

## Standard 15 : Growth

### Students will understand that:

Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.

### Students will be able to use this knowledge to:

Predict the consequences of investment decisions made by individuals, businesses, and governments.

Students should recognize that by saving and investing money today they can benefit in the future by being able to buy such things as a car, a compact disk player, a trip to an amusement park, or other things they want that cost more than what they can afford immediately. They will face similar trade-offs throughout their lives. As adults they will save for many things other than toys and vacations including housing, medical expenses, taxes, household and automobile repairs, their children's education, and their own retirement. Savings deposited in banks and other financial institutions earn interest because those savings are loaned to businesses that want to invest in capital goods, or to people who are willing to pay higher interest rates to purchase homes, cars, or other things now rather than later. The new physical capital will, in turn, increase production and promote faster economic growth.

Businesses, governments, and other organizations face decisions similar to those confronting individuals: future benefits that arise from saving and investing today make it worthwhile to sacrifice some current spending. Knowing this will help students understand the various investment and dividend programs adopted by different corporations, as well as public policies involving taxation, spending programs, and investment in infrastructure, education, and other things that will increase future standards of living. It will help them appreciate that a better life in the future often requires patience and sacrifice in the present. It will also help them understand the importance of personal investment in education and training, and of business investments.

## Benchmarks

### Grade 4

At the completion of Grade 4, students will know that:	At the completion of Grade 4, students will use this knowledge to:
When workers learn and practice new skills they are improving their human capital.	Explain why professional athletes often have training equipment in their homes.
Workers can improve their productivity by improving their human capital.	Make a pressman's hat out of newspaper with no instructions, record how much time it took them to make the hat, and discuss the quality of the finished product. After

	receiving instruction on how to make the hat, and given time to practice, repeat the activity, record how long it takes to make the hat, and compare the quality of the hats produced with and without instructions and practice.
Workers can improve their productivity by using physical capital such as tools and machinery.	Complete a basic math worksheet using pencil and paper in a given amount of time; correct the work and record the number of problems completed and the number of correct answers. Repeat the activity, using calculators; correct the work, record the number of problems completed and the number of correct answers, and explain the differences in results.

## Grade 8

<b>At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also that:</b>	<b>At the completion of Grade 8, students will use this knowledge to:</b>
Standards of living increase as the productivity of labor improves.	Analyze data on labor productivity and material standards of living. Draw a generalization about the relationship between the two. Also, tell how the living standards of their families would probably change if the productivity of every worker in the United States were to increase by 20 percent.
Productivity is measured by dividing output (goods and services) by the number of inputs used to produce the output. A change in productivity is a change in output relative to input.	Participate in a simulated production process in which they calculate productivity and analyze changes that occur through investment in human capital and capital goods.
Technological change is an advance in knowledge leading to new and improved goods and services and better ways of producing them.	Create a timeline showing at least five new products that have occurred over the last 25 years. Also, explain how technological change led to this new or improved product.
Increases in productivity result from advances in technology and other sources.	Study data about technological development and labor productivity for the last 25 years in the United States, India,

	Haiti, and Germany. Generalize about the relationship between technological change and changes in productivity from the data.
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## Grade 12

<b>At the completion of Grade 12, students will know the Grade 4 and Grade 8 benchmarks for this standard, and also that:</b>	<b>At the completion of Grade 12, students will use this knowledge to:</b>
Economic growth is a sustained rise in a nation's production of goods and services. It results from investments in human and physical capital, research and development, and technological change, and from improved institutional arrangements and incentives.	Analyze per capita real GDP data for several periods in history, identifying periods during which the United States experienced rapid economic growth; identify the factors that contributed to this growth.
Historically, economic growth has been the primary vehicle for alleviating poverty and raising standards of living.	Compare the standard of living of individuals living in the United States in 1790, 1890, and 1990; explain the relationship between higher production levels, new technologies, and standard of living.
Economic growth creates new employment and profit opportunities in some industries, but growth reduces opportunities in others.	Tell how growth in the computer industry affects employment and profit opportunities in the computer industry as compared to the typewriter industry.
Investments in physical and or human capital can increase productivity, but such investments entail opportunity costs and economic risks.	Engage in a simulated production activity involving investment in human capital and capital goods and identify the opportunity costs and economic risks.
Investing in new physical or human capital can increase productivity, but such investments entail opportunity costs and economic risks.	Discuss the advantages and disadvantages of investing in a riding mower given the following information: A teenager mows lawns to earn income. If she purchases a riding mower, she can mow lawns in less time and possibly earn more income.
Higher interest rates discourage investment.	Explain why the purchase of an old car to use for delivering pizza's is less attractive when interest rates are higher.
The rate of productivity increase in an	Explain how copyrights in the popular

economy is strongly affected by the incentives that reward successful innovation and investments (in research and development, and in physical and human capital).	music industry and patents in the pharmaceutical industry affect the rate of productivity in each industry.
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