The background is a light gray field with various geometric shapes in a slightly darker shade of gray. On the left, there is a square containing a circle. In the center, there are several overlapping circles of different sizes. On the right, there are three horizontal parallel lines. The overall aesthetic is clean and modern, typical of a science-themed presentation.

Science
Monday 6/5/2017

Types of Rock

Liz LaRosa <http://www.middleschoolscience.com> 2010
Images from Geology.com unless otherwise noted

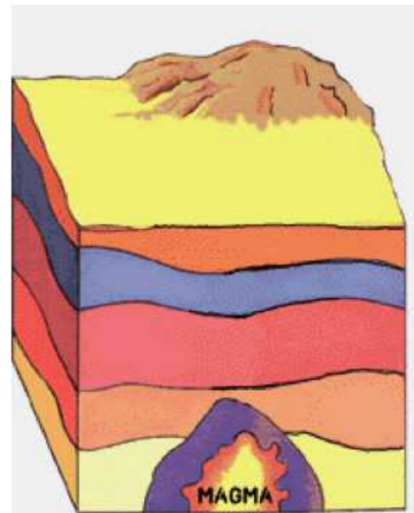
What are Rocks?

- A rock is a naturally occurring solid mixture of one or more minerals, or organic matter
- Rocks are classified by how they are formed, their composition, and texture
- Rocks change over time through the rock cycle



Igneous Rocks

- Igneous rock begins as magma.
- Magma can form:
 - When rock is heated
 - When pressure is released
 - When rock changes composition
- Magma freezes between 700 °C and 1,250 °C
- Magma is a mixture of many minerals



<http://www.fi.edu/fellows/payton/rocks/create/igneous.htm>

Igneous Rocks

- Felsic: light colored rocks that are rich in elements such as aluminum, potassium, silicon, and sodium
- Mafic: dark colored rocks that are rich in calcium, iron, and magnesium, poor in silicon
- Coarse-grained: takes longer to cool, giving mineral crystals more time to grow
- Fine-grained: cools quickly with little to no crystals

Igneous Rocks

Coarse-Grained

Fine-Grained

Felsic

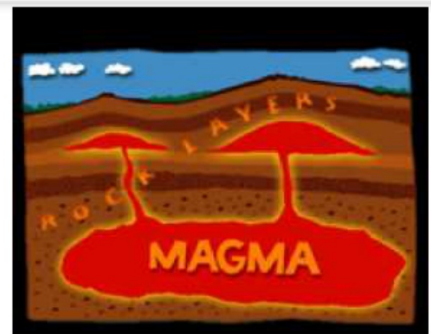


Mafic



Igneous Rocks

- Intrusive Igneous Rocks: magma pushes into surrounding rock below the Earth's surface
- Extrusive Rocks: forms when magma erupts onto the Earth's surface (lava), cools quickly with very small or no crystals formed



http://www.windows.ucar.edu/tour/link=/earth/geology/ig_intrusive.html&edu=high&fr=t

Igneous Rocks

Obsidian is a dark-colored volcanic glass that forms from the very rapid cooling of molten rock material. It cools so rapidly that crystals do not form.



Is this rock Felsic or Mafic?

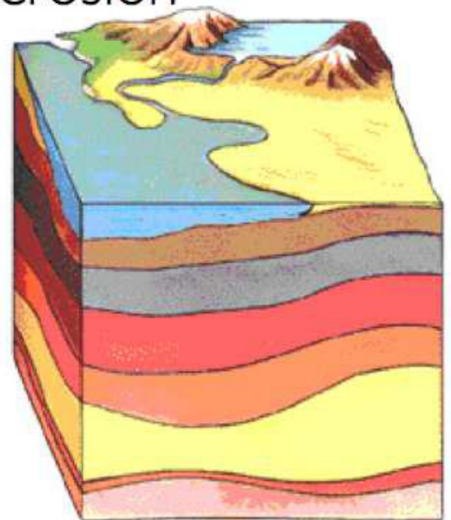
Is it fine-grained or coarse-grained?

Is this rock Intrusive or Extrusive?

Mafic, fine grained, extrusive

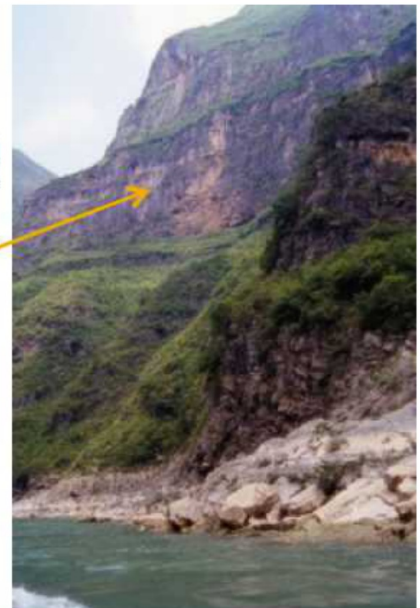
Sedimentary Rocks

- Sedimentary rock is formed by erosion
- Sediments are moved from one place to another
- Sediments are deposited in layers, with the older ones on the bottom
- The layers become compacted and cemented together



Sedimentary Rock

- Sedimentary Rocks are formed at or near the Earth's surface
- No heat and pressure involved
- Strata – layers of rock
- Stratification – the process in which sedimentary rocks are arranged in layers



Sedimentary Rock

Clastic – made of fragments of rock cemented together with calcite or quartz

Breccia is a term most often used for clastic sedimentary rocks that are composed of large angular fragments (over two millimeters in diameter).

The spaces between the large angular fragments can be filled with a matrix of smaller particles or a mineral cement that binds the rock together.



© geology.com

Sedimentary Rock

Chemical sedimentary – minerals crystallize out of solution to become rock

Limestone is a sedimentary rock composed primarily of calcium carbonate (CaCO_3) in the form of the mineral calcite. It most commonly forms in clear, warm, shallow marine waters.

It is usually an organic sedimentary rock that forms from the accumulation of shell, coral, algal and fecal debris.



Sedimentary Rock

Organic sedimentary – remains of plants and animals

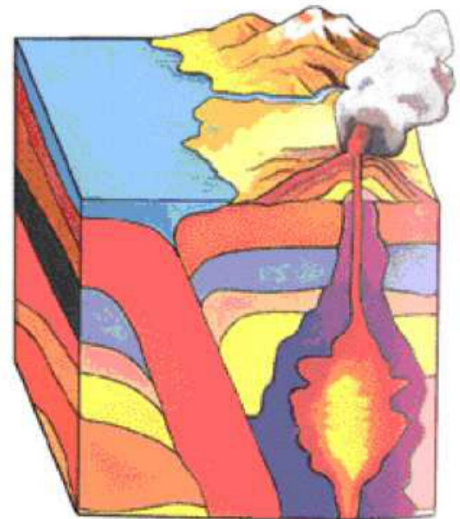
Coal is an organic sedimentary rock that forms from the accumulation and preservation of plant materials, usually in a swamp environment.

Coal is a combustible rock and along with oil and natural gas it is one of the three most important fossil fuels.



Metamorphic Rock

- Meaning to change shape
- Changes with temperature and pressure, but remains solid
- Usually takes place deep in the Earth



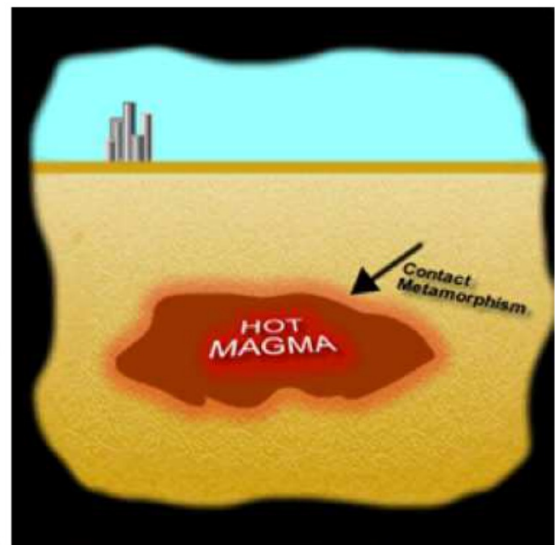
<http://www.fi.edu/fellows/payton/rocks/create/metamorph.htm>

Metamorphic Rocks

- Contact Metamorphism – heated by nearby magma
- Increased temperature changes the composition of the rock, minerals are changed into new minerals



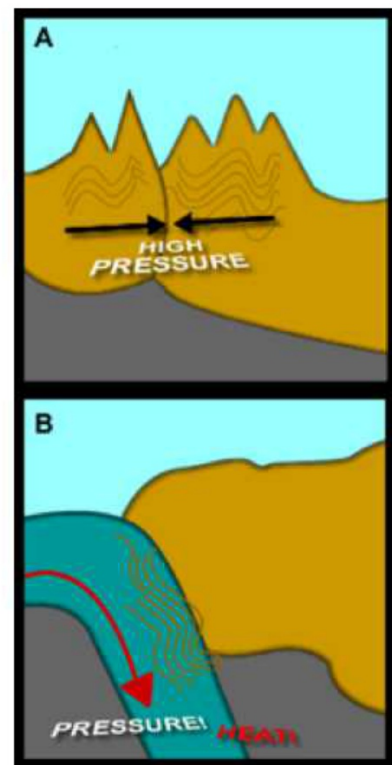
Hornfels is a fine-grained non-foliated metamorphic rock produced by contact metamorphism



http://www.windows.ucaredu/tour/link=/earth/geology/meta_contact.html&edu=high&fr=t

Metamorphic Rocks

- Regional Metamorphism – pressure builds up in rocks that is deep within the Earth
- Large pieces of the Earth's crust collide and the rock is deformed and chemically changed by heat and pressure



Metamorphic Rock

- Foliated - contain aligned grains of flat minerals

Gneiss is foliated metamorphic rock that has a banded appearance and is made up of granular mineral grains.

It typically contains abundant quartz or feldspar minerals.



Metamorphic Rock

- Non-Foliated – mineral grains are not arranged in plains or bands

Marble is a non-foliated metamorphic rock that is produced from the metamorphism of limestone.

It is composed primarily of calcium carbonate.



Metamorphic Rock

- Determine if the following rock samples are foliated or non-foliated:



Amphibolite

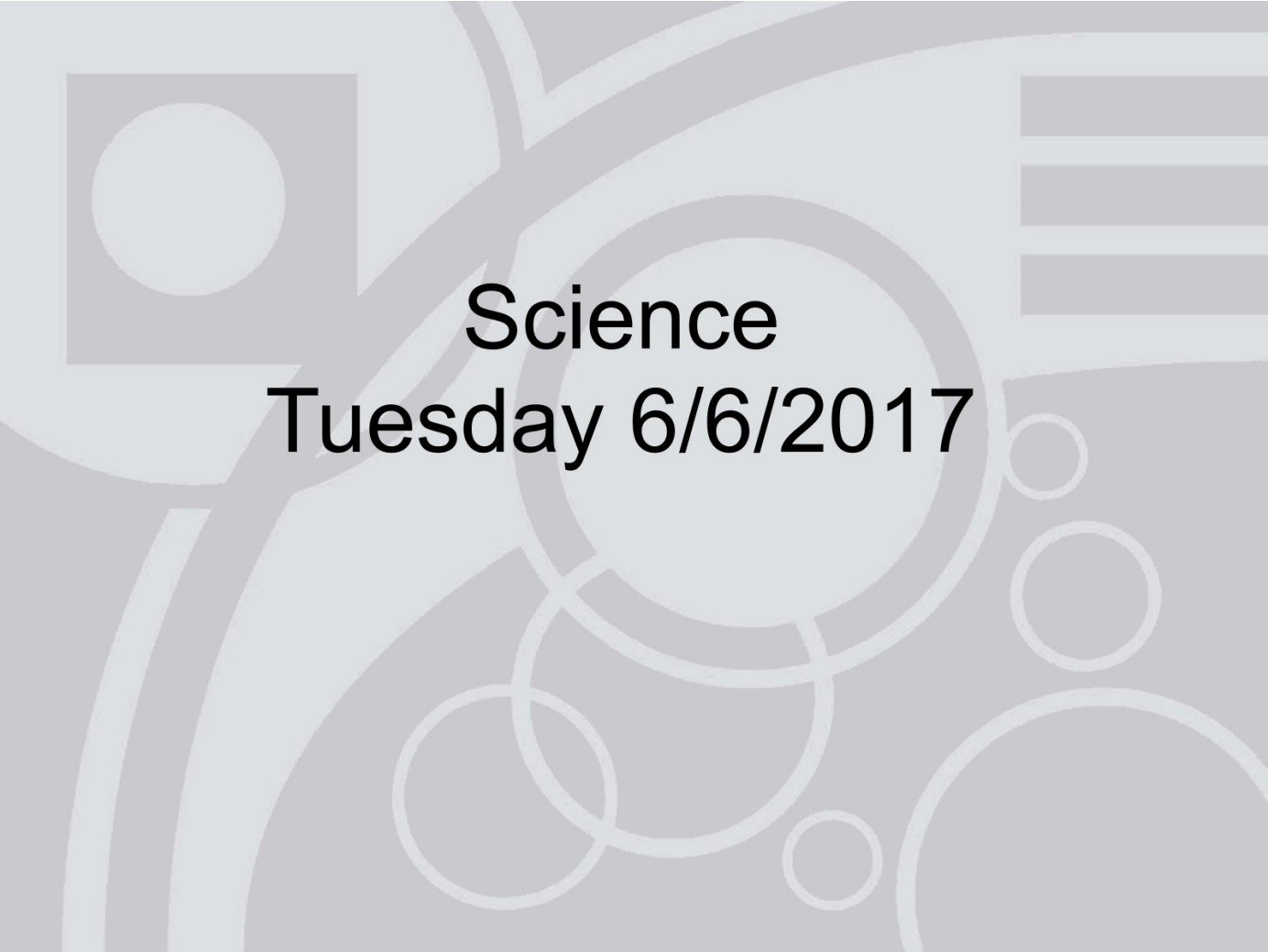
Quartzite

Phyllite

Foliated

End of Types of Rocks PPT

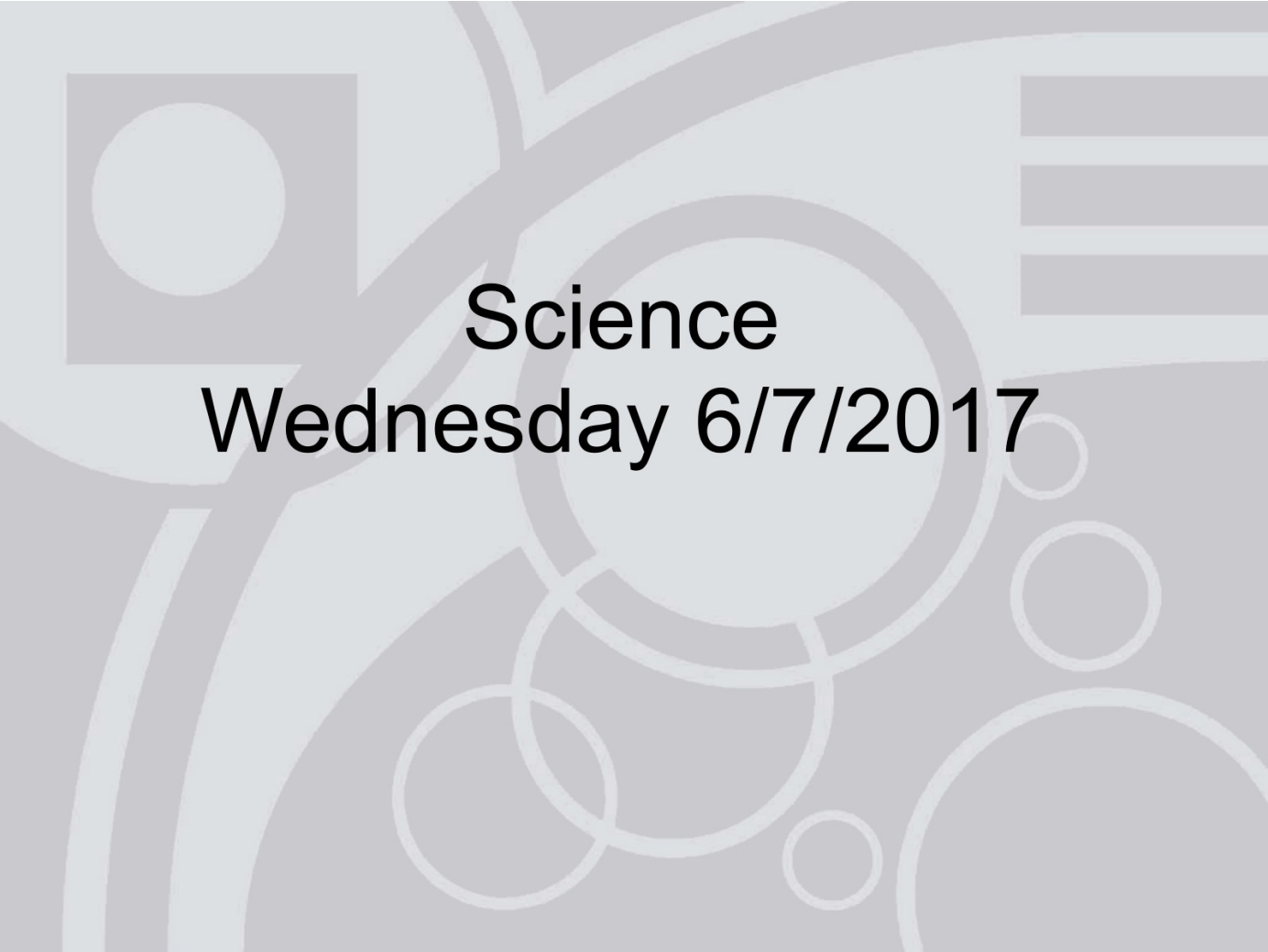
- Be sure to complete your “Types of Rocks” notes as you view this presentation.

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Science
Tuesday 6/6/2017

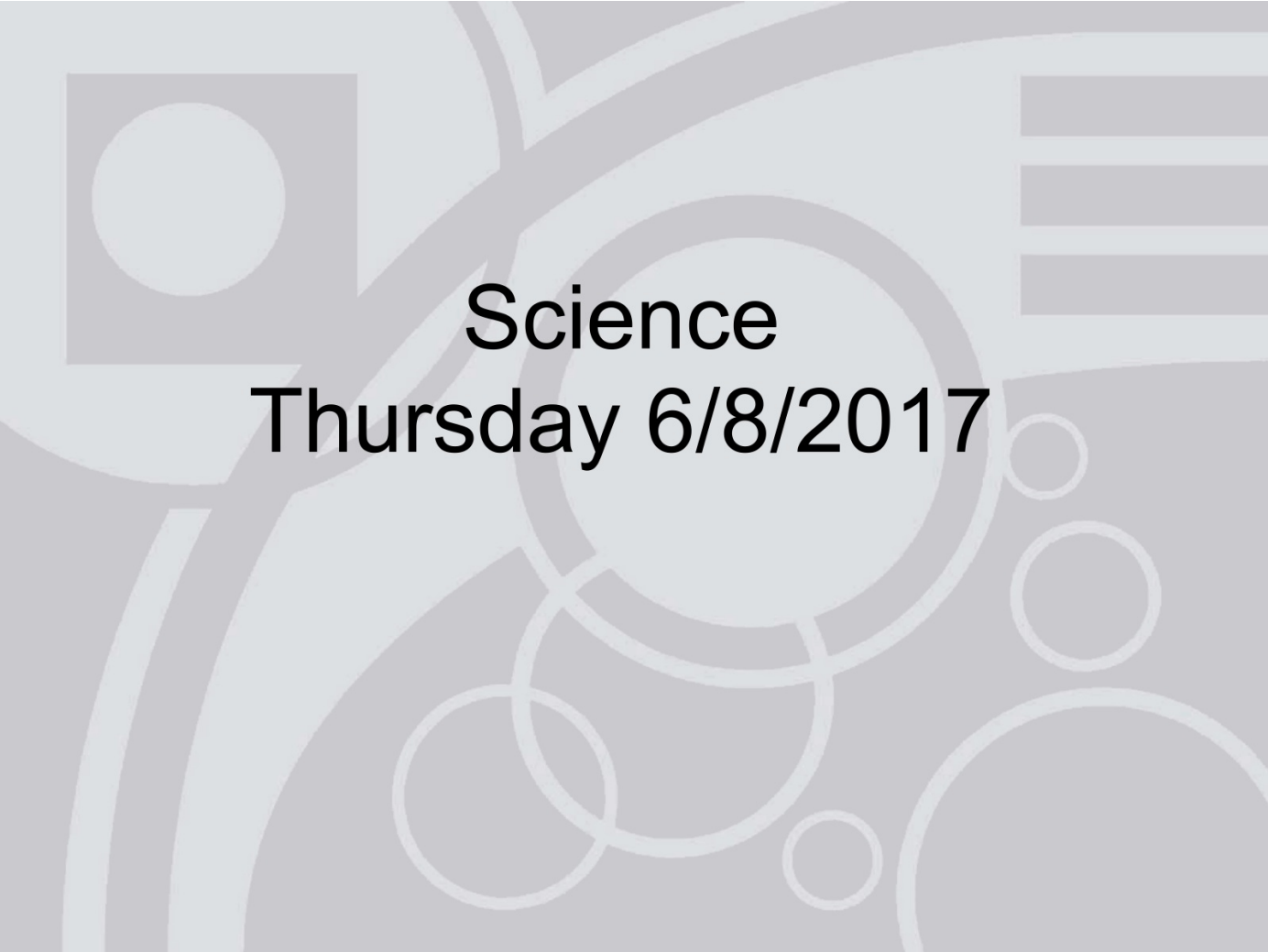
Its time for our Rock Lab!

FINALLY!

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Science
Wednesday 6/7/2017

Today, you'll have time to finish up your rock lab, if needed!

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Science
Thursday 6/8/2017

Nutrition

TEKS: The student understands that personal health decisions and behaviors affect health throughout the life span. The student is expected to:

(D) identify healthy and unhealthy food choices such as a healthy breakfast and snacks and fast food choices.

By: Erin Hogan



K

What do you know?



W

What do you want
to know?



L

What did you learn?



What are grains?

Any food made from:

- wheat,
- rice,
- oats,
- cornmeal,
- barley or
- another cereal grain

is a grain product.

Bread, pasta, oatmeal, breakfast cereals, tortillas,
and grits are examples of grain products.

What are fruits?

Fruit Group foods provide vitamin C. Vitamin C helps our body heal cuts and bruises and fight infections!

Some examples are:

- apples
- bananas
- watermelon
- grapes
- oranges
- cantaloupe

What are Vegetables?

Vegetables are organized into 5 subgroups, based on their nutrient content. The subgroups are dark green vegetables, starchy vegetables, orange vegetables, dry beans and peas, and other vegetables.

What is the dairy group?

- milk
- yogurt
- cheese

What is meat and other proteins?

- meats
- dry beans and peas
- poultry
- eggs
- nuts and seeds
- fish

What are fats/oils?

- canola oil
- butter
- fat (from meats)
- olive oil
- sugars
- mayonaise

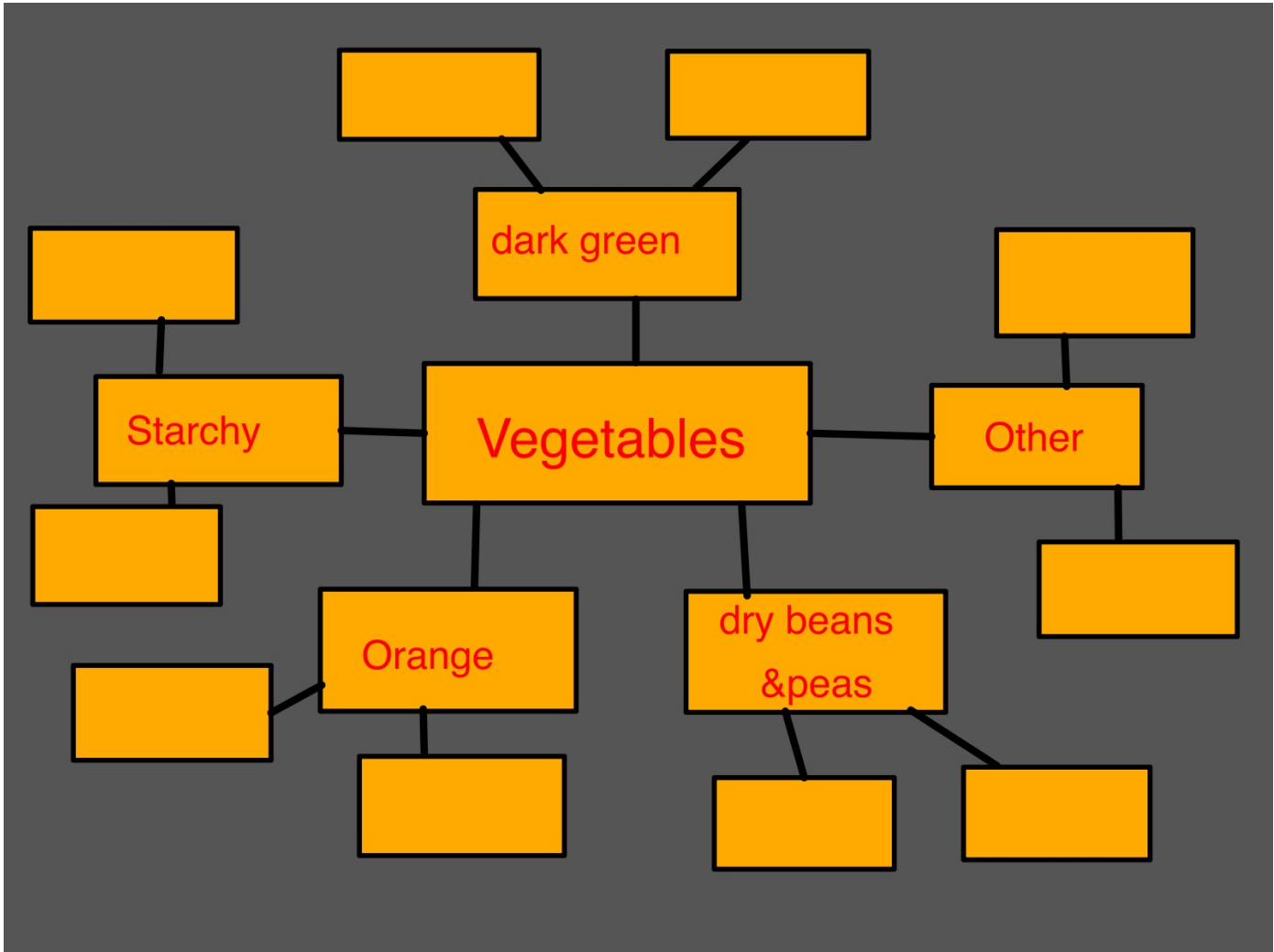
Circle the foods that belong in the grains food group.



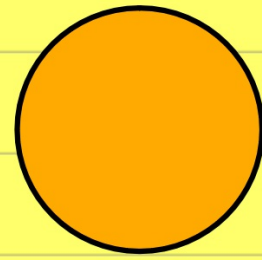
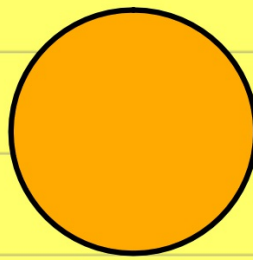
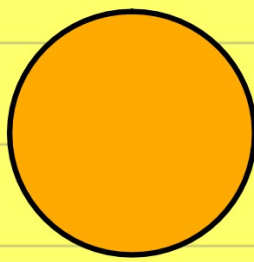
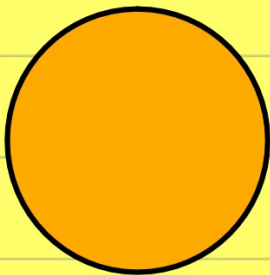
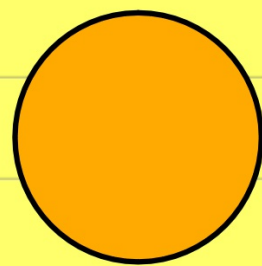
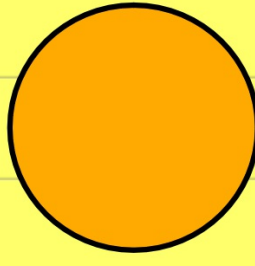
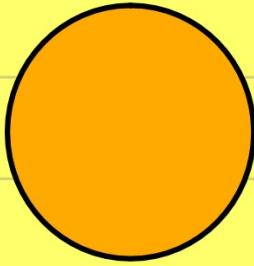
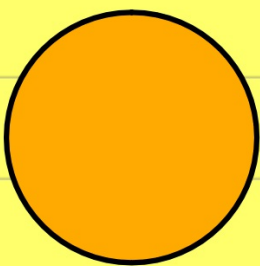
Fruits

Non-Fruits





What are some foods you eat on a daily basis that are in the dairy group?



QUESTION

Which of the following is in the meats and other proteins group?

A

sunflower seeds

B

yogurt

C

wheat

D

oranges

QUESTION

Which food group are you supposed to have the least amount of servings of?

A

dairy

B

fats/oils

C

fruits

D

grains

Circle the one that doesn't belong.

grains



fruits



vegetables



dairy



meats & proteins

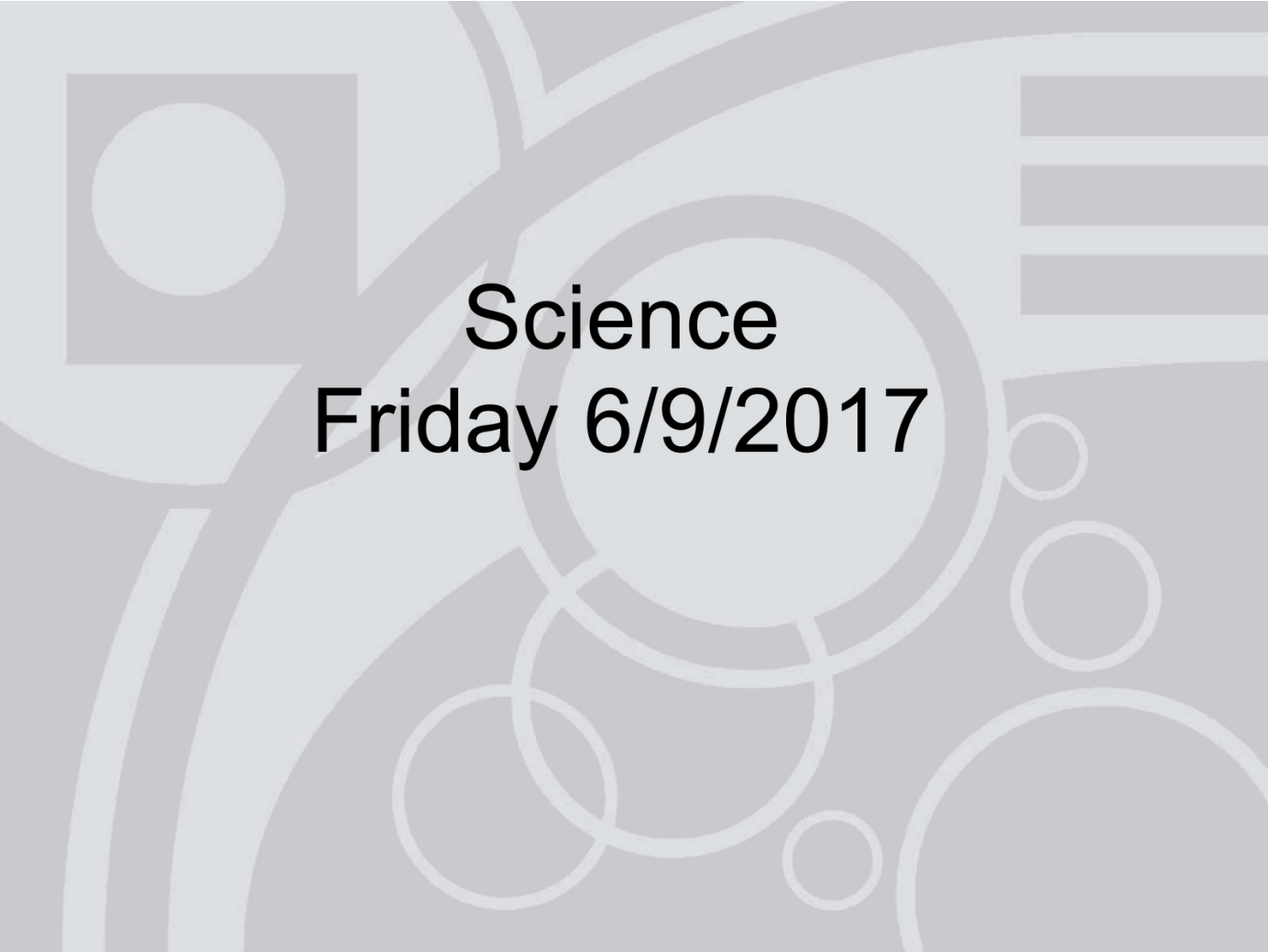


fats/oils



Websites

- **Google Images**
- **<http://www.mypyramid.gov/kids>**

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Science
Friday 6/9/2017

Class Party!