Author: Abby Dupke
Hamilton High School

Subject: Economics, Advanced Placement Macroeconomics

Lesson title:
Adding women to the crew to help keep the ship sailing strong?:
How Re-thinking policies on women and immigrants in the Japanese
workforce may revitalized economic prospects

Link to U.S. Standards
National Council for Economic Education, Standards 13 and 19; GDP and Employment

Lesson overview: Students will analyze data and articles to assess the problem of economic
stagnation in Japan and propose possible solutions to the problem. Students begin by
examining current GDP data, workforce participation rates, population demographics and
policies regarding women and immigrants in the workforce. They complete the lesson by
creating a poster proposal on how to alleviate the problem.

Standards: Council for Economic Education Voluntary content Standard 15 Economic Growth
and Content Standard 19 Employment

Lesson length: 2-3 50-minute class periods

Materials (attached at end of this lesson):
Chart 1 on Japanese GDP
Chart 2 on Aging workforce and women in the workforce
Article 1 "Number of Children in Japan shrinks to a new record low"
Article 2 "Why Japan is Failing Women"
Article 3 "Can Japan Survive without Immigration?"
Other: Poster paper and markers for student presentations

Introduction
Activity 1:

1. Hand students a copy of **Chart 1** (below)on current GDP for Japan.
2. Ask students to identify trends in the data from 2007 year to 2016?
3. Ask students to describe this economy? (is it thriving? stagnant?)
4. Hand students a copy of **Chart 2** (below) with data on age and gender in the workforce.
5. A. (optional, for more depth) Hand students **Article 1** on aging population. "Number of

    children in Japan shrinks to new record low"

    B. Ask them to read the article and identify the trend in the age of the Japanese
    workforce. Ask them to discuss with a partner the impact this information has on the
    prospects of the Japanese economy.
6. Remind students of workforce participation rate formula:

$$\text{Labor Force Participation} = \frac{\text{Labor force (total \# of available workers both employed and unemployed)}}{\text{Adult population}} \times 100$$

Ask:
1. what would happen if Japan were able to add more people to the workforce? (its production potential increases)
2. What part of the formula is impacted if the adults already live in the country? (the numerator would increase but the denominator would remain the same, this increasing productivity)
3. What part of the formula is impacted if there are new people added to the adult population? (this would happen with adult immigrants who would affect the formula both in the numerator and the denominator, but would still increase productivity potential since there are more workers which could help solve the problem of not enough workers in Japan.)

Activity 2: Tell the students that given Japan's <u>aging population</u> and the resulting problem of not having enough workers to sustain a thriving economy, some have proposed **increasing the number of women** in the workforce while others have suggested **increasing immigration** to help solve the issue. The class will be split into two groups, half of which will explore the proposal to increase women in the workforce, half of which will explore the proposal of increasing immigration to solve the issue.

Procedure: (you may choose to assign this as homework, or do in class)
1. Break the class into 2 groups
2. To one group, hand out the article **Article 2** "Why Japan is Failing Women"
3. To the other group, hand out the **Article 3** "Can Japan Survive without Immigration"
4. Ask students to silently, individually read their article and identify 3 main points.
5. Within the group that read the same article, have students find a partner and share there 3 main points.
6. For the group as a whole, as the students to discuss how increasing the number of women (or immigrants) in the workforce will help solve Japan's problem of not having enough workers.
7. Ask the students to identify 1-2 obstacles to implementing this policy. (they might be cultural, economic or other obstacles)
8. Have each group pretend that they are policy advocates for either increasing women or immigrants in the Japanese workforce. They must create a poster highlighting a reason why increasing numbers would help solve the issue and include on the poster one proposal on how to overcome the obstacle they identified.
    a. (modification--you may choose to have students write this out as a proposal or create a multi-media presentation of their proposal. You may have them work as individuals, pairs or in larger groups)
9. Students watch the presentation from the opposite group (women or immigrants) and write a short paragraph describing why they believe the policy might be effective and assessing whether they believe the obstacle the group identified might be overcome.
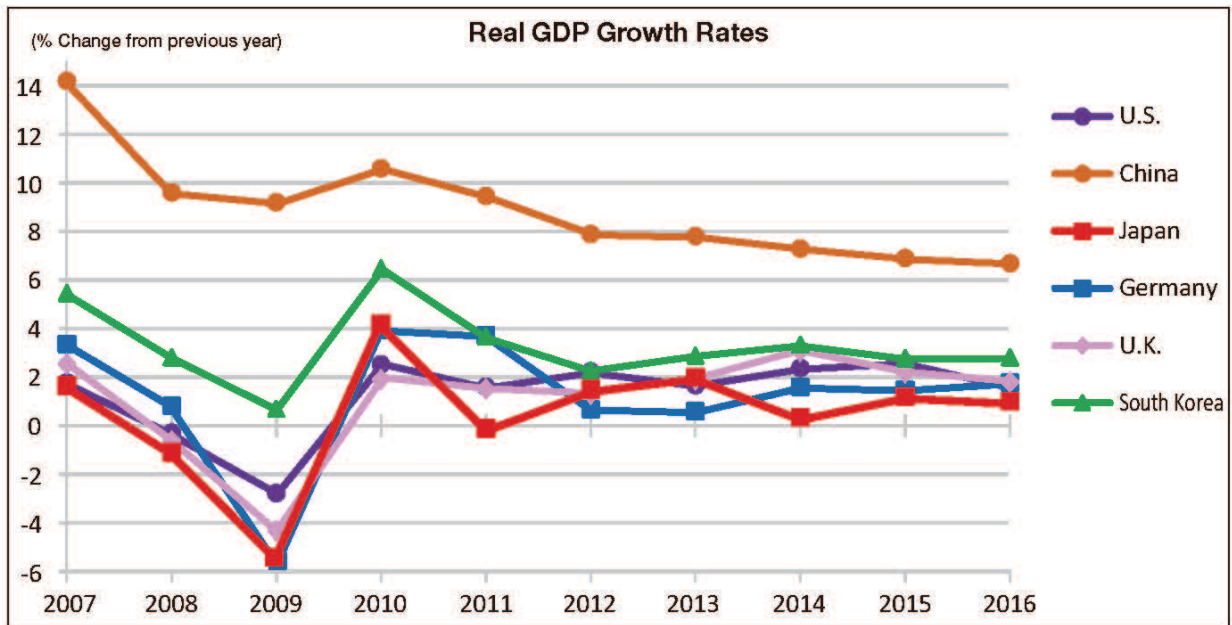
Extension: video on a Syrian immigrant in Japan
https://www.cnn.com/2017/08/01/asia/japan-migrants-immigration/index.html

Chart 1

Japanese GDP - source: "Japan and the World 2017-2018: A pocket Guide in Figures. Keizai Koho Center, Japan Institute for Social and Economic Affairs".

http://en.kkc.or.jp/uploads/research/jw/Japan201718.pdf

1-2 GDP Growth Rates   GDP成長率

Real GDP Growth Rates

(% Change from previous year)

Legend: U.S., China, Japan, Germany, U.K., South Korea

Source: IMF http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx

Real GDP Growth Rates

(% Change from previous year)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
U.S.	1.8	-0.3	-2.8	2.5	1.6	2.2	1.7	2.4	2.6	1.6
China	14.2	9.6	9.2	10.6	9.5	7.9	7.8	7.3	6.9	6.7
Japan	1.7	-1.1	-5.4	4.2	-0.1	1.5	2.0	0.3	1.2	1.0
Germany	3.4	0.8	-5.6	4.0	3.7	0.7	0.6	1.6	1.5	*1.8
U.K.	2.6	-0.6	-4.3	1.9	1.5	1.3	1.9	3.1	2.2	1.8
France	2.4	0.2	-2.9	2.0	2.1	0.2	0.6	0.6	1.3	1.2
India	9.8	3.9	8.5	10.3	6.6	5.5	6.5	7.2	7.9	6.8
Italy	1.5	-1.1	-5.5	1.7	0.6	-2.8	-1.7	0.1	0.8	0.9
Brazil	6.1	5.1	-0.1	7.5	4.0	1.9	3.0	0.5	-3.8	-3.6
Canada	2.1	1.0	-3.0	3.1	3.1	1.7	2.5	2.6	0.9	1.4
S. Korea	5.5	2.8	0.7	6.5	3.7	2.3	2.9	3.3	2.8	2.8

*estimate
Source: IMF http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx

Japan's Nominal GDP Growth Rate

(% Change from previous year)

Values shown: 0.9, -2.1, -6.0, 2.2, -1.8, 0.7, 1.7, 2.1, 3.3, 1.3

Source: Cabinet Office
http://www.esri.cao.go.jp/jp/sna/data/data_list/
sokuhou/files/2016/toukei_2016.html

Chart 2 Japanese employment by age and gender
source: "Japan and the World 2017-2018: A pocket Guide in Figures. Keizai Koho Center,
Japan Institute for Social and Economic Affairs".

2-6 **Employment Rate by Age and Gender** 年齢・性別雇用率

(%)

Age	Country	Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
15-24	U.S.	Female	51.8	50.2	47.0	45.1	44.9	45.4	46.0	47.1	48.2	48.8
		Male	54.4	52.3	46.7	44.9	46.0	46.6	46.9	48.2	49.0	50.1
	Japan	Female	41.5	41.6	40.9	40.1	40.3	38.9	40.6	40.9	40.7	42.6
		Male	41.3	40.8	38.2	37.5	38.0	37.8	38.6	39.3	39.9	41.8
	Germany	Female	43.6	44.6	44.4	44.5	46.1	44.5	45.2	44.3	44.0	44.5
		Male	47.2	48.7	47.5	47.9	49.7	48.6	48.4	47.7	46.5	46.9
25-54	U.S.	Female	72.5	72.2	70.2	69.3	69.0	69.2	69.3	70.0	70.3	71.1
		Male	87.5	86.0	81.5	81.0	81.4	82.5	82.8	83.6	84.4	85.0
	Japan	Female	67.5	67.7	67.8	68.3	69.1	69.2	70.9	72.0	72.8	74.0
		Male	92.9	92.7	91.4	91.5	91.7	91.6	91.8	92.2	92.2	92.6
	Germany	Female	74.0	74.7	75.4	76.4	77.9	78.3	78.6	78.9	79.2	79.7
		Male	86.4	87.0	86.1	86.8	88.0	88.4	88.2	88.1	88.2	88.1
55-64	U.S.	Female	56.6	57.0	56.4	56.4	55.9	56.1	56.2	56.3	56.4	56.5
		Male	67.4	67.7	65.2	64.4	64.4	65.5	66.0	66.8	67.1	67.5
	Japan	Female	51.3	51.9	51.8	52.2	52.7	52.5	54.3	56.1	58.0	59.7
		Male	81.5	81.5	80.0	79.1	79.2	78.9	79.9	81.6	82.5	83.6
	Germany	Female	43.4	46.0	48.6	50.7	53.2	55.0	57.7	60.0	61.2	63.6
		Male	59.4	61.7	63.8	65.2	67.1	68.6	69.9	71.4	71.3	73.7

Note: 2011 results for Japan excludes 3 prefectures (Iwate, Miyagi and Fukushima) from March-August 2011. For time series comparison, the corresponding
    figures 2010 are also compiled on the basis excluding the 3 prefectures.
Source: OECD http://stats.oecd.org/Index.aspx?DataSetCode=STLABOUR#

2-7 **Part-time Employment Rate by Age and Gender** 年齢・性別短時間雇用率

(%)

Age	Country	Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
15-24	U.S.	Female	40.3	40.5	44.0	43.2	42.8	43.7	41.9	42.3	41.5	41.3
		Male	28.0	30.0	32.6	33.0	33.2	31.9	31.7	30.7	31.7	31.2
	Japan	Female	27.4	27.2	29.4	30.5	32.3	31.4	33.6	35.2	35.2	35.6
		Male	23.7	24.5	25.4	27.5	26.6	28.5	29.2	29.9	29.9	30.6
	Germany	Female	22.9	23.0	22.8	21.9	24.1	24.5	25.5	25.2	26.4	27.1
		Male	14.2	14.9	14.5	13.7	15.0	15.5	17.1	16.7	17.4	18.3
25-54	U.S.	Female	12.1	12.2	13.6	13.1	12.8	12.7	12.3	12.4	11.9	12.1
		Male	2.7	2.9	4.1	3.9	4.0	3.8	4.0	3.8	3.6	3.6
	Japan	Female	29.8	30.4	30.5	30.2	30.6	30.6	32.1	33.1	32.5	32.4
		Male	3.8	4.5	5.0	4.5	4.5	4.4	4.9	5.4	5.3	4.9
	Germany	Female	40.1	39.3	39.1	39.1	38.6	38.2	37.9	37.0	36.7	36.0
		Male	5.5	5.4	5.6	5.6	5.7	5.6	5.8	5.9	5.9	5.8
55-64	U.S.	Female	15.4	15.5	15.3	15.1	15.8	15.5	14.5	15.0	14.6	14.4
		Male	6.1	5.9	6.7	6.4	5.8	6.0	5.8	5.4	5.3	5.7
	Japan	Female	38.3	38.9	40.0	40.5	41.8	41.5	43.2	43.7	42.5	42.4
		Male	9.8	10.2	11.0	11.3	11.1	10.9	12.1	12.5	11.6	10.8
	Germany	Female	44.4	43.7	42.7	42.0	42.6	41.9	42.2	41.4	41.1	40.9
		Male	8.6	8.2	8.3	8.1	8.9	9.2	9.2	9.3	9.2	9.1

Notes: Germany and Japan data utilize total employment statistics. U.S. data utilizes dependent employment statistics. Dependent employment refers
    to wage and salary workers.
Source: OECD http://stats.oecd.org/Index.aspx?DataSetCode=STLABOUR#

Article 1

Number of children in Japan shrinks to new record low

By Yoko Wakatsuki and [James Griffiths](#), CNN
Updated 12:55 AM ET, Mon May 7, 2018

https://www.msn.com/en-us/news/world/number-of-children-in-japan-shrinks-to-new-record-low/ar-AAwShBi

Article 2

Why Japan is failing its women

by Sophia Yan @sophia_yan October 16, 2016: 11:26 AM ET
CNNMoney (Tokyo)First published September 15, 2016: 10:57 PM ET

https://money.cnn.com/2016/09/15/news/economy/japan-working-women-report-card/index.html

Article 3

Can Japan survive without immigrants?

By [Emiko Jozuka](#) and Junko Ogura, CNN Graphics by Natalie Leung, CNN Updated
10:45 PM ET, Thu June 14, 2018

https://edition.cnn.com/2017/08/01/asia/japan-migrants-immigration/index.html