



Can you get an EGG into a jar?



Egg-speriment Pack

By Liesl at the Homeschool Den

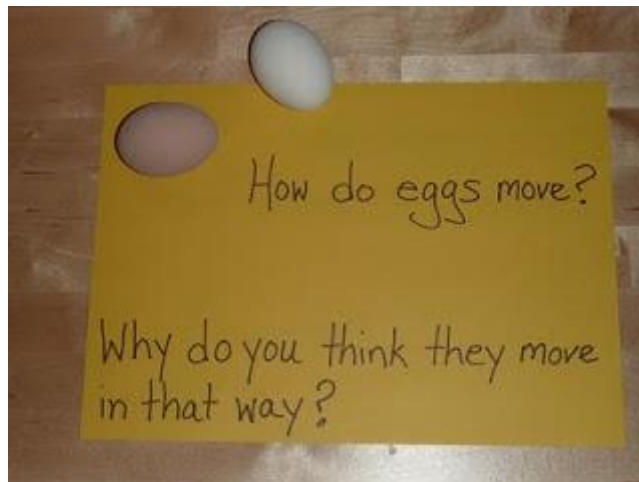


EggSpect the UnEggSpected with these EggSperiments!

Egg Activity #1

Why do eggs move the way they do?

Have the kids roll an egg around on a table. Talk about why they are shaped the way they are.



Eggs wobble when they roll so they won't go far from a mother hen and they will stay inside of a nest. Because eggs are a funny and oblong shape, they roll and wobble around in a certain way. If eggs were round, they would probably roll out of nests or too far away from the mother hen.

Egg Activity #2

Why are eggs shaped the way they are?

Place an egg in the middle of your palm. Squeeze as hard as you can. Can you break it?

LD was certain he would be able to crack his egg immediately. He was shocked when he couldn't and begged to be allowed to throw the egg on the ground instead!



The arch is one of the strongest architectural shapes and similarly the ovoid shape gives an egg its incredible strength!

If you look at the roof of the Pantheon (in Rome) it is shaped like an egg. It has survived for more than 2,000 years. That's because when weight is applied, no single point in the dome supports the entire weight. Instead, the object's weight is carried down along the curved walls to the dome's base.



Egg Activity #3

So if eggs are so strong, can you stand on them?
Try it!

If you're careful you can! But of course, if the egg breaks it's probably because you applied greater pressure to the shell than it could bare!



EggSperiment #4

Will an egg float or sink in water? What happens when we add salt to the water?



We added a lot of salt to one cup and had plain water in the other cup.



The egg in salty water floated, while the other egg sunk. We talked about why that was the case and how salt molecules changed the density of the water.

Egg Activity #5

Do eggs breathe?

Have the kids discuss this. Then take an egg and place it in warm water or vinegar. Have them watch as bubble form around the egg and start rising towards the surface.



Eggs are porous:

- Eggshells have to have little holes in them so that air can move through and into the egg for the growing baby bird. This lets the growing embryo get oxygen.
- We can see evidence that there are little holes in an eggshell by putting it in water and seeing air bubbles. Air can not only get into the egg, but come out of it, too.

Eggs and Pollution

We then talked about how since it is porous it can let things through -- like acid (vinegar), acid rain and pollutants. We talked about DDT (how eagles nearly became extinct)-- and how poisons, pesticides and so forth can harm the animal populations. Also, this means that eggs can take on the smell/flavor of things around it so it is important to keep eggs in their carton in the fridge so they don't begin to smell like stinky cheese!

Egg Activity #6

Chick Development

After talking about the growing chick embryo, we brought out this set I made a few years ago. You can buy the same thing (for example Learning Resources makes a set), but since we only use it for 10 minutes once every couple of years, it wasn't worth the \$30 price to our homeschooling family. Instead I bought some wooden eggs from a craft store and printed pictures out from the Internet.



EggSperiment #8

Is this egg hard boiled or raw?

Give the kids a hardboiled egg and a raw egg and have them try to figure out which is which. Suggest that they spin them around. Can they figure out which is which?



If the egg spins well, it is hard boiled. If the egg spins and wobbles slowly, it is raw. Since the raw egg is fluid inside, its center of gravity changes as the egg spins around. This results in the wobbling motion.

If you touch the eggs slightly to try to stop them, the raw egg will continue to spin for just a moment. That's because of the inertia of the fluid in the egg.

EggSperiment #9: Brush your... errr... egg!

This activity helps kids understand how very important it is to brush your teeth every day!

For this activity we chose coke, grape soda (we didn't have any grape juice) and coffee. The kids selected two drinks and we let the eggs soak for several hours.



As the kids "brushed" their eggs, they were amazed at how quickly and easily the "stain" came off.



Brush Your Egg!

The Homeschool Den

EggSperiment #10

Can you get an **EGG** into a jar?



The Homeschool Den

This experiment requires you to soak a raw egg for two days in vinegar. We soaked 3 eggs in vinegar so each of my kids had an egg to work with:



When the eggs are ready, gently remove them from the vinegar. The egg will feel very rubbery! We used old baby food jars for this experiment. Make sure that you don't press on the egg too hard or the membrane will burst. Both ED and DD's eggs broke within the first five minutes:



LD was having better luck. We decided to start over again with his egg because he stopped making progress. We ran the baby food jar under hot water and placed the egg on top. Then we packed some frozen veggies around the outside since cool air contracts. That seemed to do the trick. Slowly, agonizingly slowly, the egg began to work its way down into the baby food jar!

The more he worked with the egg, the more of the shell came off leaving behind just the membrane between success and disaster! We shouted with joy when the egg made it into the jar without breaking!



Egg Activity #11: Egg Drop

The first time we did this activity, we were studying the brain. I had the kids design a helmet that would protect our egg pilot in a fall. The shell, I told them, was his skull; the egg white and yolk was his brain. Then I left the kids to it!



LD designed a balloon-encased egg protector.



DD designed a construction paper protective cloak:



Mom designed a cotton ball-play dough helmet (I took the photo before covering it entirely):



Then it was time for the big drop:



We checked to see which egg pilots survived.

DD's made it through unscathed:



Mom's design was a bust:



LD's egg pilot survived and lived to see another fall (and another and another!)



So then we tried it from higher spots in the house and outside!



Egg Activity #12: The Stinky Smelly Egg!

Have your kids ever smelled rotten eggs? There's nothing quite like it!

Leave an egg in a sealed container in the sun for a couple of days. Uncover the egg and take a whiff. DO NOT TOUCH THE EGG! It smells pretty bad, right? Why is that?



Eggs contain sulfides, a mixture of sulfur, metals and other organic elements. Sulfides don't smell bad when they are fresh, but when the egg rots, the sulfides are released as a smelly gas.

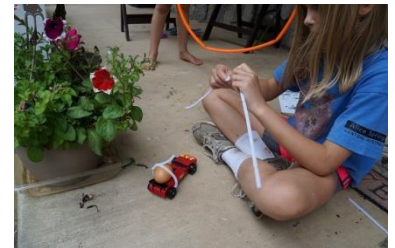
Egg Activity #13: Seatbelt Safety with Crash-Test Egg

In preparation for the activity, they made their own pinewood derby cars (just kits that we got from Michaels)



Once the paint was dry and the wheels were on, I told them they had a challenge... to create a seatbelt safety system to protect an egg as the car traveled down our steep driveway.

DD experimented with a couple different options. First she tried using pipe cleaners. When she couldn't get the egg from popping forward, though, she opted for a rubber band system instead.



Then it was time to test the "seatbelt."



Although her egg stayed in place, her egg did not survive the bumpy ride down the hill. To be fair, though, her egg had a slight crack to begin with (from rolling off during the seat belt adjustment phase!).

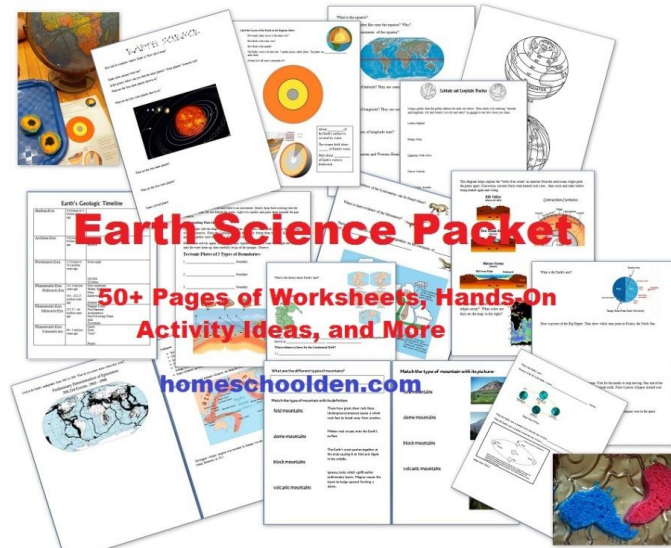


She gave it a second go with a pom-pom addition (I'm not quite sure what the pom-pom was for)... but egg pilot #2 came to a bitter, sad end as well! She really had a blast with this activity despite the sad end for her eggs!

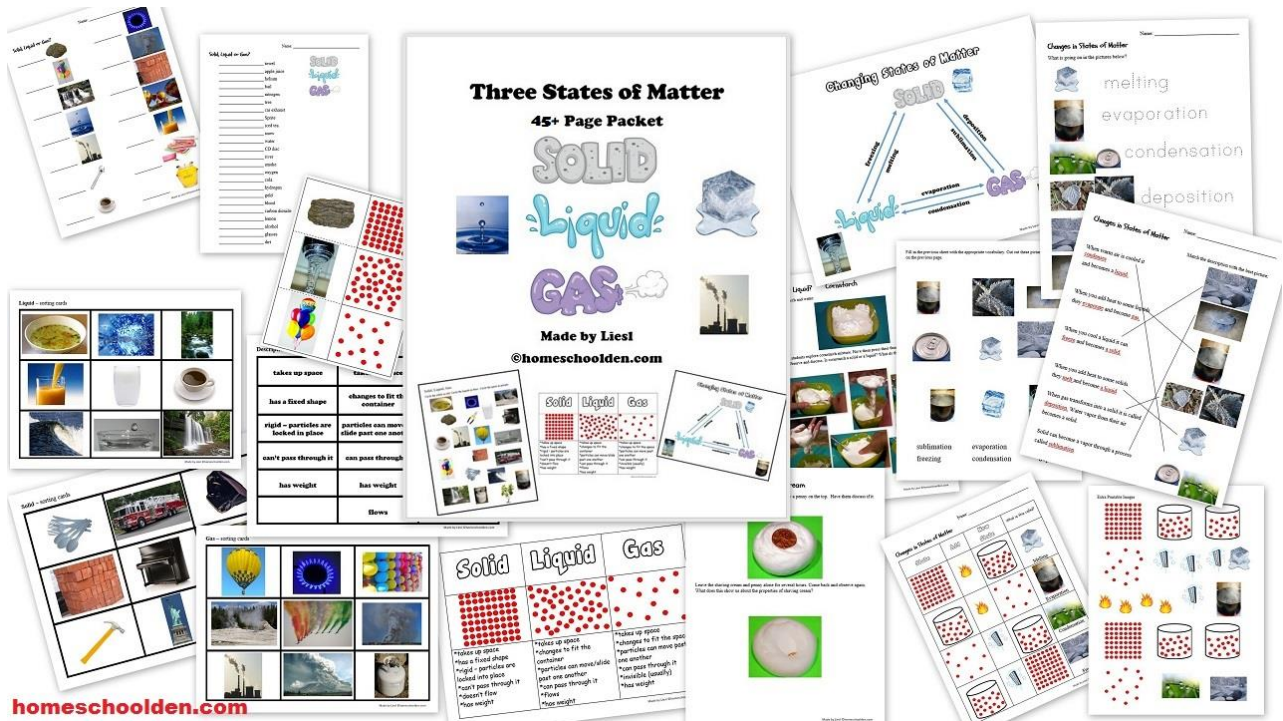


Be sure to check out our packets at homeschoolden.com

Earth Science Packet: Plate Movement, Earthquakes
Volcanoes and more!



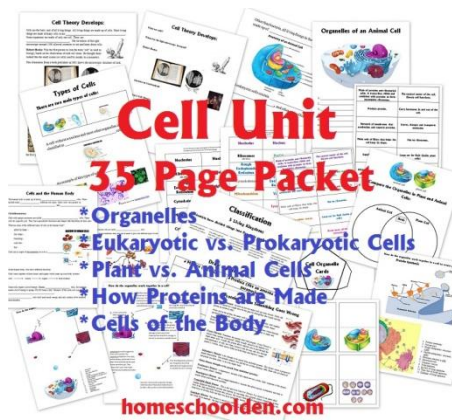
States of Matter Packet



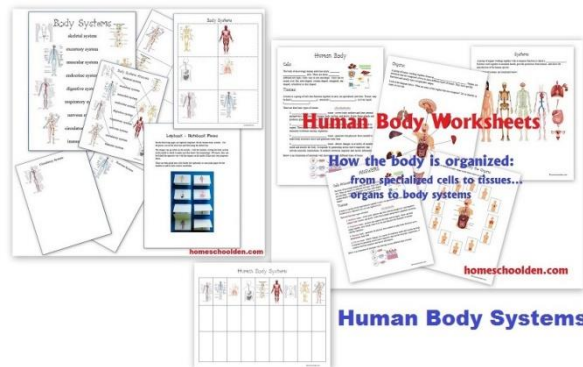
Simple Machines Packet



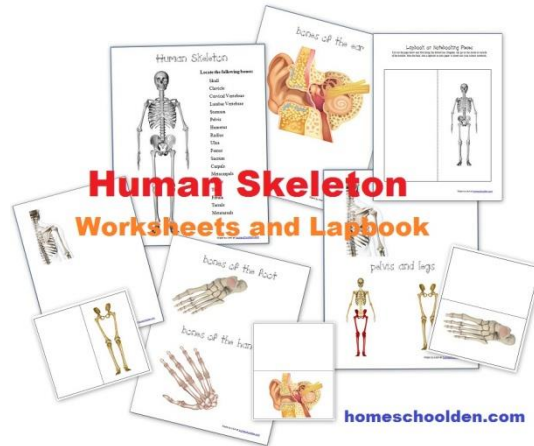
A Study of Cells Packet



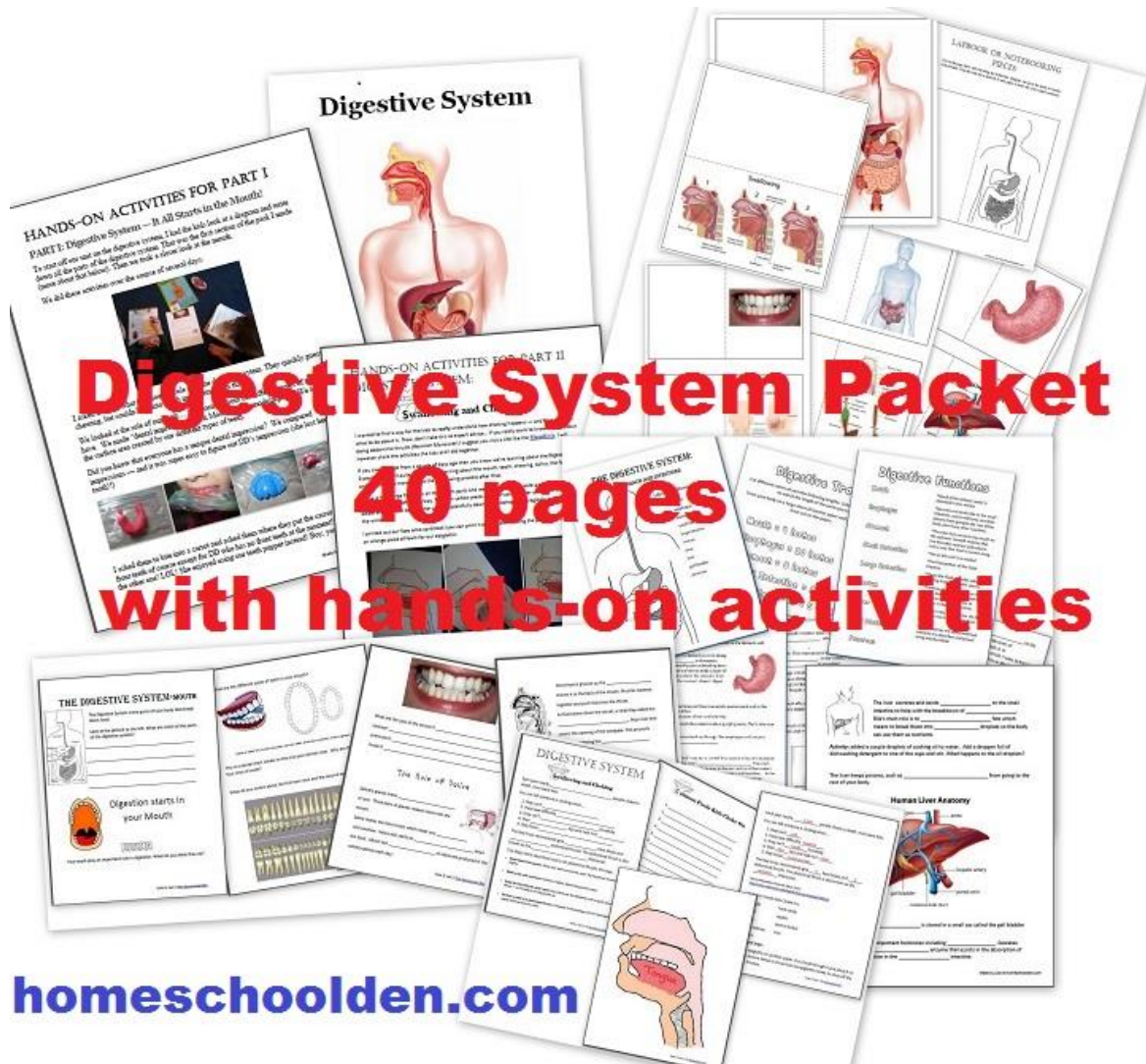
Human Body Systems



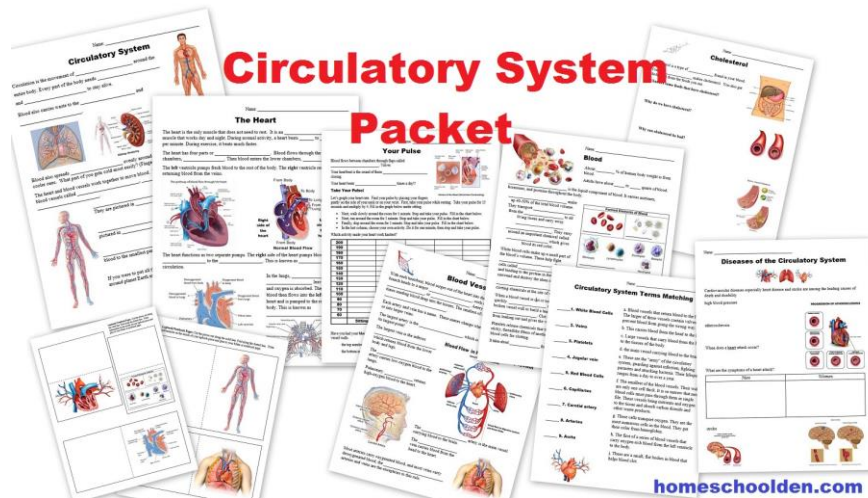
Skeleton Lapbook and Notebook Pages



Digestive System Pack



Circulatory System Packet coming soon!



Animal Packet: (5 vertebrate groups, characteristics of animals, invertebrate animal groups, animal track activities, domesticated vs. wild animals)



Biology Unit: Biomes, Ecosystems, Habitats, Feeding Relationships, Biological Interactions

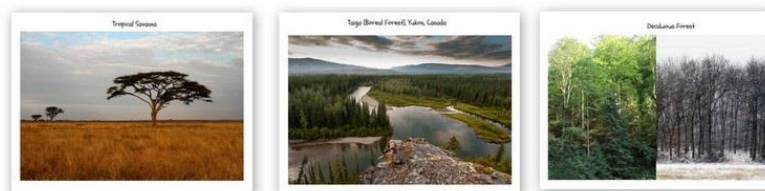
Biology Unit:
This 70-page packet covers the biosphere:
Biomes, Ecosystems, Habitats, Food Chain/Food Webs, Feeding Relationships, Energy Pyramid, Biological Interactions: symbiosis, mutualism, amensalism, etc.

8 x 11 Printable Photos of the 9 Biomes
(or print 4-per-page for smaller cards)

Part of our 70-page
Biology Packet

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Biome Worksheets and Picture Cards



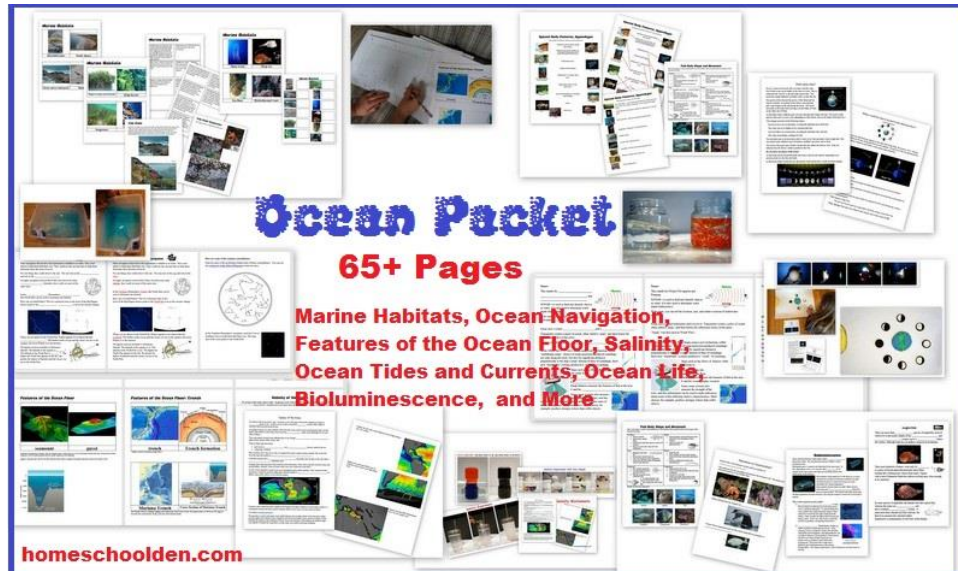
8 x 11 Printable Photos of the 9 Biomes
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Ocean Unit

We did a very thorough study of the hydrosphere — ie. the ocean. We talked about the various marine habitats, the features of the ocean floor, salinity, tides and currents, ocean navigation, ocean life: Special Body Features, Fish Body Shape and Movement, Biological Interactions: Mutualism and Commensalism in the Ocean, Deep Sea Life – Bioluminescence, Anglerfish



Civics and Government Packet:



American Revolution Packet (A Study of the causes of and events leading to the American Revolution such as the French & Indian War, Sugar & Molasses Acts, Stamp Act, Boston Massacre, Townshend Acts, Boston Tea Party, Lexington & Concord and more)

Causes and Events Leading to the AMERICAN REVOLUTION

Highlighting: 30-Page Packet

The French and Indian War
Albany Plan
Sugar and Molasses Acts
Pontiac's Rebellion
Proclamation of 1763
Stamp Act
Sons of Liberty
Notable Men of Boston
Townshend Acts
Tea Act
Boston Tea Party
Intolerable Acts
First Continental Congress
Battles of Lexington and Concord

Made by Liesl at homeschoolden.com

World Facts Packet:

- *Largest countries
- *Population facts
- *Major world religions
- *Facts about the World: longest river, largest desert, wettest and driest places on Earth, tallest mountain, deepest spot in the ocean, etc.
- *Facts about the US: largest/smallest state, capital, highest mountain, longest river, rivers & lakes sheet, largest cities, neighbors
- *Blank fact sheet pages for: Canada, United Kingdom, Australia, South Africa
- *Famous world landmarks

World Facts Packet

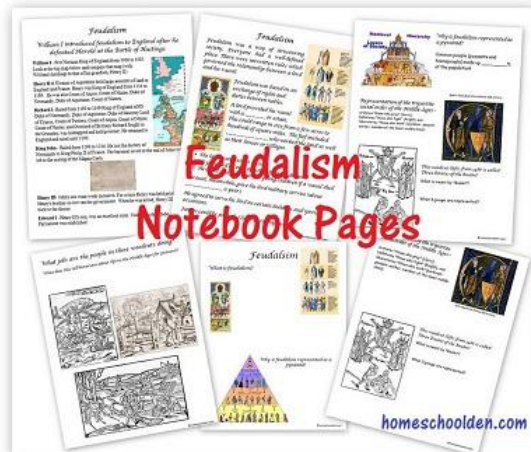
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PAGES INCLUDE:

- *Largest countries
- *Population facts
- *Major world religions
- *Facts about the US: largest/smallest state, capital, highest mountain, longest river, rivers & lakes sheet, largest cities, neighbors
- *Blank fact sheet pages for: Canada, United Kingdom, Australia, South Africa
- *Famous world landmarks

including answer sheets

Feudalism, Medieval Art



Middle Ages Unit Feudalism Activities



Rocks and Mineral Packet



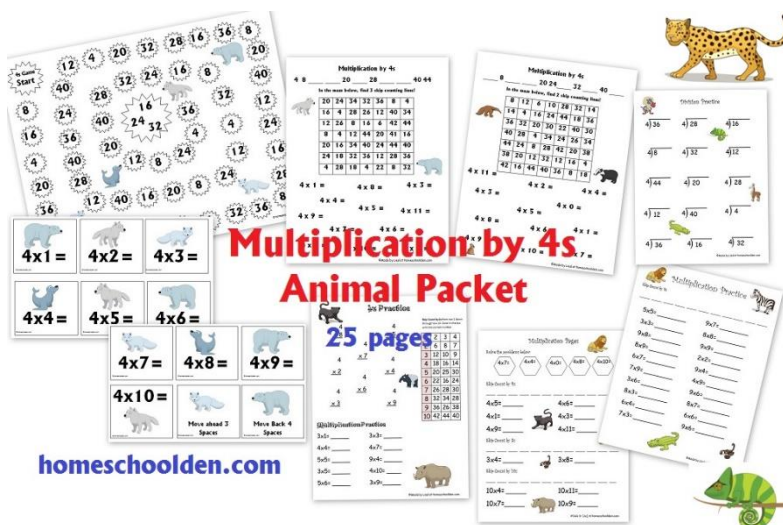
Multiplication Fact Packets: As my daughter moved into learning her multiplication facts I looked around for the kind of multiplication practice that would help her. The math book she was using went through the math facts a bit too quickly for her. She needed quite a bit of repetition and wanted bright, colorful worksheets. I wound up making my own sets of practice pages and games. She loved that! Be sure to check out our Multiplication Bundle here: [Learning the Multiplication Tables 2s thru 9s](#). Scroll down to see the links to these individual packets below.



Each of the **Multiplication Math Packets** I made for ED had a different theme. And as you will see, the packets progressed from fairly easy, straight-forward pages in the first packet to mixed multiplication and division problems by the time she was working on her 8s.

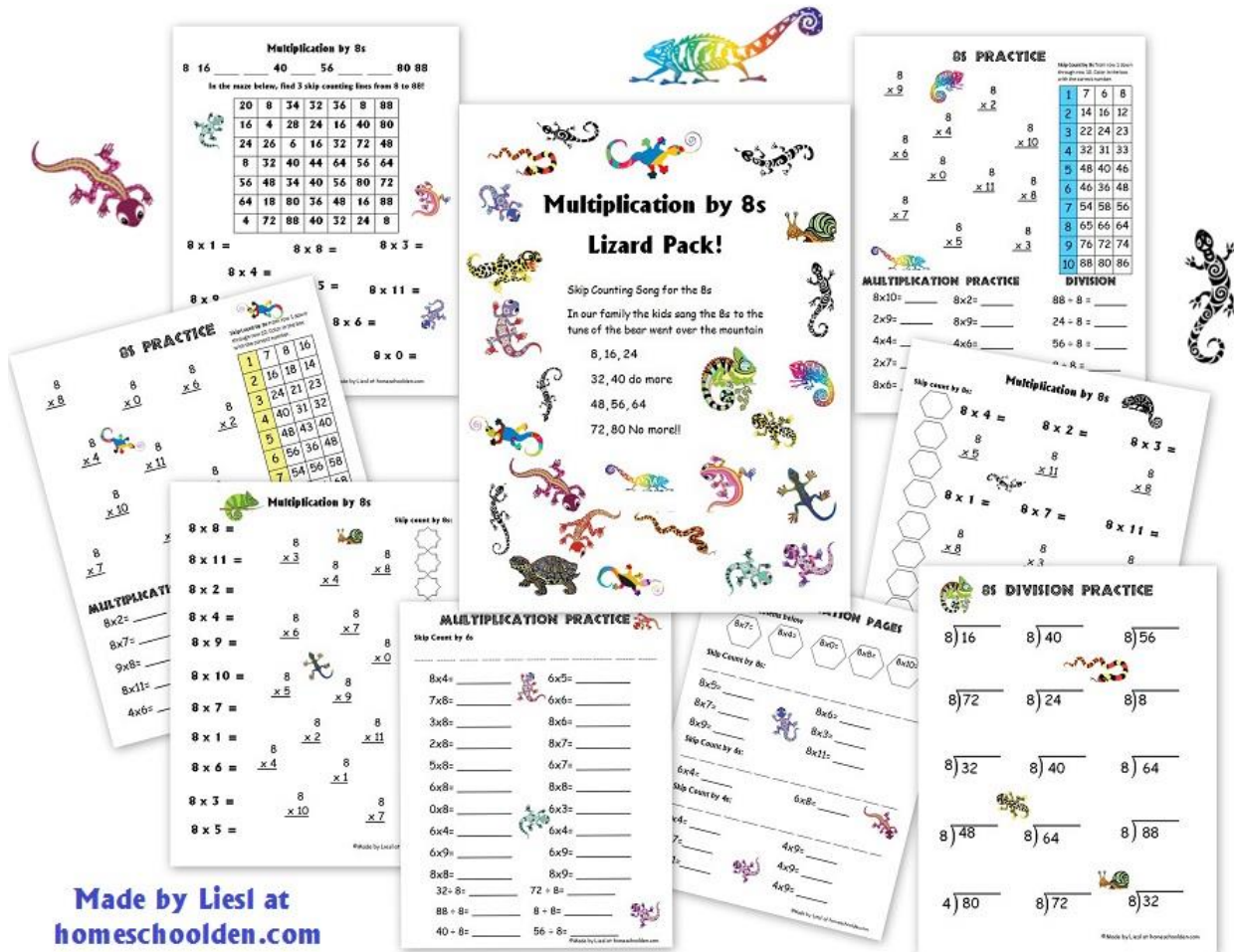
What order did she learn her math facts? 2s, 5s, 10s, 3s, 6s and 7s (because those skip counting songs were easy for her!), 4s, 9s, 8s.

Here are some of the activities in the 4s packet:

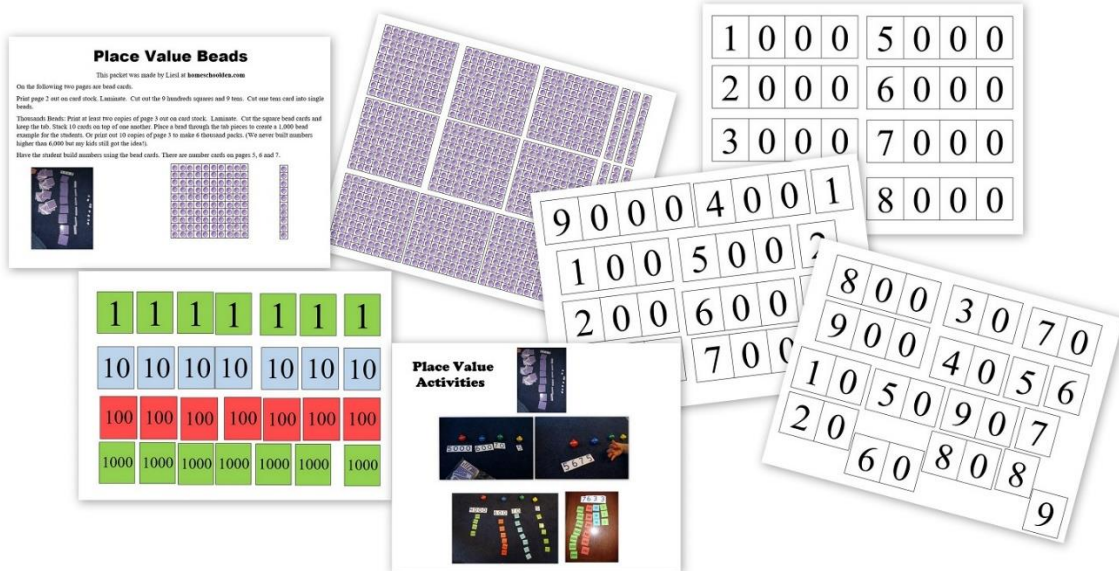


Many of these are all on sale individually or you can buy the [bundle](#) of all these materials. Here are some of the worksheets and activities in our 8s packet:

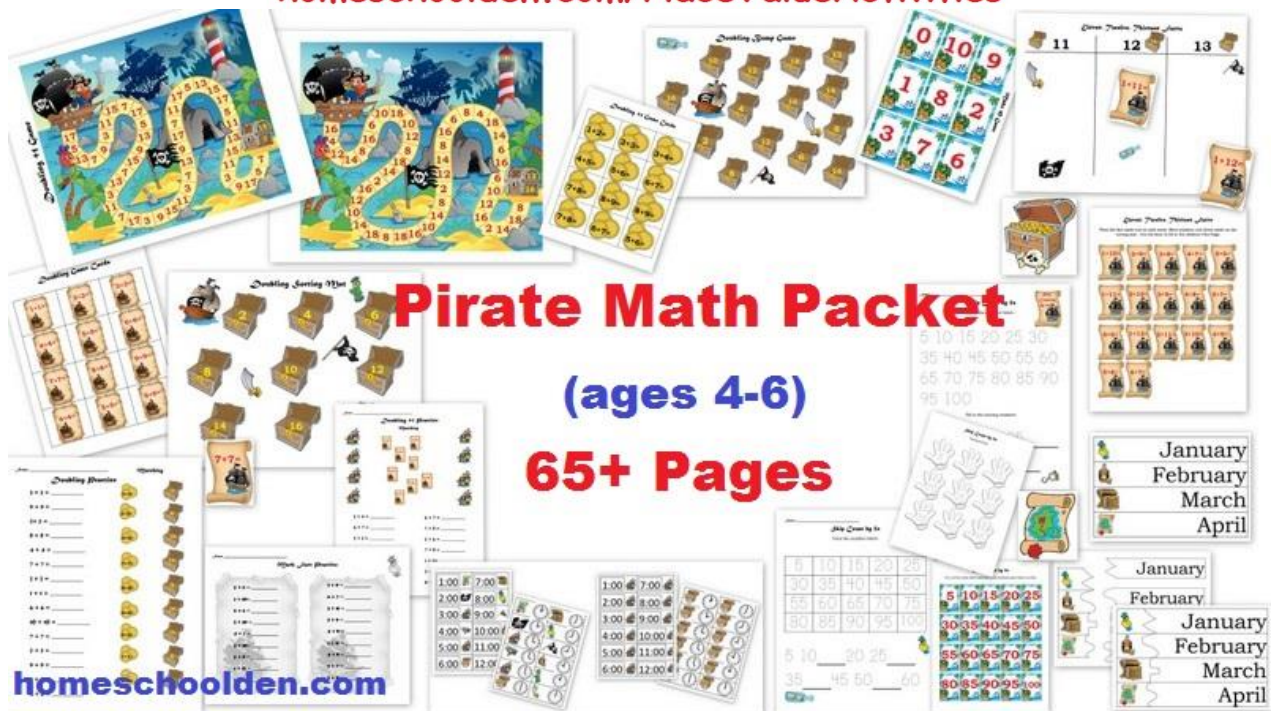
Multiplication by 8s Packet: 25 pages of worksheets, Lizard Races for the 4s, 6s, 7s, 8s and 9s



Place Value Printable and Pirate Addition Pack



homeschoolden.com/PlaceValueActivities



and for 3-7 year olds, our 60+ page Dinosaur Packet!

