

# School Finance Simulation

*What does it mean for school funding to be fair?*

**Setting the stage:** Imagine that you live in a very small state that has only five municipalities: Ashville, Brookline, Carlton, Dover, and Eastburg. Each has its own school district. Your task in the following simulation is to ensure that each district is funded in a way to meet the priorities of the both the state and the individual districts. Local currency is in dollars, but may vary from the familiar U.S. dollars.



We're going to be doing some calculations today, so let's start with a familiar example to review how to work with percentages:

**Task #1:** Suppose you are out to dinner with a group, and the final bill totals exactly \$200. If you leave a 15% tip, how much would that be? What would a 20% tip be? Show enough work to be able to explain to your neighbor the process you used to figure out these two tip amounts. Circle your answers.

When you are finished, explain to your neighbor how you calculated 15% and 20% of \$200.

Assume for the sake of this activity that it costs \$100 per year to provide an adequate education for a single student. We call this number the **adequacy threshold**. This means providing a full range of course offerings, extracurricular activities and limiting class sizes to 20 students in elementary school, 24 in middle school, and 30 in high schools. Districts may decide to exceed the adequacy threshold and provide more services or staff for their students, but if a district spends less than this amount, they must cut services, or increase class size by laying off teachers. In this simulation (as in New Jersey) we will make the assumption that every student in the state is legally entitled to an adequate level of funding for education.

**Adequacy threshold = \$100 per student per year**

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**Property value** refers to how much land and buildings are worth, and includes property from residences, business and industry. These values are used to calculate taxes to pay for school, though property such as churches, parks, and protected open space are exempt from these taxes. One important value to know for each district is the **property value per pupil**. For example, if a town has \$100,000 worth of property and 500 pupils, it will have \$2000 of property value per pupil.

$$\frac{\$100,000 \text{ property value}}{500 \text{ pupils}} = \$2000 \text{ of property value per pupil}$$

This amount is then used to calculate how much money can be raised by a property tax. Give it a try now:

**Task #2: Calculate property tax per pupil.**

Property value per pupil	Tax Rate	Property tax revenue per pupil	Is this adequate? (\$100 per pupil or higher?)
\$2000	10%	$\$2000 \times 0.10 = \$200$	yes
\$2000	20%	$\$2000 \times 0.20 =$	
\$2000	15%		
\$2000	5%		
\$2000	2.5%		
\$2000	1%		
\$2000	Try out a rate of your choice		

Those are the basics. Let's begin the game!

**The goal: Fund your schools as best you can while keeping taxes as reasonable as possible.**

For this simulation we will have **three school board meetings** and **two state assembly meetings**. Each round, your school district will hold a board meeting to set and vote upon the property tax rate.

If your rate is **too high**, people and businesses may move out of town. Fewer will move in.

If it is **too low**, you might not raise enough money to run your schools.

After the first round, you will be given an opportunity to submit a request for state aid, which is money that comes from sales tax and income tax. Each school board will send a representative to the legislature to decide how the state money is to be divided among the five districts. Let's start with the first school board meeting...

**Task #3: Prepare your school district budget, funded solely by property taxes**

Each town will now figure out how much money needs to be raised to fund their schools adequately, then have a school board meeting to set the tax rate, and make decisions about adding or cutting things to the budget. Here is the state data on each district:

District	% of students in state	Total property value	Property value per pupil
Ashville (1,500 pupils)	3%	\$900,000	\$600
Brookline (30,000 pupils)	60%	\$24,000,000	\$800
Carlton (3,000 pupils)	6%	\$3,000,000	\$1000
Dover (15,000 pupils)	30%	\$48,000,000	\$3200
Eastburg (500 pupils)	1%	\$3,000,000	\$6000

Each district needs to figure out three things before the first round starts. Use the Excel spreadsheet to help you with these calculations, and input the numbers for your district:

- 1.) If your tax rate is set at 10%, which is the average property tax rate in the state, how far above or below the adequacy number (\$100 per pupil) would your district be?

- 2.) What would be the total dollar amount of funding your district would need to run at an adequate level? (\$100 per pupil x # of pupils)

- 3.) In order to fund the district at an adequate level from local property taxes alone, at what percentage would the property tax need to be set?

**Task #4: First School Board Meeting:**

Now have a school board meeting to choose the desired tax rate for your district. Note that people like **low tax rates** and **high-quality education**. As a group, discuss the benefits and drawbacks of the various proposals made by your fellow board members.

Circle the choices your district makes (spending and/or cutting):



<p>If you choose to spend <b>over</b> the \$100 per student amount you may:</p> <ul style="list-style-type: none"> <li>• Add a gifted &amp; talented program (\$20 per pupil)</li> <li>• Provide additional transportation, security, and tutoring services (\$50 per pupil)</li> <li>• Expand extracurricular activities and afterschool programs (\$100 per pupil)</li> <li>• Lower class sizes by hiring more teachers (\$50 per pupil)</li> <li>• Purchase high quality professional development for teachers (\$200 per pupil)</li> <li>• Expand the instructional technology at your schools (\$200 per pupil).</li> <li>• Increase supply orders for teachers (\$ ??)</li> </ul>	<p>If you must spend <b>under</b> the \$100 per student amount you may:</p> <ul style="list-style-type: none"> <li>• Cut back on non-core academics like art and music (\$20 per pupil)</li> <li>• Reduce supply orders for teachers (\$10 per pupil)</li> <li>• Cut extracurricular activities and afterschool programs (\$15 per pupil)</li> <li>• Cut funds for field trips and other transportation costs (\$20 per pupil)</li> <li>• Share guidance counselors, school nurses, and world language teachers at multiple schools (\$20 per pupil).</li> <li>• Raise class sizes by laying off more teachers (\$50 per pupil)</li> </ul>
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Use the Excel spreadsheet (Task #4 tab) to help you calculate the figures below.

How much do you wish to spend per pupil? \$ \_\_\_\_\_

How much money will you need to raise? \$ \_\_\_\_\_

Agreed upon district tax rate: \_\_\_\_\_ %

**Task #5: Prepare your school district proposal for state aid**

The state is prepared to help finance K-12 education in the five districts, and has allocated a total of \$500,000 to offer in state aid. Use the Excel spreadsheet to decide on the amount your district will request and prepare to defend this amount at the congressional budget meeting.

How much do you wish to spend per pupil? \$ \_\_\_\_\_

Amount of state aid requested by district \$ \_\_\_\_\_

New tax rate if requested state aid is approved: \_\_\_\_\_ %

**Task #6: Congressional budget meeting:**

Each district will send a representative to a congressional budget meeting. Each district should make an argument for their proposed budget. Engage in this process democratically, and have a discussion about the fairest way to divide up the state aid before taking a vote.

District	Total Students	% of students in state	State aid (\$500,000 total)
Ashville	1,500	3%	
Brookline	30,000	60%	
Carlton	3,000	6%	
Dover	15,000	30%	
Eastburg	500	1%	

**Task #7: District budget meeting:** Now that you have your state aid, decide as a district whether you will use the money to lower property taxes, increase school spending, or do a little bit of both. Try out different scenarios using the spreadsheet. Decide on the district's final tax rate with a proposal and a vote.

**Final Results:**

District	Total Students	% of students in state	State aid (\$500,000 total)	Final per pupil spending	Final tax rate
Ashville	1,500	3%			
Brookline	30,000	60%			
Carlton	3,000	6%			
Dover	15,000	30%			
Eastburg	500	1%			

Essential Question: What does it mean for school funding to be **fair**?  
 Does it mean that the **per pupil spending** is equal?  
 Or does it mean that the **tax rate** is equal?



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