sup>2</sup> McGregor, AG, and Rose Kingwill. "Ryerson and Burnham Archives." Ryerson and Burnham Archives, The Art Institute of Chicago, <http://www.artic.edu/research/archival-collections>.

#### Activity 4: Unique Elements of Your City

Next, list some things that might be unique about **your** city. Some questions to ask yourself might include:

- Where is your city located? Near an ocean? In the mountains?
- How big is your city? Think about how many people you think will live and work in your city.

What creative choices can you make about your city? What would make people to move there instead of anywhere else in the world? Make sure you weigh the pros and cons of these features! Some ideas could be:

- Every citizen of the city receives a scooter.
- All deliveries are made by drones!

#### Activity 5: What would your city sound like?

Each part of your city will have different sounds. For example, when you travel downtown to Michigan Avenue, you'll probably hear cars honking. But when you visit the Garfield Park Conservatory, you might hear the wind blowing through the trees. People, animals, and the environment all create different sounds.

The musical language can help us to describe the sounds you hear in each area of your city. We will break down the sounds in each section to add the following musical terms to help describe in each section what you hear.

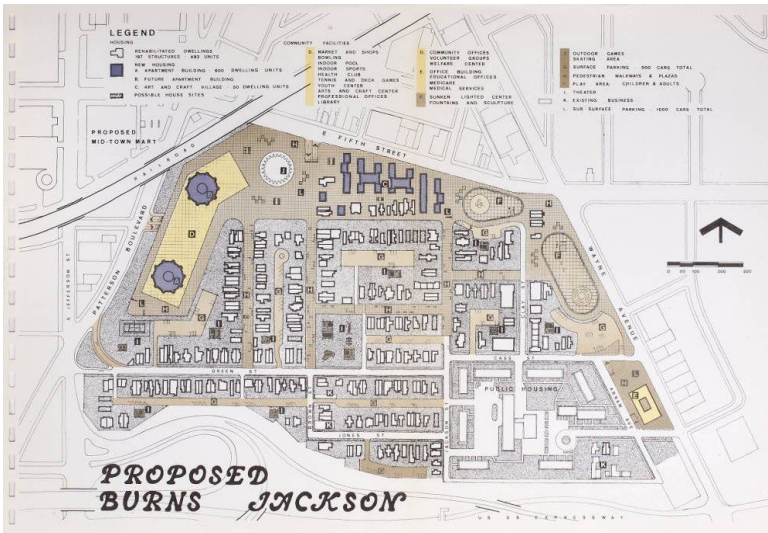
- **Timbre:** the character or quality of a musical sound or voice as distinct from its pitch and intensity.
  - Think about how all of the sounds you might hear in each section will be different.
  - Use the words below to help you describe the timbre of the sounds in each section (you do not have to ONLY choose the words listed below):
    - Reedy, Brassy, Clear, Bright, Focused or Unfocused, Breathly, Dark, Rounded, Piercing Strident, Harsh, Warm, Mellow, Resonant, Heavy, Light, Flat
- **Tempo:** the rate or speed of motion or activity; pace.
  - Each section of your city might have a different pace (speed) of daily living.
  - Use the words below to connect each section of your city to describe the speed using the musical language. Choose one or multiple musical terms to describe the tempo in each section:
    - *Grave* – very slow, *Largo* – broadly, *Lento* – slowly, *Adagio* – slowly with great expression, *Andante* – at a walking pace, *Moderato* – at a moderate speed, *Allegro* – fast, quickly, and bright, *Vivace* – lively and fast, *Presto* – very, very fast
- **Dynamics:** the volume of sounds in music
  - Volume is like turning the dial on your radio up or down. Each section of your city can either have loud and/or soft sounds inside of it.
  - Use the musical terms to describe the volume of each section of your city (you do not have to choose only one per section):
    - Fortissimo: Very Loud, Forte: Loud, Mezzo forte: medium loud, Mezzo piano: medium soft, Piano: Soft, Pianissimo: Very Soft

Your city might have several different sections. Below choose four of the sections (or use additional paper to add more) to describe what you hear, what it sounds like (timbre), the speed (tempo), and volume (dynamics). Please use the musical terms above to help you describe what you hear.

City Sounds				
Section	What you Hear?	Timbre?	Tempo?	Dynamics?
<i>Example: Home Neighborhood</i>	<i>Example: Cars, Kids, Airplanes</i>	<i>Example: Bright, Warm, Full</i>	<i>Example: Moderato</i>	<i>Example: mezzo forte</i>

### PHASE 3: Design Your City

#### Activity 6: Sketch an image of what your city looks like zoomed out.



Begin by sketching the boundaries of your city and major roadways. Use a straight edge to help you draw. Review the elements of your city and begin to include them in your sketch. Think about spacing, how roadways will intersect, and where your city is located. Don't forget to leave space for the buildings, places for people to live, work, and have fun that you brainstormed above.

Create a legend for your design to explain what buildings, places, and more are for in your sketch.

*Example:* Places people live are blue or parks have stripes. Make sure to include your

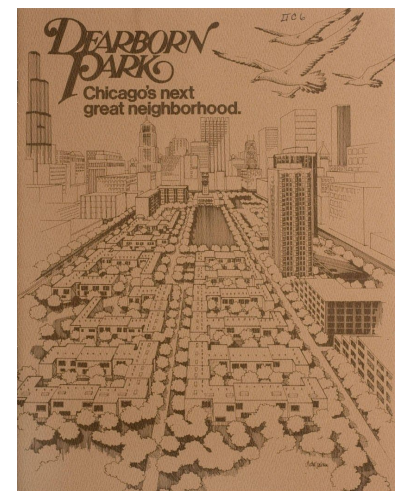
research, unique elements, and common elements of your city design sketch.

#### Activity 7: Sketch an image of what your city looks like zoomed in.

Select a section of your city design to zoom in on like you were using a magnifying glass. Sketch buildings and outdoor space using a lot of detail. Use a straight edge to help you draw. Think about the types of buildings and what they would look like if you were standing next to them in your city. Remember where your city is located and what the landscape will look like.

*Detail Examples:* Different types of trees, windows on a skyscraper, or one story houses people live in.

Make sure to include your research, unique elements, and common elements of your city design.



### PHASE 4: Present Your City



**Activity 8:** Create a persuasive presentation that explains why your version of a city is the ideal one. Use the following templates to organize your research and ideas to present your city to an audience.

**Name Your City** \_\_\_\_\_

**City Tagline** Create a tagline for your city. Think about what makes your city unique!  
Some Examples: Chicago - "The Windy City", New York - "The City that Never Sleeps"

\_\_\_\_\_

\_\_\_\_\_

**Write - Why is your city ideal?** Use the following space to write why your city is ideal and what makes it unique. You'll use your thoughts here as you speak to your audience.

<b>Claim:</b> Begin with a topic sentence that makes a claim that your city is ideal.	
←	<b>Reason 1:</b> Why is your city ideal?  <b>Example:</b> Use the elements of your city and experiences people will have in your city.
	<b>Reason 2:</b> Why is your city ideal?  <b>Example:</b> Use the elements of your city and experiences people will have in your city.
	<b>Reason 3:</b> Why is your city ideal?  <b>Example:</b> Use the elements of your city and experiences people will have in your city.
<b>Closing Sentence:</b> Conclude by restating your claim. Consider including your city tagline.	

## Pitch - How to present your city

Think about how you will share all of this information with your audience. Consider the most important things to say, and how to say them.

Begin by introducing your city, share your city name and tagline.

Welcome to \_\_\_\_\_!  
Name of City Tagline

Share the **traditional elements** of your city that all cities have. What about these elements are ideal or different from other cities? As you speak, show your zoom-out sketch to reference as you show the streets, transportation systems, and public spaces.

In \_\_\_\_\_ our unique transportation systems offer residents  
Name of City

\_\_\_\_\_. As you can see in this sketch, \_\_\_\_\_.  
What's unique about it? Show this in your sketch.

Share the **unique elements** of your city. As you speak, reference and show your zoom-in sketch of a section of your city, and describe the buildings in this section, the landscape in this section, and the sounds of this section.

In \_\_\_\_\_ our residents get to \_\_\_\_\_  
Name of City Unique element (sound or landscape)

As you can see in this sketch, \_\_\_\_\_.  
Show this in your sketch or demonstrate the sounds.

Conclude by reminding your audience why your city is **ideal**, and repeat your tagline.

When speaking to an audience and "pitching" your city, remember the following:

- Make sure your information is presented in a logical, interesting **sequence** that is easy for the audience to follow.
- Be sure to **thoroughly explain** your ideas while still being **concise**.
- Use **visuals** such as your sketches to reinforce your ideas.
- Maintain **eye contact** during your presentation.
- Speak in a **clear voice**, so your audience can understand.

# Enrichment Activities

## Digital Resources

If you have access to the internet, please go to [tinyurl.com/DigitalAtHome](https://tinyurl.com/DigitalAtHome). This document contains links to multiple digital resources that you can use each day.

There are also more resources specific to grades 6-8 at [tinyurl.com/CPSESEnrichment](https://tinyurl.com/CPSESEnrichment).

## Non-Digital Resources

We've designed this section of the packet to provide you the opportunity to:

*Read* *Write* **Move** DESIGN **Solve**

### Directions

1. Each day, pick at least one activity to complete from each category.
2. Keep track of your work on a separate sheet of paper or in a journal.
3. At the end of each day, write a journal entry answering the questions:
  - a. What was my favorite activity today? Why?
  - b. What is something new I learned today?
  - c. What are my goals for tomorrow?

# Read

**Read independently** for at least 30-40 minutes per day (break the time into two or more chunks if that works best). Then select 1-2 questions from the tables below to respond to or to discuss with a friend or family member. You can pick different questions everyday!

## Questions about **fiction**:

Describe a problem or conflict your character faced. How would you solve it?	What lesson(s) do any of the characters learn? What do we, as readers, learn?	What are major turning points in the story? (mood, plot, characterization, etc.)	Pick three adjectives to describe one of the characters. Use examples from the text to support your choices.	Find examples of symbols in your story. What do they mean and what do they add to the story?
Change the genre of your book. What would happen to the main character in this genre?	Analyze the plot structure of your story. Where does the story begin? End?	What are repeated themes in the text? Provide evidence to support your answer.	What examples of figurative language are in the text? What meaning do they hold?	Determine a character's perspective and how it affects the telling of the story.
Create a comic strip that connects major events in your book.	Choose two characters in your story and compare and contrast them.	How does the main character change or develop across the story?	What are the protagonist's strengths and weaknesses?	What is the main conflict in the book? How do the characters react?
How does the author's use of descriptive language add to the story?	Which minor character most influences the protagonist? Give an example and explain why.	Can you draw connections between your story and other stories you have read?	Based on the themes in your book, design a new/alternate cover for your book	Describe how the author creates tension around the conflict. How does it play out in the climax of the story?
What type of language is used to set the tone in your book? Provide evidence and explanations.	How well did the author develop the characters? What did you like about them? What did you dislike?	Identify an important decision made by the protagonist in this chapter. Would you have decided the same thing? Why or why not?	Write a book review about your story, which parts would you highlight to get other readers to read your story?	Choose a few scenes from your book. Write it as a scene from a drama. Include setting, dialogue and directions.

Questions about **informational texts**:

Give examples of when the author uses extreme or absolute language. (leaves no doubt)	Find examples of an author's use of experts to support their claims.	How do the diagrams or photos add to your understanding of the topic?	Create a diagram of a descriptive paragraph provided in your book.	Create an infographic using the facts and figures from your text.
Analyze the language of your text to determine the author's perspective on the issues/topics.	Create an advertisement for your book. Why would other students want to read your book?	Create a jingle or a poem for the topic of your book using information you learned from the text.	Describe the text structures found in your text. How does the organization of the information contribute to the meaning of the text?	Create a children's version of the book or text. What essential information would your young reader need to know?
Write a fictional story from the perspective of a real person or topic in your text. Use information you learned about the person, animal or thing to write the story.	Compare the topic of your book to something similar. Make connections between your topic and the thing you are comparing it to (e.g., storms are like roller coasters).	What questions do you have about your topic? How would you research the answer to your questions?	Write a 2 paragraph critique of your book. Include your opinion about the content of the text and the writing style of the author.	Create a documentary about your topic. Create a storyboard that captures the most interesting or exciting scenes that would be in your documentary.

*Write*

**I Am Poem:** Write a 3 stanza poem on a separate sheet of paper by completing each statement with your own ideas. When you are done, recite the poem for an audience. If you want to write another poem, interview someone and write an I Am Poem for them!

First Stanza: I am (2 special characteristics you have). I wonder (something of curiosity). I hear (an imaginary sound). I see (an imaginary sight). I want (an actual desire). I am (the first line of the poem repeated).

Second Stanza: I pretend (something you actually pretend to do). I feel (a feeling about something imaginary). I touch (an imaginary touch). I worry (something that bothers you). I cry (something that makes you sad). I am (the first line of the poem repeated).

Third Stanza: I understand (something that is true). I say (something you believe in). I dream



(something you dream about). I try (something you really make an effort about). I hope (something you actually hope for). I am (the first line of the poem repeated)

### Start a Writing Journal

Pick one idea to write about every day. Get creative! Write in paragraphs or write a poem. Add illustrations or diagrams. Go back to build on your writing over time as you think of new ideas.

1. What is your favorite holiday? Write the reasons for your choice.
2. What is the bravest thing you have ever done?
3. If you could be a superhero, what extraordinary powers would you give yourself? Explain your choices.
4. What is the one food you would least like to give up for the rest of your life? Explain why.
5. Would you rather be a dog or a cat? Write the reasons for your choice.
6. Who or what makes you laugh? Explain why you think this person or thing is funny.
7. Imagine that you drank a magic potion, and then suddenly you started to grow smaller and smaller. Finally, you were no larger than a fly. What would you do?
8. What is your most prized possession? Explain why it is so important to you.
9. What do you like most about yourself? What do you like least about yourself? Explain your answers.
10. Do you think you have a lot of self-confidence? Explain the reasons for your answer.
11. What is the hardest decision you have ever had to make? Looking back on your decision, do you now think you made the right choice? Explain your answer.
12. What is one goal or hope you have for the future? Explain why it is so important to you.
13. How would you feel if there was a new law forbidding the playing of any music?
14. Who is a hero of yours? Explain why that person means so much to you.
15. Which would you rather be: a fish or a bird? Explain your answer.
16. Invent a new game or a new toy you think people your age would like.
17. Imagine that you had to go to a deserted island for a week. In addition to food, shelter, and other necessities that will be provided, you are allowed to take three personal items. What would they be? Explain the reasons for your choices.
18. Would you prefer to live in a cold climate like Alaska's or a hot climate like Florida's? Explain the reasons for your choice.
19. If you could be anything you want to be when you graduate from college, what would you be? Explain your choice.
20. Write a science fiction or fantasy story in which you are a character.

**Story or Poetry Re-tell:** Copy the beginning of a story or poem, but don't include the ending. Rewrite it yourself!

**Write a Play:** Use the example text below to create a play based on one of your journal entries.

- What is the title of your play?
- List and Description of Characters
- Setting - Where is your play taking place?
- Time - What time is it?
- Major Conflict - What is the major problem the characters are going to confront in this play?
- Curtain Up! - What are the characters doing when the curtain rises?
- Write your dialogue and stage directions. Example below.

ANDREA

[Enters, holding a soccer ball] I can't find it!

TRAVIS

I told you already: it's in the car. [Takes the soccer ball]

## Move

**Healthy Corners:** Identify four activities for the four corners of the room. Activities can include jumping jacks, chair dips, arm circles, calf raises, or squats. Rotate through each corner after doing each activity for 1-2 minutes.

- **Variations:** Play music and when the music stops, rotate between stations.

**Fitness Uno:** Before beginning the game, choose an exercise for each color. Example: Red- Jumping Jacks, Green- Squat Jumps, Blue- Jog in Place, Yellow- Arm Circles. Complete the appropriate exercise for each card that is played. When the card states WILD, pick your favorite exercise to perform.

- **Variations:** If playing the game with the Uno deck of cards, use the number on the deck to indicate how many reps to perform of each workout. You can also use a regular card deck and assign workout movements to each suit.
- **Materials Needed:** Uno Cards or playing cards

**Pulse Rate:** Your pulse rate is the result of blood being pumped through your arteries by your heart. When your heart contracts (pumps), blood moves through blood vessels in your body called arteries. The arteries pulsate as blood rushes through them. This pulsation can be felt in different locations of your body (wrist, neck, chest). During exercise, your heart muscle pumps harder to move oxygenated blood to your muscle cells. Normally at rest, your heart muscle works less because your muscles are not really active. Monitoring pulse rate is one way to evaluate one's cardiovascular fitness. Generally, the healthier your cardiovascular system (heart, arteries), the lower your resting heart rate. While sitting use the second and third fingers of your right hand to find the radial pulse of your left wrist.

1. Once you find your radial pulse, count each pulsation for one minute. Record your result.
2. Repeat procedure #1 five times.
3. Once you have completed your five minutes of data collecting, organize it by forming a line graph.
4. Answer the following questions after organizing your data.
  - What is a pulse?
  - What can your resting pulse rate determine?
  - What effect does exercising have on your pulse rate?
  - What can you determine about your resting heart rate after collecting and charting your data?

- **Variations:** Repeat daily and graph results. Take heart rate after movement and graph it.

**Physical Activity Calendar:** Complete the daily activity in the calendar on the following page. After finishing the activity for today's date, pick any other activity you want and complete that too!

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p><b>1 Mindful Minute</b></p> <p>For 60 seconds, clear your mind &amp; only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</p> <p>Self-Injury Awareness Day</p>	<p><b>2</b></p> <p>Try and sprint from one end of your street to the other. Have a family member time you.</p>	<p><b>3 Mindful Minute</b></p> <p>For 60 seconds, clear your mind &amp; only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</p>	<p><b>4</b></p> <p>5 walking lunges 5 jumping split squats 5 jump squats</p> <p>3 times through</p>	<p><b>5 Partner Challenge</b></p> <p>Sit back to back with a friend and link arms. Try to stand up without unlinking arms.</p>	<p><b>6 Fitness Intervals</b></p> <p>10 squats 10 broad jumps 10 second sprints 10 pushups 10 sit-ups</p> <p>National Day of Unplugging (starts at sundown)</p>	<p><b>7 Jab, Jab, Cross</b></p> <p>Jab twice with your right fist then punch across your body with your left. Complete 10 times then switch sides.</p> <p>National Day of Unplugging (ends at sundown)</p>
<p><b>8 Sugarcane Pose</b></p> <p>Hold Sugarcane Pose for 30 seconds on each side.</p> 	<p><b>9 Limbo</b></p> <p>Grab a broom stick and have 2 people hold it. Take turns going under the stick arching backwards. Lower the stick after each successful pass. How low can you go?</p>	<p><b>10 Crazy 8's</b></p> <p>8 jumping jacks 8 leaps 8 frog jumps 8 vertical jumps (as high as you can) Repeat 3 times</p>	<p><b>11 Between the Knees</b></p> <p>Gather rounded objects of varying size. Starting with the largest try walking around your house keeping the object between your knees.</p>	<p><b>12 Happy Baby Pose</b></p> <p>Straighten your legs for an added challenge.</p> 	<p><b>13 Toe Fencing</b></p> <p>With a partner, hold each other's shoulders. Try to tap the other person's toe without having yours tapped.</p> <p>National Good Samaritan Day</p>	<p><b>14 Chest Pass</b></p> <p>Practice your chest passes against a brick wall. Remember to step towards your target.</p>
<p><b>15</b></p> <p>Put a piece of tape on the ground and jump back and forth as quick as you can for 30 seconds.</p>	<p><b>16 Mindful Minute</b></p> <p>For 60 seconds, clear your mind &amp; only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</p>	<p><b>17 Code Words</b></p> <p>While watching TV any time you hear the code words complete 10 jumping jacks.</p> <p>Code words: green, St. Patrick's Day, lucky, leprechaun</p>	<p><b>18 Mindful Minute</b></p> <p>For 60 seconds, clear your mind &amp; only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</p>	<p><b>19 Pretend!</b></p> <p>Pretend to:</p> <ul style="list-style-type: none"> <li>-Sit in a chair for 10 seconds</li> <li>-Shoot a basketball 10 times</li> <li>-Ride a horse</li> <li>-Be a frog</li> <li>-Lift a car</li> </ul>	<p><b>20 Jump, Jump</b></p> <p>Jump side-to-side over an object or line for 1 minute straight. Go again but jump front to back. Repeat each jump twice.</p>	<p><b>21 Walking Race</b></p> <p>Pick a distance and challenge a friend to a speed walking race. No running!</p>
<p><b>22 Dance, Dance</b></p> <p>Put on your favorite song or turn on the radio. Dance however you like during the entire song!</p>	<p><b>23</b></p> <p>Complete 25 of the following:</p> <ul style="list-style-type: none"> <li>High Skip</li> <li>Squat Jumps</li> <li>High Knees</li> <li>Walk backwards</li> </ul>	<p><b>24 Squat with Kicks</b></p> <p>Complete a squat when standing kick one leg forward. Be sure to alternate legs on each squat. Complete 10.</p>	<p><b>25 Fitness Intervals</b></p> <p>10 squats 10 broad jumps 10 second sprints 10 pushups 10 sit-ups</p>	<p><b>26 Do this:</b></p> <ul style="list-style-type: none"> <li>-Hop on one leg 30 times, switch legs</li> <li>-Take 10 giant steps</li> <li>-Walk on your knees</li> <li>-Do a silly dance</li> <li>-Sprint for 10 seconds</li> </ul>	<p><b>27 Set the Menu</b></p> <p>Talk with who takes care of you about choosing the dinner menu. Pick items that are healthy and yummy.</p>	<p><b>28 Vertical Jump</b></p> <p>Jump as high as you can for 30 seconds. Repeat.</p>
<p><b>29 Ragdoll Pose</b></p> <p>Hold Ragdoll Pose for 30 seconds. Repeat.</p> 	<p><b>30 Jab, Jab, Cross</b></p> <p>Jab twice with your right fist then punch across your body with your left. Complete 10 times then switch sides.</p>	<p><b>31 Mindful Minute</b></p> <p>For 60 seconds, clear your mind &amp; only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</p>	<p><b>National Health Observances:</b></p> <ul style="list-style-type: none"> <li>National Nutrition Month</li> <li>1<sup>st</sup> Self-Injury Awareness Day</li> <li>6<sup>th</sup> -7<sup>th</sup> National Day of Unplugging (sundown-to-sundown)</li> <li>13<sup>th</sup> National Good Samaritan Day</li> </ul> <p>Yoga pictures from <a href="http://www.forteyoga.com">www.forteyoga.com</a></p>		<p>SHAPE America recommends school-age children accumulate at least 60 minutes and up to several hours of physical activity per day. Each bout of physical activity should be followed by cool-down stretches that help reduce soreness and avoid injury. Happy exercising!</p>	

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<https://www.shapeamerica.org/publications/resources/teachingtools/teachertoolbox/activity-calendars.aspx>

## DESIGN

**Designing Solutions:** Find a few short articles from magazines, newspapers, or other nonfiction texts. Identify a real-world problem in what you read and design a solution to address the problem. After drawing your design, look for items around the house that you can use to build a model of your solution. Then answer the following questions:

- What is the problem you are trying to solve?
- Who will your solution help?
- How will you convince others to use your solution?
- Share your solution with a family member or trusted adult and ask for feedback.
- Revise your design and model to address the feedback you heard.

**Rube Goldberg Machine:** Identify a simple task and use household items to design and build a multi-step machine to complete the task. Before building your machine, answer the following

questions:

- What task are you trying to solve? (Closing a door is a great task to start with, but you can choose anything!)
- What steps will you include in your machine? (Try to include at least 10!)
- What materials will you need?
- What will you do if your machine doesn't work at first?

**Musical Art:** Gather paper and any art supplies (crayons, markers, paints), and a music source. Play any song and listen to the music. What do you see in your mind? What do you hear? What do you feel? Use your art supplies to express what you are seeing/hearing/feeling on paper. Repeat with two more songs, trying to find songs that sound different from one another. After you finish, talk about (or write) about what you created. Do they look different based on what you heard? Develop titles for your artwork.

## Solve

See the tasks below & others at [youcubed.org/tasks](https://youcubed.org/tasks).

**Penny Collection:** Consider a collection of pennies with the following constraints: When the pennies are put in groups of 2 there is one penny left over. When they are put in groups of three, five and six there is also one penny left over. But when they are put in groups of seven there are no pennies left over. How many pennies could there be?

**Nine Colors:** You have 27 small cubes, 3 each of 9 colors. Can you use all the small cubes to make a 3 by 3 by 3 cube so that each face of the bigger cube contains one of each color?

**Ice Cream Scoop:** In shops with lots of ice-cream flavors there are many different flavor combinations, even with only a 2-scoop cone. With 1 ice-cream flavor there is 1 kind of 2-scoop ice cream, but with 2 flavors there are 3 possible combinations (eg vanilla/vanilla, chocolate/chocolate, and vanilla/chocolate). How many kinds of 2-scoop cones are there with 10 flavors? What about "n" flavors?

**Leo the Rabbit:** Leo the Rabbit is climbing up a flight of 10 steps. Leo can only hop up 1 or 2 steps each time he hops. He never hops down, only up. How many different ways can Leo hop up the flight of 10 steps? Provide evidence to justify your thinking.

**Four 4's:** Can you find every number between 1 and 20 using only four 4's and any operation? Here's an example  $\sqrt{4} + \sqrt{4} + 4/4 = 5$

**What's the Secret Code?:** Use the clues to find the code number:

- It is between 8,500 and 8,800.
- When multiplied by 8, the result is a whole number.
- The digit in the hundreds place is  $\frac{3}{4}$  the digit in the thousands place.
- The sum of all digits in the number is 26.
- The digit in the hundredths place is 200% of the digit in the tenths place.
- There are no zeros in the decimal places.

What code numbers fit these clues? Explain how you used all of these clues to find these possibilities. Write one more clue so that there is only one possible code number.