



Interactive Practice Makes Perfect!

Matt Hill

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Professional Development

Using Interactives

Presented by: Matt Hill

Email: matt@mru.org

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- <https://learn.mru.org/high-school-economics-teaching-webinars/>

Objectives

1. **Understand the Role of Interactives in Economics Education:** Learners should be able to articulate the value of using interactives in teaching economics, including their potential for enhancing understanding of complex concepts, promoting active learning, and facilitating real-world problem solving.
2. **Explore a Variety of Economics Interactives:** Participants will have the opportunity to interact with a range of online tools and simulations designed specifically for economics education, and should be able to identify the most suitable resources for their particular needs and contexts.
3. **Integrate Interactives into Lesson Planning:** Learners should be able to incorporate interactive elements into their lesson plans in a way that enhances rather than distracts from the learning objectives of the lesson. They should understand how to align interactives with the curriculum, and balance the use of these tools with other teaching methods.
4. **Assess Student Learning with Interactives:** Learners will understand how to assess students' understanding and application of economics concepts using interactive tools. This includes the ability to interpret the data generated by these tools to gauge students' progress and identify areas where further instruction may be needed.

Presenter

Matt Hill

Marginal Revolution University

Matt is a curriculum designer for MRU. Matt received his PhD in 2012 and since then he has been trying to get students excited about economics by teaching at a variety of universities (UCLA, Loyola Marymount, USC). He joined MRU in 2022 to bring that excitement to even more students.



Today's Agenda



- 1) Interactive Bellringer
- 2) Learn about the benefits of interactives and learning
- 3) Share several interactives
 - 1) Interactive bellringers
 - 2) Interactive videos
 - 3) Interactive independent practice
 - 4) Interactive group activities

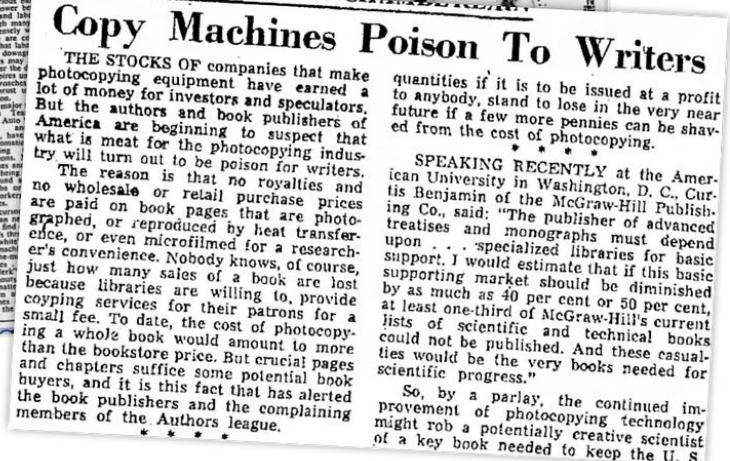
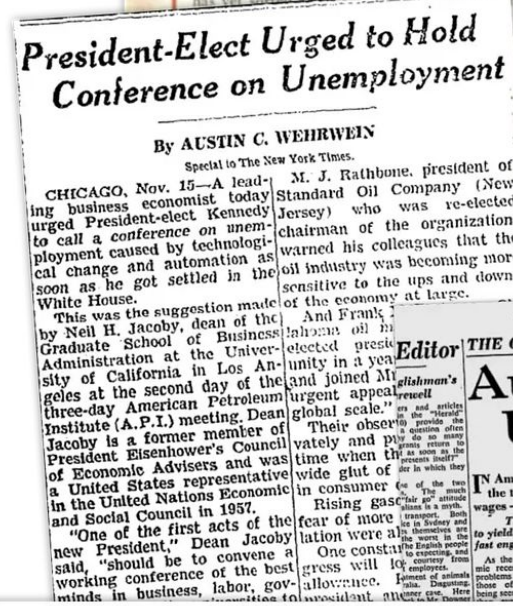
Guess the decade of the quote—

1. “Automation might end most unskilled jobs in 10 years”
 - a) 1850s
 - b) 1960s
 - c) 1990s
 - d) 2020s

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Roots of crime in a workless

Here's what happens when people are rendered powerless and hopeless by a technological society that no longer needs their labor.

By JEREMY RIFKIN

A new study reports that one in three black men in their 20s are imprisoned, on probation or on parole in the United States. The breakdown of the African-American family and drug abuse are often cited as the immediate causes of the increase in crime.

Yet, a look back at the economic roots of the present crisis offers a far more telling explanation for the current plight facing African-American men. Their story needs to be retold, as it is an object lesson for what may lie in store for young white males in the years ahead.

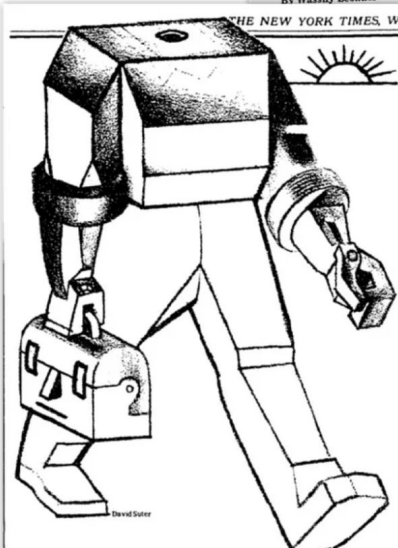
In the mid-1950s, automation began taking its toll in the nation's manufacturing sector. Hardest hit were unskilled jobs in the very industries where black workers were concentrated.

Between 1952 and 1962, 1.6 million



some new jobs, the few to absorb the displaced by the economy is base smaller, elite work automated techno and services, whi I relied on ma duce goods and s The steady t threatens to unde tions of modern s years, the heart of the measure of it have centered o person's labor. H begin to adjust to which most peopl devalued and ev Every nation v the question of millions of peopl less, or not at all.

The growth o one way to address the growing unrest, crime and violence. If we ue along that path, we are likely increasing numbers of both black males in jail in the years The alternative is a soul-searc tionwide debate on how best to vast productivity gains of the Information Age to give every



New technol isn't a panac

may work very hard in the morning, produce 50 units, and take it easy in the afternoon. In eliminating this control, PUMA shuts off the worker's creativity and initiative — a critical productivity loss that is not measured. Proponents of these changes argue that if we don't adopt new technologies such as robots as quickly as possible, we will fail to be competitive with countries that do, such as Japan. The ability to compete, however, depends on much more than technology. The Chrysler New Yorker, for example, is built with the latest in robots but is a poorly conceived gas guzzler and therefore virtually unmarketable. In any case, potent labor-saving technologies are becoming far too pervasive to assume that enough jobs will automatically be created for the number of people displaced. Economic revitalization no longer means re-employment. And the devastating social cost of unemployment is not reckoned in the savings that technology provides. Such a socially destructive use of technology need not be inevitable. Jobs for workers displaced and improved working conditions for those who remain ought to be a condition for the introduction of robots. Productivity gains, for example, could trans-

A Robot Is After Your Job

By Harley Shaiken

DETROIT — Technological innovation is widely billed as a miracle cure for the United States' economic doldrums. Its aftermaths, however, may be far from benign. The introduction of revolutionary new technologies such as robots — versatile computer-controlled mechanical arms — raise two painful possibilities: sizeable losses of jobs and a deteriorated quality of working life. The threat of lost jobs, although also dependent on social and economic factors, is especially critical. Auto makers are already buying robots in

Growing technologies, shrinking jobs: a limit to 'full employment'

By Wassily Leontief
today is practically the same as it was 35 years ago.
would be unemployed. However, under conditions of labor-saving technological advance, creation of one additional job 20 years ago might have required \$10,000; today, \$50,000; now easily \$50,000 or more.

Unemployment will end honeymoon with robots

By DON MADDOCKE
Japan, the United States and West Germany will force other countries to step up their own manufacturing methods. If they don't, they might as well get out of the market. This competition in manufacturing will lead to higher unemployment. And the best option is to make leaders here and in Britain. By doing this, jobs can be spread among more people. New technology, other than robotics, has led to a large increase in employment in West Germany. The investigation is timely, because some of Japan's biggest manufacturers are on the brink of closing. The danger is that this expansion could lead to economic stagnation, which would be a disaster for the world.

Office Workers Fear Spread Of Automation

By MARSHA TAYLOR
WASHINGTON — Office workers fear that the unemployment now crippling the U.S. industry may spread to the white-collar workplace as a result of increased automation. "There is concern among office workers," says Janice Blood, an official of the Cleveland-based National Organization of Working Women. "Not enough is being done to find out if long-range unemployment is going to be the result of office automation. The arrival of new technology in the office creates acute employee anxiety over job security according to a survey conducted last month by Research & Data Forecasts Inc. for the Michigan-based Kelly Services Inc. Companies surveyed were drawn from the Fortune 1000 list, 88 percent of which already use some form of electronic equipment ranging from word processors, video display terminals and electronic mail systems to computerized message and data storage centers. More than half the surveyed companies say employees were "aggressive" prior to automation, adding that more employees — 20 percent — specifically mentioned concerns over job security than any other issue as the cause for appre-

what employees call "the sweatshops." Low-scoring employees experience anxiety and acute fear of job loss. "In the United States, companies seem to think just about productivity (in office automation), not the human impact," says Ms. Blood. "We're making the same mistakes in the office revolution that we made in the industrial revolution." There probably will be little short-term loss of jobs in the office through automation, but the kind of jobs available is changing rapidly. One in four companies surveyed by Research & Data Forecasts say that over the next six months they plan to hire more with word-processing in seven the number lacking those. "Net loss of a robot-ere automation, save, vice a ma-based e casting firm. "But... we end kinds of (office wo trained to couldn't. T in skilled.

Mellon Bank announces the Office in Seoul, Korea

Robert L. Fansler, Vice President and Representative

The Decline of the Global Labor Force and the Dawn of the Post-Market Era

Guess the decade of the quote—

3. “Will (we) continue to be the master of the intricate machinery of civilization or will it prove a Frankenstein monster that will slay its own maker?”

- a) 1880s
- b) 1920s
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14 THE NEW YORK TIMES BOOK REVIEW AND MAGAZINE, OCTOBER 2, 1921

Man Devoured by His Machines

SOCIAL DECAY AND REGENERATION. By R. Amos Freeman. Introduction by Havelock Ellis. Boston: Houghton Mifflin Company, \$5.

MAN devoured by his machines, body, mind and soul, and his civilization poisoned to its approaching death by their influences and their needs...

...omment during previous centuries gave every warrant for expecting. Comparing the state of man when he first emerges into view in the Eolithic Period with that to which he had attained, as in the Nile Valley, in about the year 3000 B. C., and this... e present, he becomes evi- and splendid days of the maintained." until these le the first uation. The that mo- car, it is from the the lat- century Her sub- man to begin- nted the iver of se and such en the n the n to t that n na- f you omatic y, he liber- l the at of ng it ap- limit. nct now the co- and ter- cret the of ad man with...



2 THE NEW YORK TIMES BOOK REVIEW, OCTOBER 13, 1929.

The Machine Age and Its Effect On the Literary Arts


Mr. O'Brien Undertakes to Gauge Its Impact On the Form and Quality of Our Writing

DANCE OF THE MACHINES. By Edward J. O'Brien. 214 pp. New York: The Macaulay Company, \$2.50.

By JOHN CHAMBERLAIN

IT is a man-sized job that Edward J. O'Brien has attempted in his "Dance of the Machines," and if he has failed to carry it through with complete lucidity, with inevitable logic and with thorough satisfaction to all concerned, why, who is there among us to cast the first stone? What he has tried to do is to ascertain the effects of a machine civilization upon man as an artist, and the path he has chosen to walk is strewn with the pitfalls of the imponderable. He finds himself enveloped with all the while it cannot shape the future. It can at least measure what exists and from this measurement deduce certain general laws.

How is the question of a machine civilization bound up with all this? It has a very real connection, if we are to believe Mr. O'Brien's argument. He makes the point that people living in constant contact with machines are apt to worship with contempt because of the factor of error, and to admire the machine because it is infallible. The emphasis on the value of time and will not "tolerate spaciousness in man." One has only to go to Henry Ford's pronouncement upon...



A Photograph From "Das Deutsche Lichtbild, 1928-1929."

FOSDICK SPEAKS TO WELLESLEY GRADS

WELLESLEY, Mass., June 20— Will man continue the master of the intricate machinery of civilization or will it prove a Frankenstein monster that will slay its own maker? This query was proposed in the commencement day address of Raymond B. Fosdick of New York to the young women of Wellesley college today.

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Daily **Mail**
.com

AI is coming for your JOB: Bots could take 80% of human careers in the 'next few years', expert warns

- **Ben Goertzel, a US-Brazilian tech boss, foresees AI taking over 80% of jobs**
- **He says this is a positive, as people can find 'better things to do with their life'**
- **But there will be a period where it is 'obsoleting one human job after another'**

By [FIONA JACKSON FOR MAILONLINE](#) 

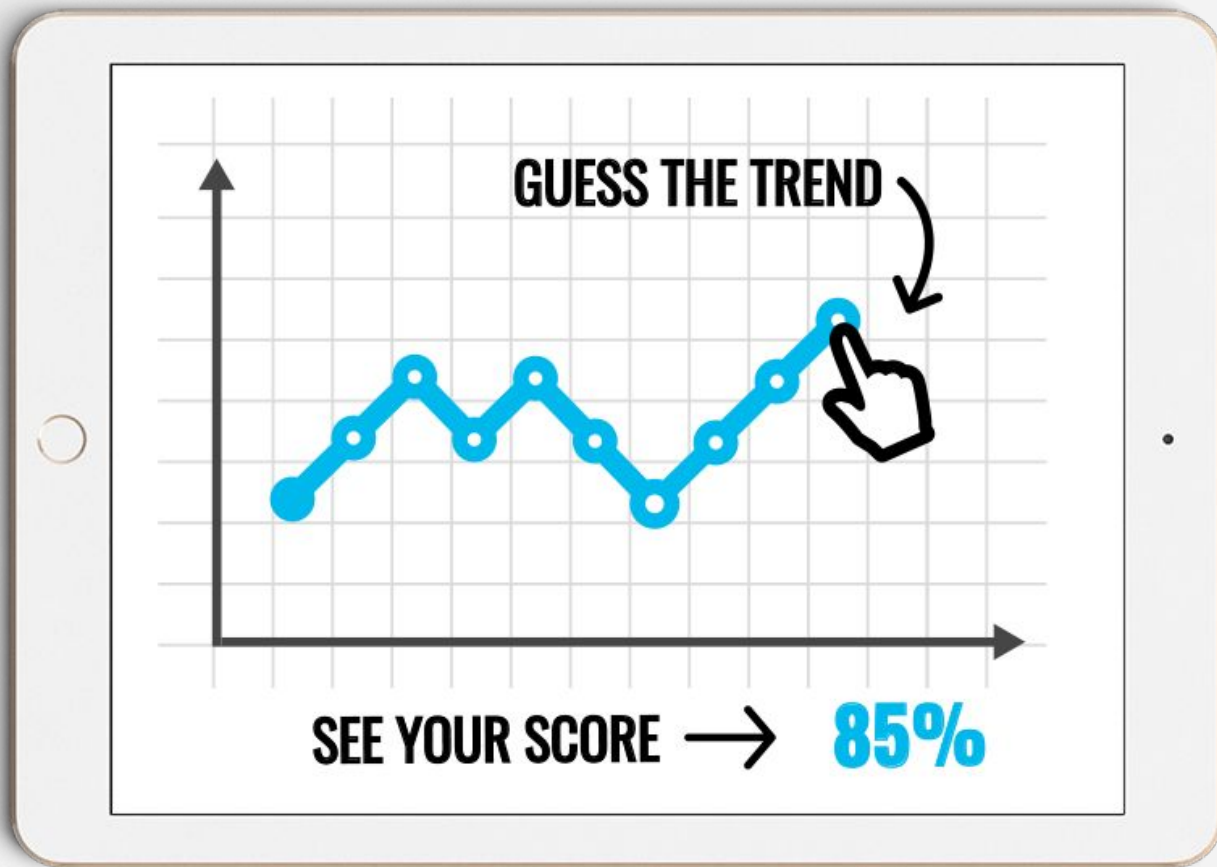
PUBLISHED: 05:03 EDT, 9 May 2023 | **UPDATED:** 05:03 EDT, 9 May 2023

Storyline

As technology has advanced, guess the trend in the two key US employment statistics—

- 1) Labor force participation - the percentage of the population in the labor force (people working or people who would like to be working)
- 2) Unemployment rate - the percentage of people in the labor force who are unemployed

Storyline Activity



<https://play.storylinegame.com/public/play?quiz=MRUPF>

Interactivity: What is it?



Interactivity uses digital technology to:

- Directly place students in **navigation/control** of their learning
- Elicit student input
- Get students **engaged**

More reasons to use interactives



- Interactives enable students to **self-pace**.
- Interactives provide **instant feedback**, enabling students to identify gaps in understanding.
- Many interactives provide **elaborative feedback**
- Allows for **retrieval practice**.

Why use interactives?



Interactives can

- Boost curiosity and increase student attention, (Ha and Im, 2020)
- Boost understanding of concepts and retention of information, (Evans and Gibbons, 2007; Wang, Vaugh, and Liu, 2011)
- Boost test scores (Ha and Im, 2020; Evans and Gibbons 2007)
- In a meta-analysis 225 studies of active learning versus lecturing in STEM courses, undergraduate students in traditional lecture courses were 1.5x more likely to fail. (Freeman et al 2014)

When to use an interactive



- As a Bellringer
- During direct instruction
- During in-class independent practice
- During in-class group activities
- As retrieval practice/review/homework

What causes changes in demand?



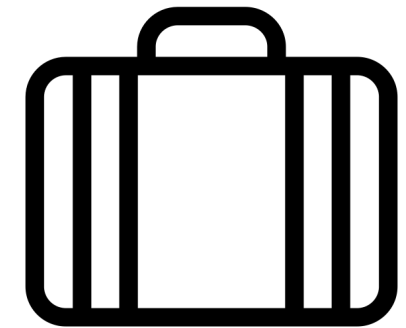
How much did the U.S. demand for **disposable face masks** change from 2019 to 2020?

It increased by a factor of...

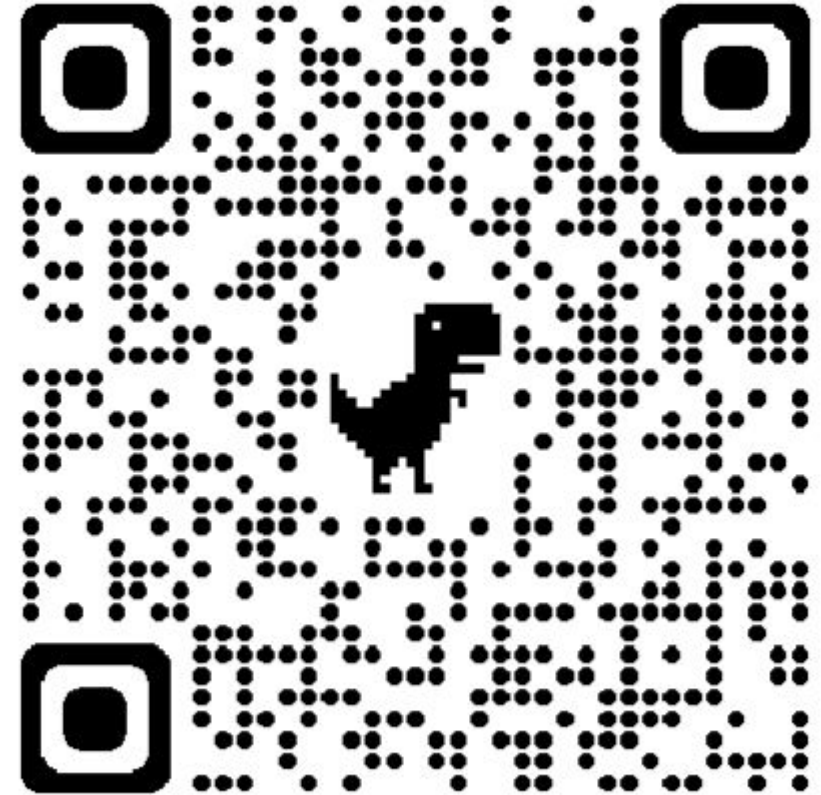
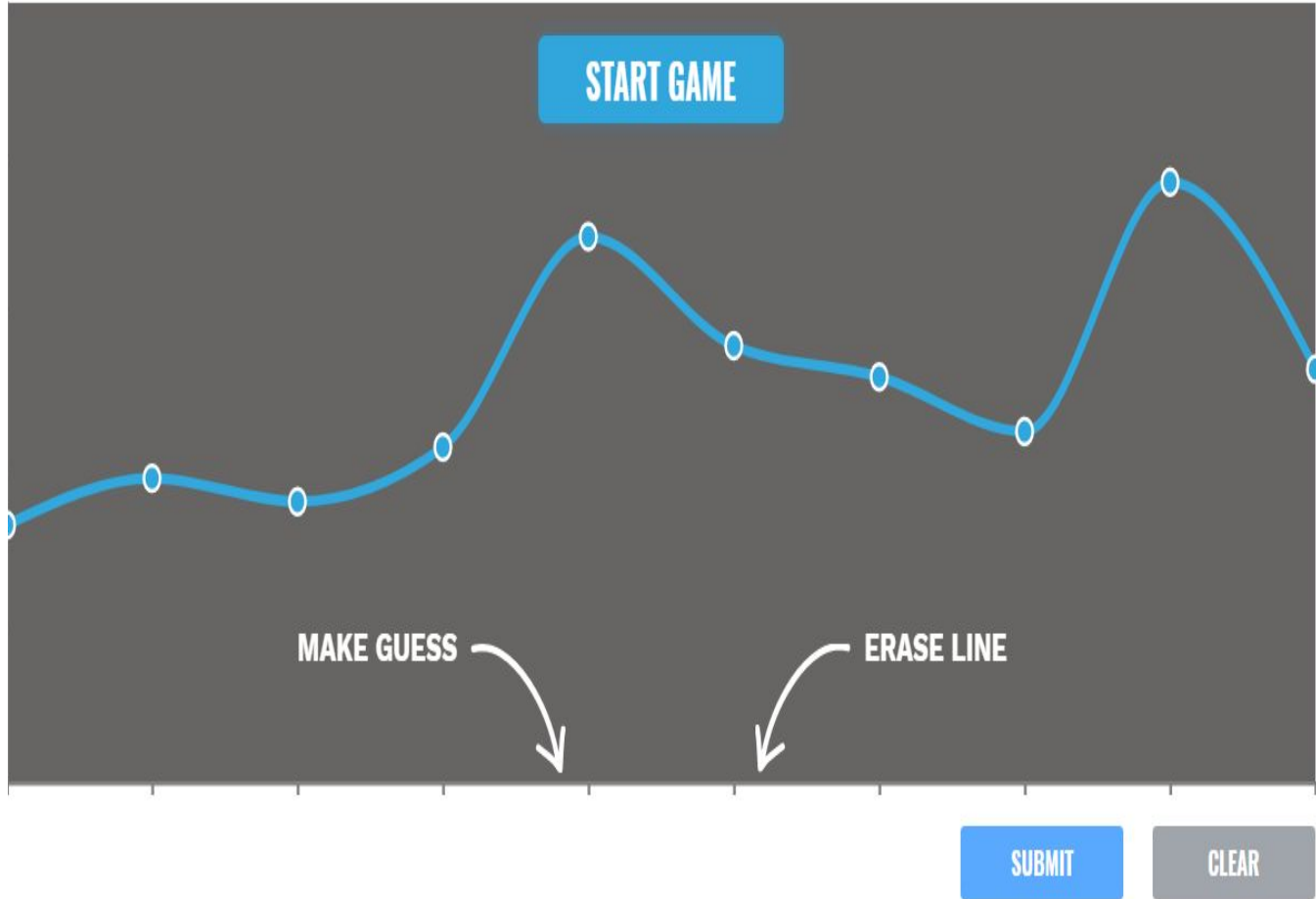


How much did the U.S. demand for **luggage** change from 2019 to 2020?

It decreased by...



Explore: Trend Guessing Game



<https://mru.io/pnn>



Teacher:

<https://guess-the-cost-and-time.bubbleapps.io/version-test/presenter>

Student: <https://practice.mru.org/guess>

Guess the Price and Time



START GAME

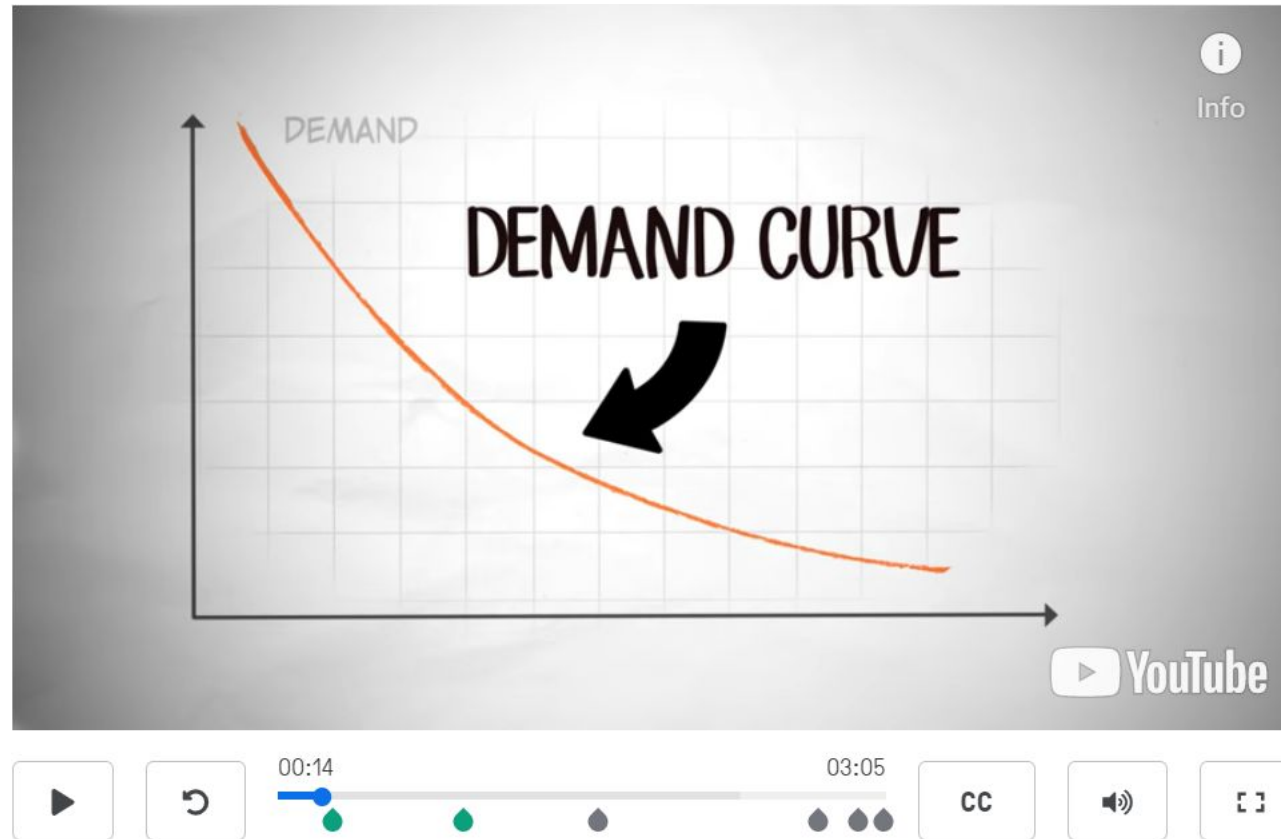


HOW TO MAKE A

\$1500 SANDWICH

IN ONLY 6 MONTHS

Interactive Video: Direct Instruction



MRU video example on edpuzzle:

<https://edpuzzle.com/media/5fd3d35cdb4de74158044a79>

Interactive video: Review



edpuzzle

Change in Demand vs. Change in Quantity Demanded
Marginal Revolution University

The video player displays two side-by-side graphs on a grid background. The left graph shows a downward-sloping demand curve D_1 with two points marked by blue dots and vertical dashed lines to the x-axis. A red arrow points from the lower point to the upper point, indicating a change in quantity demanded. The right graph shows two parallel downward-sloping demand curves, D_1 (black) and D_2 (light blue), with a red arrow pointing from D_1 to D_2 , indicating a change in demand. A vertical blue bar on the left contains the word "MICRO" and the MRU logo. Below the graphs, the text "QUANTITY DEMANDED" is in a blue box, "VS." is in black, and "DEMAND" is in a black box. A play button icon is visible in the center of the video frame.

MRU

YouTube

00:00 03:11

MRU Video Example on EdPuzzle: bit.ly/3hig2TE

Interactive video:



To access our interactive videos

- Mapped to CEE standards
- Search on EdPuzzle directly
- We also have our videos mapped to AP standards (macro)

- Our videos can work as direct instruction, bellringer, review, or homework!

Independent Practice: Interactive questions



ECON PRACTICE

A supply and demand diagram showing two intersecting lines. The upward-sloping line is labeled "SUPPLY" and the downward-sloping line is labeled "DEMAND". A blue circle is positioned at the intersection point, with a hand cursor icon pointing to it. Below the intersection, the text reads "Change in Demand vs. Change in Quantity Demanded".

PLAY

DEMAND CURVE FOR SUVs

A graph with "PRICE" on the vertical axis and "QUANTITY" on the horizontal axis. A downward-sloping line represents the demand curve. A blue circle is placed on the line, with a hand cursor icon pointing to it.

BREAKING NEWS

Gas prices plummet and stay low for years.

Consider the demand curve for SUVs. What happens?

SUBMIT

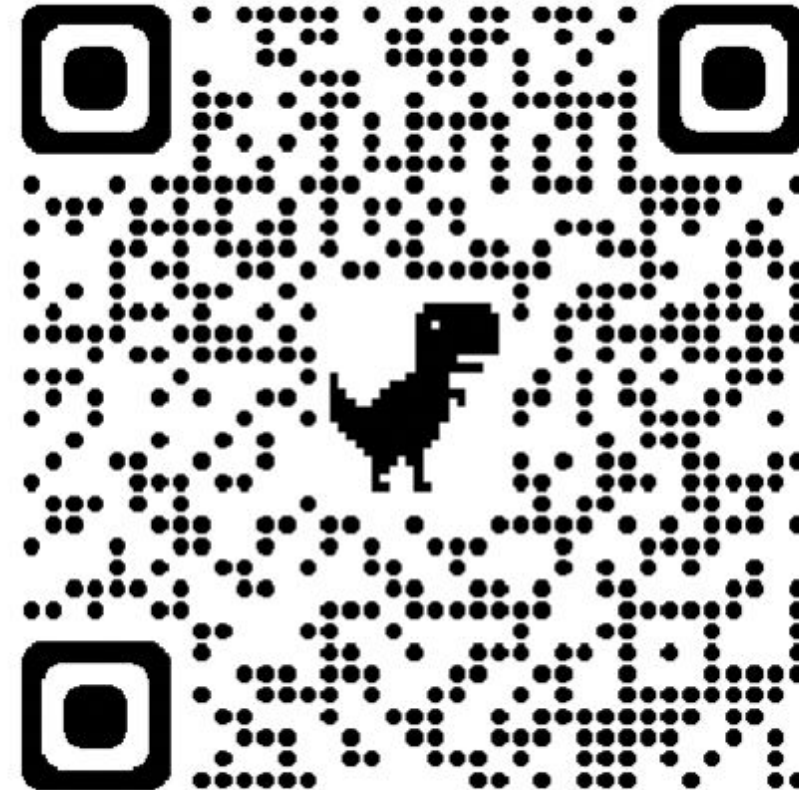
practice.mru.org

Independent Practice: Interactive questions



Functions of Money

PLAY



<https://practice.mru.org/functions/>

Independent Practice: Homework/In Class Discussion



Countdown to \$100k (per capita)

Pick a country, any country 1

This country's 2019 **real GDP per capita** is (Constant 2017 International \$):

Pick a country

This country's current **real GDP per capita growth rate** is:

At its current growth rate, this country will reach **100k** in real GDP per capita around:

1. Select Jamaica.
2. What is the difference in the current and 10 yr average growth rate?
3. How much does that change impact when they could reach 100k?
4. Repeat steps 1–3 for Canada.

<https://mru.io/Day4-Countdown100k>

Independent Practice: Interactive questions



Using the website, "[Countdown to 100k](#) per capita," fill out the first 3 rows of the table and answer the following questions below:

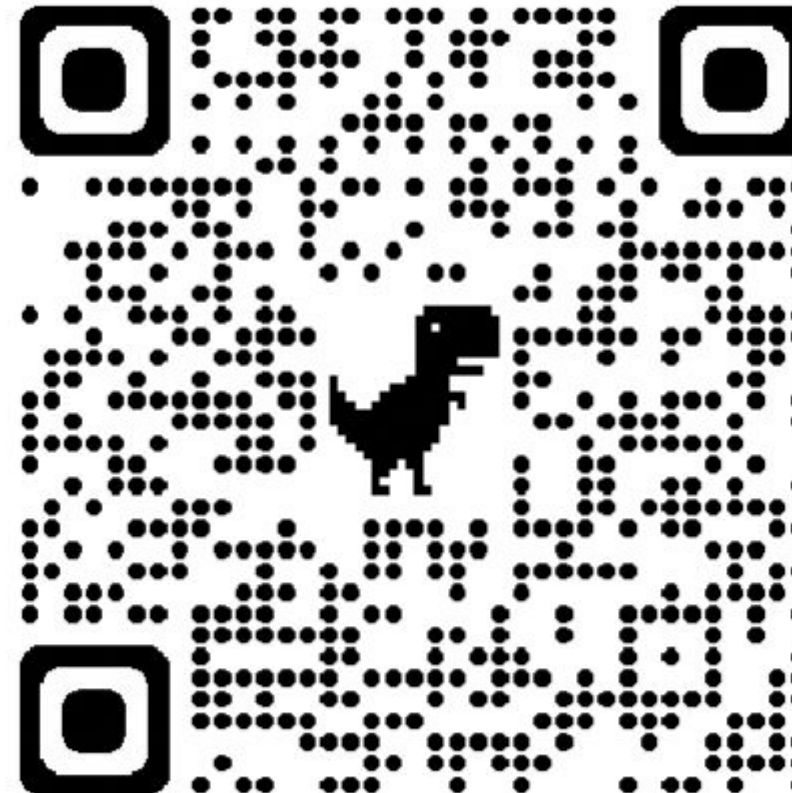
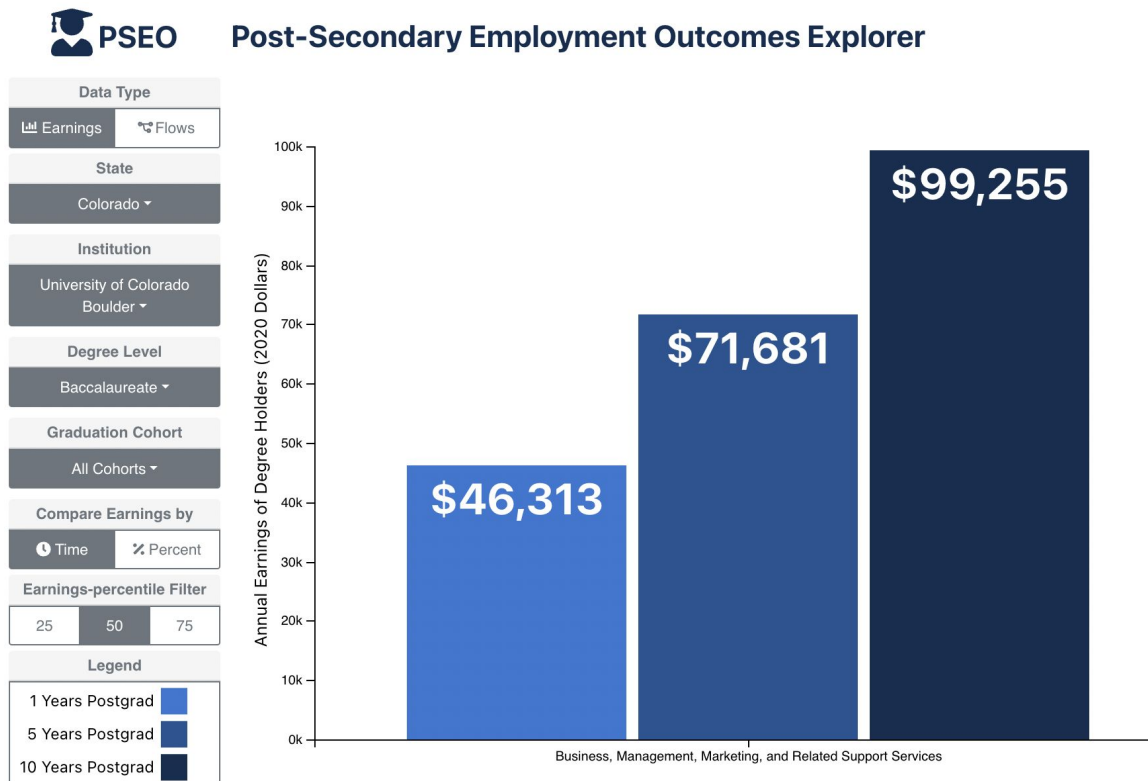
Country	Real GDP per Capita (PPP adjusted)	Current GDP per Capita Growth Rate	Year they will hit \$100,000 per capita with current growth rate	10 yr Average GDP per Capita Growth Rate	Year they will hit \$100,000 per capita with 10 yr average growth rate
United States (or country in which you reside)					
Australia					
Ukraine					

1. Does it surprise you when the United States is projected to reach \$100,000 per capita? Why or why not?
2. What do you notice about the difference between Australia's average GDP per capita growth rate and its current GDP per capita growth rate?
3. What do you notice about the difference between Ukraine's average GDP per capita growth rate and its current GDP per capita growth rate?
4. Does this mean that every citizen will make \$100,000 per capita? Why or why not?
5. Now pick another country and fill in the same information.
6. Excluding the United States, which country is most likely to hit \$100,000 GDP per capita? Why?

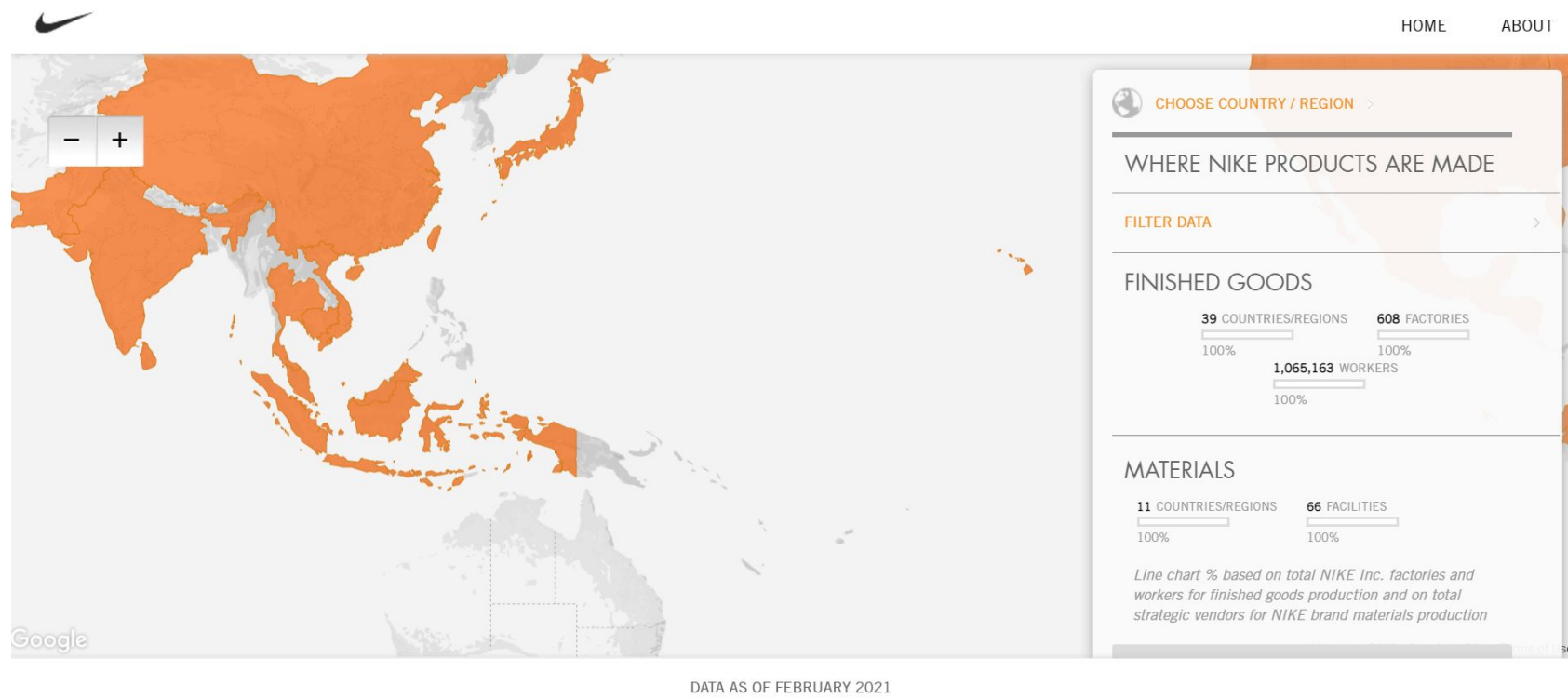
Independent Practice: Homework/In Class Discussion



How much money will you make 10 years after graduating?



Interactive Practice: Independent practice



mru.org/global-1-2

Interactive Practice: Data Interaction



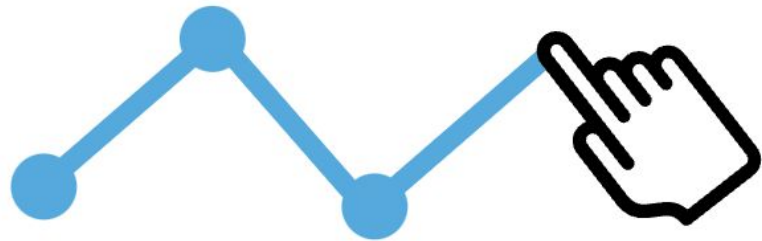
Click on individual countries (or select from **CHOOSE COUNTRY/REGION** dropdown) to answer the following.

6. Click on Brazil & The United States then fill out the chart below

Country	Number of Factories	Number of Workers
Brazil		
United States		

Storyline Activity

STORYLINE



The trend guessing game

PLAY



[Worksheet](#)

Our interactives are integrated into our curriculum.

- We offer advice on when each interactive can be most effectively used to engage students and promote content retention.
- We map our content to CEE standards, so in addition to having fun, you can be confident you're covering content your students need to know.

Q & A

CEE Affiliates



A network of 200 nationwide affiliates

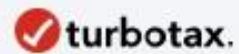
Provide professional development for K-12 teachers, advocate for including economics and personal finance in K-12 schools, conduct research, and forge partnerships.

<https://www.councilforeconed.org/resources/local-affiliates/>

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Alfred P. Sloan
FOUNDATION



Thank you!

Resource link: mru.org/inter

Questions/Feedback
matt@mru.org

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