

TEACHING TIDBITS: MATH CONNECTIONS

An ABC Escapade through Egypt

www.bernadettesimpson.com

Useful Sites for the Math Activities

Online Calculators and Tables for Metric Conversions

<http://www.metric-conversions.org/>

Food and Agriculture Organization of the United Nations (FAOSTAT)

FAOSTAT provides time-series and cross sectional data relating to food and agriculture for some 200 countries.

<http://faostat.fao.org/>

ProdSTAT

The ProdSTAT data domains cover crops, livestock, and primary and processed commodities.

<http://faostat.fao.org/site/526/default.aspx>

NCES Kids' Zone - Create a Graph

Graphs created on this site can be printed, emailed, or downloaded as a PDF, SVG, PNG, JPG, EMF, or EPS.

<http://nces.ed.gov/nceskids/createagraph/default.aspx>

Possible Math Connections

These learning extensions are geared toward students in the upper elementary grades. Modify or expand, and prepare the activities to suit the needs and abilities of the learners.

Browse activities by topic or by letter.

by Topic

[Using Numbers :Computations and Problem Solving](#)

[Data: Collect, Organize, Display, & Interpret Numbers in Tables and Graphs](#)

[Geometry and Spatial Reasoning: Shapes and Symmetry](#)

[Measurement: Estimate, Measure, and Convert Weight, Volume, and Length](#)

[Fractions and Their Uses - Equivalent Fractions and Recipes](#)

Using Numbers: Computations and Problem Solving

Bread

Learners can answer other math story problems, such as:

One kilogram of flour is used to make ten loaves of *baladi* bread. How many kilograms of flour would you need to bake 100 loaves of bread? Convert to pounds.

Each loaf of *baladi* bread should weigh 130 grams. Convert to ounces.

Hieroglyphics

Learners can research and learn how hieroglyphic numbers were written.

http://library.thinkquest.org/J002046F/how_to_write_hieroglyphics.htm

<http://www.greatscott.com/hiero/numbers.html>

Learners can then write math problems for each other using hieroglyphs.

Learners can also compare Ancient Egyptian hieroglyphic numbers to Mayan hieroglyphs.

[http://original.britannica.com/eb/art-441/The-Mayan-number-system-](http://original.britannica.com/eb/art-441/The-Mayan-number-system-which-is-base-20-with-simple)

[which-is-base-20-with-simple](http://original.britannica.com/eb/art-441/The-Mayan-number-system-which-is-base-20-with-simple)

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Data: Collect, Organize, Display, and Interpret Numbers in Tables and Graphs

Athletes

Learners can survey friends, family, and schoolmates about their favorite football team – Ahly or Zamalek – or their favorite sport to play or to watch.

Learners can research and compare the size and/or capacity of various sports venues in Egypt and around the world.

Learners can research Egypt's performance at past Olympic Games. How many medals has Egypt won? Compare to other countries in Middle East or Africa. Data can be sorted by year, by medal, or by sport.

Learners decide on best way to display data – tally charts, bar graphs, etc.

Camels, Dates, Goats, Mangoes, Olives, Watermelons

Learners can research and compare the number of camels, dates, etc. in Egypt over time or the number of camels currently in various countries. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Learners decide on best way to display data – pie charts, bar graphs, etc.

Jerboa

Learners can have an actual long-jump contest – measuring and recording the distance jumped by each student. Students may choose to organize and graph the results for display.

Mangoes

Learners can survey friends, family, and schoolmates about their favorite

variety of mango or their favorite fruit in general. Learners decide on best way to display data – tally charts, bar graphs, etc.

Nile

Research and compare the length of the Nile River to other rivers of the world. Results can be graphed by hand or on the computer.

Red Sea

Learners can survey friends, family, and schoolmates about their favorite seaside destination and/or activity. Results can be graphed by hand or on the computer.

Villages

Learners and research and compare the size – population and/or area – of different cities and villages in Egypt. Display results. View population maps of Egypt and the world.

<http://www.citypopulation.de/Egypt.html>

Yogurt

Learners can survey friends, family, and schoolmates about their favorite dishes that include or use yogurt. Graph results. Research recipes - interview family members or chefs and look online - for the different dishes. Convert between units of measurement. Cook the winning recipe and enjoy!

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Geometry and Spatial Reasoning: Shapes and Symmetry

Quilting

Learners can research and explore the use of shapes, geometry, and symmetry in quilting and create their own designs. See the Quilt page of Explore Egypt at www.bernadettesimpson.com for a list of links useful for this learning activity.

Urchins

Learners can research and learn about the symmetry of sea urchins. Most have radial symmetry but others may have bilateral. Compare to other examples of symmetry in nature such as in butterflies, flowers and plant leaves.

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Measurement: Estimate, Measure, and Convert Weight, Volume, and Length

Jerboa

Learners can have an actual long-jump contest – measuring and recording the distance jumped by each student. Students may choose to organize and

graph the results. Lengths can be converted between metric [meters] and customary units [yards, feet, and inches].

Konafa

Learners can research the history of the metric system and compare to customary or Imperial units of measurement. Learners can practice converting between the different systems.

Learners can learn about the different type of scales for measuring weight – spring scales, balances, bathroom scales, supermarket scales, etc.

Learners can convert the recipe for record-breaking konafa to other units of measurement.

Nile

Learners can convert the length of the Nile from kilometers to miles and other units of measurement.

Spices

Learners can convert (and cook!) the recipe for *doe-ah* from tablespoons to other units of measurement such as milliliters, ounces, or teaspoons.

Metric Conversation Calculator for Cooking and Recipes

<http://southernfood.about.com/library/info/blconv.htm>

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Fractions and Their Uses - Equivalent Fractions and Recipes

Bread

Learners can find recipes for baking *baladi* bread and either half or double - or triple - the recipe for making different amounts of bread.

<http://foodlorists.blogspot.com/2007/10/there-is-recipe-for-egyptian-traditonal.html>

<http://members.cox.net/ahmedheissa/recbread.htm>

Konafa

Learners can adjust the recipe for record-breaking for smaller – or larger – platters.

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by Letter

A B C D G H J K M N O Q R S U V W Y

A: Learners can survey friends, family, and schoolmates about their favorite football team – Ahly or Zamalek – or their favorite sport to play or to watch.

Learners can research Egypt's performance at past Olympic Games. How many medals has Egypt won? Compare to other countries in Middle East or Africa. Data can be sorted by year, by medal, or by sport.

Learners can research and compare the size and/or capacity of various sports venues in Egypt and around the world.

Results can be graphed by hand or on the computer.

B: Learners can answer other math story problems, such as:

One kilogram of flour is used to make ten loaves of *baladi* bread. How many kilograms of flour would you need to bake 100 loaves of bread? Convert to pounds.

Each loaf of *baladi* bread should weigh 130 grams. Convert to ounces.

Learners can find recipes for baking *baladi* bread and either half or double - or triple - the recipe for making different amounts of bread.

<http://foodlorists.blogspot.com/2007/10/there-is-recipe-for-egyptian-traditonal.html>

<http://members.cox.net/ahmedheissa/recbread.htm>

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C: Learners can research and compare the number of camels in Egypt over time or the number of camels currently in various countries. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Live Animals: [Production_ProdSTAT_Live Animals]

<http://faostat.fao.org/site/573/default.aspx#anchor>

Results can be graphed by hand or on the computer.

D: Learners can research and compare the number of dates produced in Egypt over time or compare the production of dates in various countries and regions. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Crops: [Production_ProdSTAT_Crops]

<http://faostat.fao.org/site/567/default.aspx#anchor>

Results can be graphed by hand or on the computer.

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- G:** Learners can research and compare the number of goats in Egypt over time or the number of goats in various countries or regions. Learners can also compare the number of different animals, e.g. camels, goats, and sheep, counted in a single year in Egypt. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Live Animals: [Production_ProdSTAT_Live Animals]
<http://faostat.fao.org/site/573/default.aspx#ancor>

Results can be graphed by hand or on the computer.

- H:** Learners can research and learn how hieroglyphic numbers were written.
http://library.thinkquest.org/J002046F/how_to_write_hieroglyphics.htm
<http://www.greatscott.com/hiero/numbers.html>

Learners can then write math problems for each other using hieroglyphs.

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- J:** Learners can have an actual long-jump contest – measuring the distance jumped by each student, recording, sorting, and then graphing the results. Lengths can be converted between metric [meters] and customary units [yards, feet, and inches].

Results can be graphed by hand or on the computer.

- K:** Learners can research the history of the metric system and compare to customary or Imperial units of measurement. Learners can practice converting between the different systems.

Learners can learn about the different type of scales for measuring weight – spring scales, balances, bathroom scales, supermarket scales, etc.

Learners can convert recipe for record-breaking konafa to customary units, or adjust the recipe for smaller – or larger – platters.

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- M:** Learners can survey friends, family, and schoolmates about their favorite variety of mango or their favorite fruit in general.

Learners can research and compare the number of mangoes produced in Egypt over time or compare the production of mangoes in various countries and regions. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Crops: [Production_ProdSTAT_Crops]
<http://faostat.fao.org/site/567/default.aspx#ancor>

Results can be graphed by hand or on the computer.

- N:** Learners can convert the length of the Nile from kilometers to miles and other units of measurement. Research and compare the length of the Nile River to other rivers of the world.

Results can be graphed by hand or on the computer.

- O:** Learners can research and compare the number of olives produced in Egypt over time or compare the production of olives in various countries and regions. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Crops: [Production_ProdSTAT_Crops]
<http://faostat.fao.org/site/567/default.aspx#ancor>

Results can be graphed by hand or on the computer.

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- Q:** Learners can research and explore the use of shapes, geometry, and symmetry in quilting and create their own designs. See the Quilt page of Explore Egypt at www.bernadettesimpson.com for a list of links useful for this learning activity.

- R:** Learners can survey friends, family, and schoolmates about their favorite seaside destination and/or activity.

Results can be graphed by hand or on the computer.

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- S:** Learners can convert (and cook!) the recipe for *doe-ah* from tablespoons to other units of measurement such as milliliters, ounces, or teaspoons.

Metric Conversation Calculator for Cooking and Recipes
<http://southernfood.about.com/library/info/blconv.htm>

- U:** Learners can research and learn about the symmetry of sea urchins. Most

have radial symmetry but others may have bilateral. Compare to other examples of symmetry in nature such as in butterflies, flowers and plant leaves.

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- V:** Learners and research and compare the size – population and/or area – of different cities and villages in Egypt. View population maps of Egypt and the world.

<http://www.citypopulation.de/Egypt.html>

Results can be graphed by hand or on the computer.

- W:** Learners can research and compare the number of watermelons produced in Egypt over time or compare the production of melons in various countries and regions. Use FAOSTAT to obtain the data. Some learners may need assistance with this site or the data simply provided to them so they can go on to the next step of graphing.

Crops: [Production_ProdSTAT_Crops]

<http://faostat.fao.org/site/567/default.aspx#ancor>

Results can be graphed by hand or on the computer.

- Y:** Learners can survey friends, family, and schoolmates about their favorite dishes that include or use yogurt. Research recipes - interview family members or chefs and look online - for the different dishes. Convert between units of measurement. Cook the winning recipe and enjoy!

Results can be graphed by hand or on the computer.

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Want to share your teaching ideas with other readers? Submit them to me at bernadette@bernadettesimpson.com and I'll add them to the website.