

ECONOMICS REFERENCE SHEET 3-5

Econ Quick Reference Sheet – THIRD GRADE

Standard/Elements	SS3E1 The student will describe the four types of productive resources: <ol style="list-style-type: none"> a. Natural (land) b. Human (labor) c. Capital (capital goods) d. Entrepreneurship (used to create goods and services)
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KEY CONTENT for SS3E1

All goods use some combination of the four **productive resources**. Common misconceptions in this area include: 1) Capital is money, 2) Any time a person is involved, they must be using human resource (or they always represent labor), 3) If a machine changes it, it can't be a natural resource. Here are some quick bullet points to help clarify what should go in each category.

- **Natural (land)**
 - Physical land, minerals, oil, animals
 - Typically things not in a useable form naturally
 - (i.e., rubber qualifies, rubber bands do not)
- **Human (labor)**
 - Includes physical AND mental talents
 - Construction workers AND Lawyers are examples of human resources
- **Capital**
 - Produced goods that can be used to make other goods
 - Machines, factories, tools, buildings
 - Whenever a company buys one of these things, they are INVESTING in their business
- **Entrepreneurship**
 - The capacity for organizing the other three resources
 - People who START business typically fall into this category, not necessarily managers or people who are put into positions of power once the business is running
 - It is possible, especially early on in the business, for the entrepreneur to also perform some labor

Standard/Elements	SS3E2 The student will explain that governments provide certain types of goods and services in a market economy and pay for these through taxes and will describe services such as schools, libraries, roads, police/fire protection, and military.
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KEY CONTENT for SS3E2

In advanced levels of economics it is often taught that the reason governments provide certain goods and services is because the market, when left alone, will not typically produce goods that everyone in a society can benefit from while only a few people pay for it. Assume, for example, your local government did not provide fire protection and that fire protection was handled by a private company that required people to pay for their services in the form of a membership. It would be unlikely in that situation that people in connected apartments would all join the company. If I know my neighbor has bought the protection, I don't need to because in the event of a fire, the company will come no matter what to protect his place (connected to mine) therefore I also get the protection and can become a *free rider*. To prevent this, the government forces everyone to pay for services that can be used by everyone. When the government fails to meet the needs or desires of society, they may see some competition as seen in private schools and prisons operated by private corporations.

It is very important to discuss with students the importance of taxes being tied to income. Because of this, some areas have BETTER services than others.

Standard/Elements	<p>SS3E3 The student will give examples of interdependence and trade and will explain how voluntary exchange benefits both parties.</p> <ol style="list-style-type: none"> a. Describe the interdependence of consumers and producers of goods and services. b. Describe how goods and services are allocated by price in the marketplace. c. Explain that some things are made locally, some elsewhere in the country, and some in other countries. d. Explain that most countries create their own currency for use as money.
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KEY CONTENT for SS3E3

This standard touches on a major theme in economics, that of **interdependence**. Economic decisions are not made in a vacuum. Every economic decision or event has an impact on someone or something else in the economy.

Elements a and b deal with the idea of markets. How much we pay for a good when we go to the store is largely determined by the market. How much are we willing to pay versus how much is the producer willing to sell for? A variety of items play into this:

- **Related Goods:** What would you expect to happen to the amount of cereal sold if the price of milk tripled? What would you expect to happen to the amount of Pepsi sold if the price of Coke was cut in half? Whether goods are substitutes or complements, interdependence is important when one good in a market changes.
- **Preferences:** Why don't Beanie Babies sell as much as they used to? Why has the diet drink industry boomed in the last 10-15 years? Consumer preferences often dictate prices (especially short term) and amount sold in a particular market.
- **Number of Buyers/Sellers:** Fairly self explanatory. As the number of buyers in a market increase, price is likely to increase. As the number of sellers increase, the price of a good or service is likely to decrease.
- **Government, technology, expectations, and income also affect markets for goods and services.**

Element c is pretty straightforward, but students need to be aware of the importance of having goods made all over the world. Ask students how they are able to go to the grocery store in January and February and still buy watermelon or strawberries when there are none growing around them. The fact that we can get things we want when we want them is a benefit of interdependence and voluntary exchange.

For element d, students need to know that for markets (like mentioned in elements a and b) to work, there must be some medium of exchange. Countries create their own currency to facilitate this exchange. The value of a country’s currency is a function of their economy, beliefs, and types of money they offer and can change value in relation to the dollar on a daily basis.

Standard/Elements	SS3E4 The student will describe the costs and benefits of personal spending and saving choices.
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KEY CONTENT for SS3E4

This standard does not list any specifics on purpose. Students need to realize that every decision they make concerning use of their resources – NOT JUST MONEY – has costs and benefits. The costs and benefits should be chosen by the teacher and appropriate to the class. The following chart is intended as a guide to help you get started; your student's answers will differ and be meaningful in context of their choices:

	Common Benefits	Common Costs
Spending (using resources)	<ul style="list-style-type: none"> - Happiness or joy from getting something you want or need - Using the good you purchased - Making someone else happy with a gift 	<ul style="list-style-type: none"> - The actual cost of the good - Opportunity costs, what was given up to get the good or service - Losing ability to save
Saving (conserving resources)	<ul style="list-style-type: none"> - Ability to make a larger purchase later - Earning interest (if applicable) on money in the bank 	<ul style="list-style-type: none"> - Risk losing value if inflation occurs - Giving up happiness or joy currently

Econ Quick Reference Sheet – FOURTH GRADE

Standard/Elements	<p>SS4E1 The student will use the basic economic concepts of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events.</p> <ol style="list-style-type: none"> a. Describe opportunity costs and their relationship to decision-making across time (such as decisions to send expeditions to the New World). b. Explain how price incentives affect people’s behavior and choices (such as colonial decisions about what crops to grow and products to produce). c. Describe how specialization improves standards of living (such as how specific economies in the three colonial regions developed). d. Explain how voluntary exchange helps both buyers and sellers (such as prehistoric and colonial trade in North America). e. Describe how trade promotes economic activity (such as how trade activities in the early nation were managed differently under the Articles of Confederation and the Constitution). f. Give examples of technological advancements and their impact on business productivity during the development of the United States.
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COMMENTS on SS4E1

The idea here is that students can take major concepts found in economics and apply them to various historical events. Teachers are not limited to the examples given in parentheses.

Opportunity costs: the value placed on whatever is lost when a decision is made. If a student chooses a cookie instead of a brownie for a snack, the brownie becomes part of the opportunity cost. Opportunity cost is not always measured in dollar amounts. The relationship to decision making is that people, when making rational decisions, make choices so that they minimize their opportunity cost. In the example in element a, the countries that decided to send expeditions to the New World gave up money that could have been used to build bigger militaries, explore other areas, etc.

Price incentives: refers to the fact that most people, acting rationally, will change their choices in an indirect relationship to the way prices change. If prices increase, people buy less. If prices decrease, people buy more. If a person is trying to choose between two goods that will make them equally happy and one good is made cheaper, they will choose that good. Producers want to produce goods that they can sell at the highest price. Ultimately, students need to understand how price can be an incentive to change behavior.

Specialization/Standard of Living: Specialization is the act of producing one good or one set of goods based on your efficiency. The opposite of specialization is self-sufficiency, where you take care of all your needs yourself. Most people do not work on their own car, fix their own computer, do their own taxes, cook all of their meals, prescribe their own medicine when they are sick, and write their own insurance policies. People specialize in these areas. This leads to an increase in standards of living because as people specialize and become very good at producing certain goods and services, people will pay them to produce those goods or

perform those services. This allows the person who specializes to have money to spend on someone else’s goods or services. Without specialization, everyone has to produce all the goods they need and want and perform all the services. Ultimately, this will lead to people doing things or making things they are not good at, taking extra time and wasting resources.

Voluntary exchange: follows as a logical result from specialization. Voluntary exchange benefits buyers because it allows them the freedom to search out goods or services they want and determine how much they wish to spend on these items. Sellers benefit from voluntary exchange because it allows them the ability to sell their goods and services at a price they want. Both the buyer and seller get a benefit from the transaction because they chose to enter it. Non-voluntary exchange can cause problems for the buyer and seller. For example, if sellers are forced to sell a good for an artificially cheap price and they can’t profit from the sale, there will likely be a shortage in the market.

Trade: typically discussed as an economic concept concerning a country or countries exchanging goods. In element *e* the focus is on how trade promotes economic activity. The main idea is that as a country engages in trade several things begin to happen. As exports increase, more jobs become available, more money comes in to the economy, and new markets open to the goods being produced. As imports increase, a greater variety of goods are available, prices (in a completely free trade situation) will likely decrease, and there is more competition. All of these items can be discussed as positives and negatives depending on the views taken.

The last element, *f*, asks students to make the connection between technology and productivity. There is no specific example on purpose. Teachers should use multiple examples throughout the course to make this point.

Standard/Elements	SS4E2 The student will identify the elements of a personal budget and explain why personal spending and saving decisions are important.
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COMMENTS on SS4E2

This standard continues to build on the personal finance standards present in earlier grades and will continue to build through the middle school courses. Here, the idea of a budget is introduced for the first time. The basic elements of a budget are income and expenditures. In order to discuss the importance of spending and saving decisions, students need to understand the role income and expenditures play in a budget. You may want to ask students questions such as: “What happens when expenditures exceed income?” or “Why might you try not to spend all of your income?”

Budgets do not have to be done with money. Since many elementary school students will not have experience with monetary incomes, they can budget time or toys. For example, you’ve got 30 minutes on the play ground and 3 games you want to play. You need to save 5 minutes at the end to get cleaned up. What are some various ways you can budget your time? This can lead to questions such as; “What happens if you don’t save 5 minutes to get clean?” “Why might you want to save more than 5 minutes to clean up?”

Econ Quick Reference Sheet – FIFTH GRADE

Standard/Elements	<p>SS5E1 The student will use the basic economic concepts of trade, opportunity cost, specialization, voluntary exchange, productivity, and price incentives to illustrate historical events.</p> <ol style="list-style-type: none"> a. Describe opportunity costs and their relationship to decision-making across time (such as decisions to remain unengaged at the beginning of World War II in Europe). b. Explain how price incentives affect people’s behavior and choices (such as monetary policy during the Great Depression). c. Describe how specialization improves standards of living, (such as how specific economies in the north and south developed at the beginning of the 20th century). d. Explain how voluntary exchange helps both buyers and sellers (such as among the G8 countries). e. Describe how trade promotes economic activity (such as trade activities today under NAFTA). f. Give examples of technological advancements and their impact on business productivity during the development of the United States.
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KEY CONTENT for SS5E1

The idea here is that students can take major concepts found in economics and apply them to various historical events. Teachers are not limited to the examples given in parentheses.

Opportunity costs: the value placed on whatever is lost when a decision is made. If a student chooses a cookie instead of a brownie for a snack, the brownie becomes part of the opportunity cost. Opportunity cost is not always measured in dollar amounts. The relationship to decision making is that people, when making rational decisions, make choices so that they minimize their opportunity cost.

Price incentives: refers to the fact that most people, acting rationally, will change their choices in an indirect relationship to the way prices change. If prices increase, people buy less. If prices decrease, people buy more. If a person is trying to choose between two goods that will make them equally happy and one good is made cheaper, they will choose that good. Producers want to produce goods that they can sell at the highest price. Ultimately, students need to understand how price can be an incentive to change behavior.

Specialization/Standard of Living: Specialization is the act of producing one good or one set of goods based on your efficiency. The opposite of specialization is self-sufficiency, where you take care of all your needs yourself. Most people do not work on their own car, fix their own computer, do their own taxes, cook all of their meals, prescribe their own medicine when they are sick, and write their own insurance policies. People specialize in these areas. This leads to an increase in standards of living because as people specialize and become very good at producing certain goods and services, people will pay them to produce those goods or perform those services. This allows the person who specializes to have money to spend on someone else’s goods or services. Without specialization, everyone has to produce all the goods

they need and want and perform all the services. Ultimately, this will lead to people doing things or making things they are not good at, taking extra time and wasting resources.

Voluntary exchange: follows as a logical result from specialization. Voluntary exchange benefits buyers because it allows them the freedom to search out goods or services they want and determine how much they wish to spend on these items. Sellers benefit from voluntary exchange because it allows them the ability to sell their goods and services at a price they want. Both the buyer and seller get a benefit from the transaction because they chose to enter it. Non-voluntary exchange can cause problems for the buyer and seller. For example, if sellers are forced to sell a good for an artificially cheap price and they can't profit from the sale, there will likely be a shortage in the market.

Trade: typically discussed as an economic concept concerning a country or countries exchanging goods. In element *e* the focus is on how trade promotes economic activity. The main idea is that as a country engages in trade several things begin to happen. As exports increase, more jobs become available, more money comes in to the economy, and new markets open to the goods being produced. As imports increase, a greater variety of goods are available, prices (in a completely free trade situation) will likely decrease, and there is more competition. All of these items can be discussed as positives and negatives depending on the views taken.

The last element, *f*, asks students to make the connection between technology and productivity. There is no specific example on purpose. Teachers should use multiple examples throughout the course to make this point.

Standard/Elements	<p>SS5E2 The student will describe the functions of the three major institutions in the U. S. economy in each era of United States history.</p> <ul style="list-style-type: none"> a. Describe the private business function in producing goods and services. b. Describe the bank function in providing checking accounts, savings accounts, and loans. c. Describe the government function in taxation and providing certain goods and services.
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KEY CONTENT for SS5E2

The big idea behind this standard is that students understand how the three institutions listed function as a part of the economy as a whole. In later economics courses, students will learn about the circular flow of the economy and how money flows between households, businesses, and the government. They will also discuss how banks facilitate this flow through the various services they provide.

Element a is pretty straightforward. Businesses produce goods and services that are needed or wanted at that time. Businesses don't produce typewriters anymore because there is not a large market for them. Students simply need to realize that in different eras, different goods and services were produced.

Element b targets banks and their products and services. Most directly, students need to understand that when money is put into a bank, the bank holds that money so the person can use it when they need it (checking account). The bank may also pay that person some money to

leave a larger amount in the bank for a longer time (savings account). While that money is sitting there, not being used, the bank may loan it to someone else and charge them interest.

Element c builds directly on SS3E2 that dealt with government providing public goods and paying for those with taxes. The types of taxes the government imposes have changed over the years and the amount of services they provide have grown considerably over time.

Standard/Elements	<p>SS5E3 The student will describe how consumers and businesses interact in the United States economy across time.</p> <ul style="list-style-type: none"> a. Describe how competition, markets, and prices influence people’s behavior. b. Describe how people earn income by selling their labor to businesses. c. Describe how entrepreneurs take risks to develop new goods and services to start a business.
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KEY CONTENT for SS5E3

This purpose of this standard is to get students to understand some basic principles behind what they will eventually call microeconomics. The idea of markets is first introduced in Second Grade and the idea that people can get paid for their labor is first approached in Kindergarten. Element c builds on a Third Grade standard dealing with the four productive resources.

In regards to element a, students need to understand that competition in a market will typically drive prices down. Lower prices, obviously, means that more of the good can be sold. An example many students can relate to is the fast food industry. Fast food is relatively inexpensive because there are so many options. If one company tried to raise their prices substantially, they would not get as much business because of the competition.

Elements b and c are an extension of earlier standards concerning the same subject matter. People found in the history standards can be used as examples of entrepreneurs. SS5H3d, which revolves around immigration, can be tied to selling their labor.

Standard/Elements	<p>SS5E4 The student will identify the elements of a personal budget and explain why personal spending and saving decisions are important.</p>
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KEY CONTENT for SS5E4

This standard continues to build on the personal finance standards present in earlier grades and will continue to build through the middle school courses. This is an extension of the fourth grade introduction of the budget. The basic elements of a budget are income and expenditures. In order to discuss the importance of spending and saving decisions, students need to understand the role income and expenditures play in a budget. You may want to ask students questions such as: “What happens when expenditures exceed income?” or “Why might you try not to spend all of your income?”

Budgets do not have to be done with money. Since many elementary school students will not have experience with monetary incomes, they can budget time or toys. For example, you've got 30 minutes on the play ground and 3 games you want to play. You need to save 5 minutes at the end to get cleaned up. What are some various ways you can budget your time? This can lead to questions such as; "What happens if you don't save 5 minutes to get clean?" "Why might you want to save more than 5 minutes to clean up?"

“The Land of Snakes and Donuts”

Purpose: This lesson is designed as a starting point for students to actually practice some of the basic concepts found in economics. There are literally hundreds of variations of this activity that can be used to teach almost any elementary economic lesson.

Materials: This can be varied as well, but essentially, you will need:

- Play-Doh or some molding clay or something students can use to “make” something.
- Fake money or something that can be used as money
- Pens, markers, pencils (UNSHARPENED), paper
- Some variations on the lesson may require other materials

Basic Lesson: This is a progressive lesson in economics. It starts very basic and each step introduces a new, more complex component of economics. The teacher may introduce variations at each step to emphasize certain points with the students. Ultimately this activity is designed to give students an interactive example that they can use to apply these concepts to real, practical situations later on (particularly in 4th and 5th grades). It is not necessary to complete every step of this activity in one session. In reality, it may be more effective to complete one step, discuss it and talk about real life examples prior to engaging in the next step.

STEP	ACTIVITY	APPLICABLE STANDARDS	CONCEPTS
1	Students, in groups are given one can of play-doh. They are told that this play-doh represents a natural resource (or in early grades “something to make things with”). Can discuss resources if desired at this point. Students are told that they are in a group (country, city, etc) that needs two goods: snakes and donuts. They are responsible for making these goods. The teacher should demonstrate how to make each good if necessary. The snakes are long, skinny pieces that are rolled out to be the length of an unsharpened pencil. Anything shorter than a pencil is not useful. To make donuts, you connect the two ends of the snake. To be useful, the donut must be big enough to go around the Play-doh canister.	KE3a 3E1a-d	*Resources

2	<p>Now give the students 15 seconds (recommended, but vary time as needed) to make as many snakes as they can. Repeat this several times so students get the hang of making the snakes, starting over every time. Then give them the same amount of time to make as many donuts as they can and repeat several rounds. Then give the SAME amount of time and ask students to make BOTH snakes and donuts. They will probably make less as they divide their resources. Discuss with the students why they weren't able to make as much when they had to make both things. If they were able to make the same amount, they were likely smaller OR they had previously had left over resources and now they are using all of their resources. Also discuss how the members of the group are getting better at making goods and if some people are better at certain things than others.</p> <p><i>***There is a potential math connection here. Students can graph their production at different points either on a bar graph or linear graph.</i></p>	KE1(work in general), KE2, KE4 1E1, 1E2, 2E1 4E1a 5E1a	*Specialization *Scarcity/ Opportunity Cost
3	<p>Now you are going to have students make the snakes and donuts, but pay them (fake money or candy). The rate of pay should be decided by the teacher (per item, by amount of time...). Vary the rate of pay to offer incentives. For example, during one round, pay more for snakes than donuts and let students decide how they want to divide their resources, knowing that they have to have both goods. Can pay by student or by group to emphasize various points. Do not let students do anything with their money yet.</p>	KE1, KE2 1E1, 1E3 2E2 4E1b 5E1b	*Incentives *Scarcity
4	<p>Now announce that as the groups have progressed, they want snakes and donuts of different colors. Discuss with students how, if they only have one color, how they will get other colors. (This is a great opportunity to teach the</p>	KE2 1E3 2E2, 2E3 3E3a-d 4E1b-e 5E1b-e 5E3a,b	*Trade *Scarcity *Incentives *Interdependency *Role of Money

	<p>2nd grade standard about allocation of goods!) They may decide to trade evenly. Discuss some drawbacks to this (different sizes/quality, what if some groups don't have enough to trade or don't want certain colors, etc). They may decide to use money to buy snakes and donuts. If they do this, let the students see if they can work out a price on their own. Have students describe why money is better than barter. Discuss why the price ended up there. Depending on the math level of the students, you may discuss averages or mean, median, mode with students here. The other major discussion point here is about why trade and voluntary exchange is necessary. They should see that with trade, people were able to get more colors and allowing it to happen voluntarily meant that people could decide for themselves what they wanted to buy and sell for.</p>		
5	<p>By now students should all have some money of their own. If they don't, encourage them to make some more snakes/donuts to earn some money. Ask them, based on the current price of snakes and donuts, how many they would be able to buy. What happens if they buy too many donuts? At this point students can start to create a budget, if appropriate, but all students should be able to discuss the pros and cons of their decision.</p>	KE3b, KE4 1E3, 1E4 2E1, 2E3, 2E4 3E4 4E2 5E4	*Role of money *Scarcity

At this point, most of the major concepts in the elementary economics curriculum have been at least introduced and applied in a fictional setting. There are literally hundreds of variations to do for this activity. For example, the teacher may take on the role of government and collect taxes from the students in exchange for providing new cans of play-doh for each round or some other service (3E2, 5E2c). Another variation would be to see what happens to production when a new piece of technology is introduced (like a large block to flatten the play-do, then a pencil could be used to make strips for the snakes) (4E1f, 5E1f). Ultimately, the more students DO with this information, the better they will be able to apply it to real situations later.

Land of Snakes and Donuts Info

Round #	Description	# of Snakes	# of Donuts	Notes
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