

Earth Science and Astronomy

Week 1: The Earth/ Gravity

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg.10-13	pg.2-3	pg.4-7,10,12-13	#1 Bulging Ball, #5 Tilt	*Gravity All Around-A *Zero Gravity-O *I Fall Down-Y

Supplies for experiments: construction paper, scissors, hole punch, ruler, paper, glue, pencil; ball of clay the size of an apple, 2 pencils, flashlight

Vocabulary: Equator, gravity

Memory work: four seasons (winter, spring, summer, fall), hemispheres (northern, southern)

left side- make a chart of the months in each season for each the northern and southern hemispheres

right side- copy and paste page one from the following link:

<http://www.kid-friendly-homeschool-curriculum.com/support-files/2weatherb1.pdf>

Scientist: scientist study will begin on week 3

Week 2: Layers of the Earth/ Land, Water, and Air

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg.14-17	pg. 8-9	pg. 38-39	#3 Wobbler, #17 Sampler	*Water Dance-A *A Drop Around the World-O *The Magic School Bus: Inside the Earth-Y

Supplies for experiments: pen, 1 raw egg, 1 hard cooked egg; 3 different colors of clay, 1 straw, fingernail scissors

Vocabulary: The Mohole project, the water cycle

Memory work: layers of the earth (inner core, out core, mantle, oceanic crust, continental crust)

left side- list the layers from the innermost layer to the outermost layer and describe the composition of each layer

right side- copy and paste page one from the following link (note: continental crust and oceanic crust are not separate on this page):

<http://www.kid-friendly-homeschool-curriculum.com/support-files/4geologyb2.pdf>

Scientist: scientist study will begin on week 3

Week 3 : Earthquakes/ Volcanoes

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 18-21	pg. 18-21	pg.22-25	#22 Rub-A-Dub, #32 Detector	*Volcanoes and Earthquakes- DK Eyewitness Books-A *Earthquake in the Early Morning -O *Pompeii...Buried Alive! -Y

Supplies for experiments: cardboard, glass pop bottle, scissors, refrigerator, cup of water; jar, felt tip marker, rubberband, masking tape, scissors, wax paper, ruler

Vocabulary: shock waves, hot spots

Memory work: the parts of a volcano (magma chamber, vent, volcanic cone, lava flow, ash and smoke cloud)

left side- list parts of a volcano and describe them

right side- print volcano book and label any parts that are not already labeled

<http://www.crayola.com/free-coloring-pages/print/volcano-mini-book-coloring-page/>

Scientist: Begin reading about Aristotle in *Aristotle and Scientific Thought*. Read the introduction and chapter 1. Start the scientist notebooking pages. Use this website for help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/aristotle.html>.

Week 4 : Mountains/ Bending and Breaking

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 26-29	pg.22-23	pg. 30-31	#30 Folds, #52 Up & Down	*How Mountains Are Made-A *Mountains (O'Mara)-O *The Lure of Mountain Peaks-Y

Supplies for experiments: 4 paper towels, glass of water; wooden block, clear container twice as big as block, sand, masking tape, marking pen, ruler, 1 T. spoon

Vocabulary: mountain roots, mountain belts

Memory work: types of faults (normal, reverse, strike-slip, oblique)

left side- list the fault types and describe them

right side- divide a piece of plain white paper into 4 equal squares and illustrate the fault types (using pg. 28 in Planet Earth as a model)

Scientist: Continue reading about Aristotle in *Aristotle and Scientific Thought*. Read chapters 2 & 3. Continue the scientist notebooking pages. Use this website for help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/aristotle.html>.

Week 5 : Rocks

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 30-31	pg.24-25, 28-31	pg. 20	#14 Crunch, #15 Sediment. Sandwich	*A Rock is Lively-A *MSB:Rocky Road Trip-O *Let's Go Rock Collecting-Y

Supplies for experiments: 20 flat toothpicks, book; 2 bread slices, crunchy peanut butter, jelly, knife, plate

Vocabulary: petrologists, marble

Memory work: types of rocks (igneous, sedimentary, and metamorphic

left side- list the rock types and describe how they are formed

right side-divide a piece of paper into three sections, list each rock type and some examples of that rock type, draw an example of the rock

Scientist: Continue reading about Aristotle in *Aristotle and Scientific Thought*. Read chapters 4 & 5. Continue the scientist notebooking pages. Use this website for help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/aristotle.html>.

Week 6: Minerals and Gems

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 32-33	pg.26-27		#9 Needles, #16 Line-Up	*DK Eyewitness:Crystals & Gems-A *Rocks & Minerals: Crystals (Stewart)-O *Rock Stars: Minerals-Y

Supplies for experiments: 1 C. measuring cup, Epsom salt, 1 T. measuring spoon, scissors, black construction paper, lid from a large jar; paper towels

Vocabulary: gemstone, crystal systems

Memory work: ways to identify a mineral (hardness, color, density, the way they reflect light, and the way they break)

left side- list the ways to identify minerals and describe each

right side- divide a piece of paper into 5 parts, list the ways to identify minerals and draw what tools or techniques may be used to accomplish these tests (this website may be helpful <http://www.rocksforkids.com/RFK/identification.html>)

Scientist: Finish reading about Aristotle in *Aristotle and Scientific Thought*. Read chapters 6 and The World in Aristotle's Time. Finish the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/aristotle.html>.

Week 7 : Shaping the Earth/ Ice at Work

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 36-39	pg.32-35	pg. 40-41, 50-51	#11 Dripper, #48 Crack-Up	*Caves and Caverns (Gibbons)-A *The Glaciers are Melting!-O *Glaciers (Zappa)-Y

Supplies for experiments: Epsom salt, 2 small jars, cotton string, scissors, 2 washers, spoon, ruler, paper; drinking straw, modeling clay, freezer, glass of water

Vocabulary: erosion, glacier

Memory work: parts of a cave (stalactites, stalagmites, and columns)

left side- list the parts and describe how each is made

right side- draw a picture of a cave and be sure to include at least one stalactite, stalagmite, and column

Scientist: Begin reading about Charles Darwin in *One Beetle Too Many*. Read “One Beetle Too Many” and “Anatomy, Theology, and Botany”. Begin the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/charlesdarwin.html>.

Week 8: The Seas and the Seashore

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 40-45	pg.12-15	pg. 32-37	#26 Dipper, #41 Rub Away	*Oceans-Surviving in the Deep Sea-A *I Wonder Why the Sea is Salty-O *The Magic School Bus on the Ocean Floor-Y

Supplies for experiments: 2 colors of modeling clay, plastic soft drink bottle, 2 books; writing paper, pencil with eraser

Vocabulary: continental shelf, ocean currents

Memory work: the names of the oceans from biggest to smallest (Pacific, Atlantic, Indian, Antarctic, Arctic)

left side- list the oceans from biggest to smallest and the surface area of each

right side- print off the following map (make sure it is *without* ocean labels), then label the oceans on the map

<http://www.worksheetworks.com/geography/world/robinson/oceans-continents.html>

Scientist: Continue reading about Charles Darwin in *One Beetle Too Many*. Read “The Voyage of a Lifetime Begins” and “Butterflies and Gauchos”. Continue the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/charlesdarwin.html>.

Week 9: Rivers, Lakes, and Swamps

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 46-49		pg. 26-29	#46 Speedy, #47 Wander	*What's Inside Lakes?-A *The Brook Book-O *It Could Still Be a Lake-Y

Supplies for experiments: pencil, paper cup, straw, clay, 1 ft. cardboard square, 1 gallon jug and water; paper cup, pencil, drinking straw, modeling clay, 1 ft. cardboard square, dirt, rocks, 1 gallon jug with water

Vocabulary: oxbow lake, meander

Memory work: the 5 Great Lakes (Huron, Ontario, Michigan, Erie, Superior)

left side- list the Great Lakes and list which states or countries they border (use this website if needed <http://www.great-lakes.net/teach/chat/answers/greatlakesmap.html>)

right side- print this blank map and fill in the lakes (underlining the first letter of each name to emphasize the mnemonic device "HOMES") and the states/ countries that are borders <http://www.worldatlas.com/webimage/testmaps/glkoutline.htm>

Scientist: Continue reading about Charles Darwin in *One Beetle Too Many*. Read "Seashells on Mountaintops" and "Galapagos Islands". Continue the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/charlesdarwin.html>.

Week 10: The Atmosphere/ Forecasting the Weather

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 50-51, 60-61	pg.10-11, 42-43		#6 MegaWeight, #60 How Fast	*Weather (Simon)-A *How's the Weather?-O *The Weather Watcher-Y

Supplies for experiments: paper clip, 4in X 12in cardboard piece, 2 rubberbands, pencil, paper cup, 12 in. string, marker, soil; pencil, 4 cups (5oz), 2 straws, a pin, masking tape

Vocabulary: air, chaos theory

Memory work: layers of the atmosphere (troposphere, stratosphere, mesosphere, thermosphere)

left side- list the layers, their distances, and any other characteristics

right side- fill out the worksheet on page 2 of the following link

<http://tolmanadvisory.weebly.com/science.html> (about 2/3 down the page is a pdf for atmosphere- print either just page 2 or pages 1 and 2 to use)

Scientist: Finish reading about Charles Darwin in *One Beetle Too Many*. Read "The Idea That Scared the World". Finish the scientist notebooking pages. Use this website for help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/charlesdarwin.html>.

Week 11: Winds, Storms, and Clouds

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 54-57	pg.40-41, 44-45	pg. 17-19	#47 Fly Away, #91 Twirler	*Cloud Dance-A *Twister Trouble-O *Magic School Bus Rides Wind-Y

Supplies for experiments: paper hole punch, sheet of paper, shallow baking dish, bowl of water; construction paper, scissors, pencil, ruler, eyedropper

Vocabulary: Beaufort Wind Scale, fog

Memory work: the types of clouds (alto-cumulus, alto-stratus, cirro-cumulus, cirro-stratus, cirrus, cumulo-nimbus, cumulus, fog, nimbo-stratus, stratus, strato-cumulus)

Left Side- list the cloud types starting from the highest elevation

Right Side- print the worksheet on the following page and label the clouds

<http://www.enchantedlearning.com/subjects/astronomy/activities/label/clouds/>

Scientist: Begin reading about James Cook in *What's Their Story? Captain Cook*. Read pg.4-9. Begin the scientist notebooking pages. Use this website for help if necessary

http://www.ducksters.com/biography/explorers/captain_james_cook.php.

Week 12: Rain and Snow

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 58-59	pg.38-39	pg. 16-17	#43 Run Off, #75 Bigger	*Down Comes the Rain-A *Blizzard (Cole)-O *It's Snowing!-Y

Supplies for experiments: dirt, red powdered paint, 1 t. measuring spoon, funnel, coffee filter paper, wide mouth jar, 1 C. measuring cup, stirring spoon; plastic see-through lid, eye dropper, pencil

Vocabulary: hailstones, sun's halo

Memory work: types of precipitation (rain, snow, hail, freezing rain, sleet)

Left Side- list the types of precipitation going from the warmest to the coldest

Right Side- print page 1 of the following link (the types of precipitation)

<http://www.kid-friendly-homeschool-curriculum.com/weather-worksheets.html#TypesPrecipitation>

*use the information on page 2 to help fill in the chart if necessary

Scientist: Continue reading about James Cook in *What's Their Story? Captain Cook*. Read pg.10-15. Continue the scientist notebooking pages. Use this website for help if necessary

http://www.ducksters.com/biography/explorers/captain_james_cook.php.

Week 13: Climate

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 52-53	pg. 36-37	pg. 14-15, 60-61	#99 Super Cooled #61 Which Way	*What is a Biome?-A *It Never Rains in Antarctica-O *Exploring Ecosystems-Y

Supplies for experiments: 2 paper cups, table salt, 1 T. measuring spoon, pen, freezer; flashlight, 1 sheet of dark paper

Vocabulary: jet streams, monsoons

Memory work: types of fronts (cold, warm, stationary, occluded)

Left Side- list the front types in alphabetical order and describe each (use pages from link below if necessary)

Right Side- print and complete the worksheets on the following link and glue finished product into notebook <http://thewisenest.com/weather-fronts-self-check-worksheet.html>

Scientist: Continue reading about James Cook in *What's Their Story? Captain Cook*. Read pg.16-23. Continue the scientist notebooking pages. Use this website for help if necessary http://www.ducksters.com/biography/explorers/captain_james_cook.php.

Week 14: Polar Regions and Tundra

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments	Extra Reading Books
pg. 64-65		pg. 48-49	Tundra notebook pages	*Explore the Tundra-A *Penguin Puzzle-O *Tundra (Stone)-Y

Supplies for experiments: print off and complete tundra notebooking pages

Vocabulary: icebergs, permafrost

Memory work: lines of latitude (Arctic Circle, Tropic of Cancer, Equator, Tropic of Capricorn, Antarctic Circle)

Left Side- list the lines going from the top of the globe to the bottom and the degree of latitude where they are located

Right Side- print a map from the following page and fill in the lines of latitude (be sure to create a map *without* the Equator or tropics and circles)

<http://www.worksheetworks.com/geography/world/robinson/coordinate.html>

Scientist: Finish reading about James Cook in *What's Their Story? Captain Cook*. Read pg.24-31. Finish the scientist notebooking pages. Use this website for help if necessary http://www.ducksters.com/biography/explorers/captain_james_cook.php.

Week 15: Temperate Woodland

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments	Extra Reading Books
pg. 66-67			Deciduous Forest pages	*Explore the Deciduous Forest-A *What Is a Forest?-O *Forests (Stone)-Y

Supplies for experiments: print off and complete deciduous forest pages

Vocabulary: deforestation, nitrogen cycle

Memory work: the life cycle of a tree (seed, seedling, adult tree, flower, fruit)

Left Side- list each step in the cycle in the order they occur

Right Side- print off and complete the worksheet called “Life Cycle of a Tree” from the following link <http://www.colorwithleo.com/print-puzzles.php>

Scientist: Begin reading about John Wesley Powell from *In Search of the Grand Canyon*. Read pg.3-18. Begin the scientist notebooking pages. Use this website for help if necessary <http://historytogo.utah.gov/people/johnwesleypowell.html>.

Week 16: Grasslands

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments	Extra Reading Books
pg. 68-69		pg. 144-145	Savanna notebook pages	*Explore the Grasslands-A *Life in the Grasslands-O *Here is the African Savannah-Y

Supplies for experiments: print off and complete savanna notebook pages

Vocabulary: slash and burn, the Dust Bowl

Memory work: layers of the soil (humus, topsoil, subsoil, bedrock)

Left Side- write and describe the composition of the 4 layers of soil (this link may help, but they do add another level called the parent material

http://school.discoveryeducation.com/schooladventures/soil/down_dirty.html)

Right Side- print and complete the soil flip book on the following link

<http://thirdgradethinkers8.blogspot.com/2012/05/science-soil-study-layers-of-soil.html>

Scientist: Continue reading about John Wesley Powell from *In Search of the Grand Canyon*. Read pg.18-31. Continue the scientist notebooking pages. Use this website for help if necessary <http://historytogo.utah.gov/people/johnwesleypowell.html>.

Week 17: Deserts

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 70-71		pg. 42-43	Desert notebook pages	*Exploring the Desert-A *Examining Desert Habitats-O *Life in the Desert-Y

Supplies for experiments: print off and complete desert notebooking pages

Vocabulary: sand dunes, oases

Memory work: life cycle of a plant (seed, germinated seed, seed with root, seedling, flowering plant, fruiting plant)

Left Side- list each step in the cycle

Right Side- print out and complete the following page

<http://steve.global2.vic.edu.au/files/2012/10/plant-life-cycle-p9y2nx.png>

Scientist: Continue reading about John Wesley Powell from *In Search of the Grand Canyon*. Read pg.32-47. Continue the scientist notebooking pages. Use this website for help if necessary <http://historytogo.utah.gov/people/johnwesleypowell.html>.

Week 18: Tropical Rainforest

Planet Earth (all)	Kingfisher Science (older)	1 st Enc. of Our World (younger)	Experiments (Earth Science)	Extra Reading Books
pg. 72-73	pg. 438-439	pg. 46-47	Tropical Rainforest pages	*If I Ran the Rainforest-A *Afternoon on the Amazon-O *The Rainforest Grew All Around-Y

Supplies for experiments: print off and complete tropical rainforest pages

Vocabulary: erosion, mangrove swamps

Memory work: layers of the rainforest (emergent layer, canopy, understory, forest floor)

Left Side- write out the layers from top to bottom and list the height of each level (you can use page 2 of the following link <http://www.kbteachers.com/weather-and-climate/the-rainforest-worksheet.html>)

Right Side- print page 1 from the following worksheets and complete it

<http://www.kbteachers.com/weather-and-climate/the-rainforest-worksheet.html>

Scientist: Finish reading about John Wesley Powell from *In Search of the Grand Canyon*. Read pg.48-64. Finish the scientist notebooking pages. Use this website for help if necessary <http://historytogo.utah.gov/people/johnwesleypowell.html>.

Week 1: The Solar System

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 12-13	pg.398-399	pg. 28-29	#4 Too Close, #5 Quicker	*The Planets in Our Solar System-A *Space Explorers (Cole)-O *The Magic School Bus, Lost in the Solar System -Y

Supplies for experiments: 2 thermometers, 1 desk lamp, yard stick; yard stick, ruler, modeling clay

Vocabulary: elliptical orbit, nebulae

Memory work: the planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune)

Left Side- list the planets in order starting with the planet closest to the sun

Right Side- print off the planet worksheet on the following link and label the planets

<http://www.enchantedlearning.com/subjects/astronomy/activities/label/labelsolarsystem.shtml>

Scientist: Begin reading about Galileo Galilei in *Starry Messenger*. Read the first half. Begin the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/galileogalilei.html>.

Week 2: The Sun

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 14-17	pg.394-395	pg. 32-33	#38 Swirls, #41 Mirage	*The Sun (Bourgeois)-A *Sun (Rau)-O *Hot and Bright-Y

Supplies for experiments: clear plastic ball point pen, 1 sheet of typing paper; small clear bowl, modeling clay, coin, water, a helper

Vocabulary: flares, eclipse

Memory work: layers of the sun (core, radiative zone, convective zone, photosphere, chromosphere, corona)

Left Side- list the layers from the inside to the outside

Right Side- print and complete the worksheet from the following link

<http://www.enchantedlearning.com/subjects/astronomy/activities/coloring/Sun.shtml>

Scientist: Continue reading about Galileo Galilei in *Starry Messenger*. Read the second half. Continue the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/galileogalilei.html>.

Week 3: Mercury/ Venus

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. Of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 20-23	pg.403-404	pg. 34-35	#6 Hidden, #8 Thick	*KYK Solar System (pg. 12-15)-A *Mercury and Venus (Thomas)-O *Mercury and Venus (Kerrod)-Y

Supplies for experiments: desk lamp, pencil; flashlight, wax paper

Memory work: complete a characteristics chart for each planet

Left Side- list diameter, mass, density, minimum distance to the sun, maximum distance to the sun, day/night length, length of a year, tilt of axis, surface gravity, temperature, satellites

Right Side- draw a picture of each planet using Visual Factfinders as a guide

Scientist: Continue reading about Galileo Galilei in *I, Galileo*. Read the first half. Continue the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/galileogalilei.html>.

Week 4: The Earth

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. Of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 24-25	pg.400	pg. 6-7	#12 Blue Sky, #42 Direct	*Earth and Earth's Moon (World Book)-A *Earth (Hunter)-O *Earth (Kipp)-Y

Supplies for experiments: flashlight, drinking glass, eye dropper, milk, spoon; 2 sheets of black construction paper, 2 thermometers, 2 books, masking tape

Memory work: complete a characteristics chart for each planet

Left Side- list diameter, mass, density, minimum distance to the sun, maximum distance to the sun, day/night length, length of a year, tilt of axis, surface gravity, temperature, satellites

Right Side- draw a picture of each planet using Visual Factfinders as a guide

Scientist: Finish reading about Galileo Galilei in *I, Galileo*. Read the second half. Finish the scientist notebooking pages. Use this website for help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/galileogalilei.html>.

Week 5: The Moon

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 26-29	pg.401	pg. 30-31, 56	#52 Changes, #54 Face Forward	*If You Decide to Go to the Moon-A *The Best Book of the Moon-O *The Moon Book-Y

Supplies for experiments: styrofoam ball (apple size), pencil, lamp; 2 sheets of paper, marker, masking tape

Vocabulary: moon crater, moon rocks

Memory work: the phases of the moon (new moon, waxing crescent, half moon, waxing gibbous, half moon, waning crescent, new moon)

Left Side- list the moon phases in order

Right Side- print and complete pg. 4 of the moon phases worksheets on the following link <http://www.exploringnature.org/db/detail.php?dbID=42&detID=2856>

Scientist: Begin reading about Johannes Kepler in *Great Minds of Science: Johannes Kepler*. Read pg.5-24 . Begin the scientist notebooking pages. Use the following website or help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/johanneskepler.html>.

Week 6: Mars/Jupiter

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 30-33	pg.405-406	pg. 36-38	#13 Back Up, #16 Glimmer	*KYK Solar System (pg. 22,23,26,27)-A *You Are the First Kid on Mars-O *Journey to Mars-Y

Supplies for experiments: a helper; flashlight, baby powder in a plastic shaker

Memory work: complete a characteristics chart for each planet

Left Side- list diameter, mass, density, minimum distance to the sun, maximum distance to the sun, day/night length, length of a year, tilt of axis, surface gravity, temperature, satellites

Right Side- draw a picture of each planet using Visual Factfinders as a guide

Scientist: Continue reading about Johannes Kepler in *Great Minds of Science: Johannes Kepler*. Read pg.25-48 . Continue the scientist notebooking pages. Use the following website or help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/johanneskepler.html>.

Week 7: Saturn/Uranus

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 34-37	pg.407-408	pg. 39-40	#20 See Through, #21 Shepherds	*KYK Solar System (pg. 28-31) *Neptune (Vogt)-O *Saturn (Vogt)-Y

Supplies for experiments: ruler, white poster board, black marking pen, scissors, straight pin, pencil, glue; record, sugar, 2 pencils, masking tape, record player

Memory work: complete a characteristics chart for each planet

Left Side- list diameter, mass, density, minimum distance to the sun, maximum distance to the sun, day/night length, length of a year, tilt of axis, surface gravity, temperature, satellites

Right Side- draw a picture of each planet using Visual Factfinders as a guide

Scientist: Continue reading about Johannes Kepler in *Great Minds of Science: Johannes Kepler*. Read pg.49-80. Continue the scientist notebooking pages. Use the following website or help if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/johanneskepler.html>.

Week 8: Neptune/ Pluto & Beyond

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 38-41	pg.409-411	pg. 41-43	#18 Hot and Cold, #25 Spinner	*KYK Solar System (pg. 32-35)-A *Why Isn't Pluto a Planet? -O *Pluto:A Dwarf Planet-Y

Supplies for experiments: thermos bottle, 2 drinking cups, 2 thermometers, 1 qt. Wide mouth jar w/ lid, 5 or 6 ice cubes, stirring spoon; ruler, scissors, heavy thick string, 4 large paper clips, cardboard, sheet of paper, cake pan (10 in.), pencil

Memory work: complete a characteristics chart for each planet

Left Side- list diameter, mass, density, minimum distance to the sun, maximum distance to the sun, day/night length, length of a year, tilt of axis, surface gravity, temperature, satellites

Right Side- draw a picture of each planet using Visual Factfinders as a guide

Scientist: Finish reading about Johannes Kepler in *Great Minds of Science: Johannes Kepler*. Read pg.81-108 . Finish the scientist notebooking pages. Use the following website or help if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/johanneskepler.html>.

Week 9: Minor Planets/ Meteoroids

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 42-43	pg.413	pg. 44-45	#24 On the Move, #53 Plop!	*Asteroids, Comets, and Meteors-A *Beyond Pluto-O *Space Leftovers-Y

Supplies for experiments: round cake pan, 1 sheet construction paper, scissors, 1 marble; 25 sheets newspaper, 2 sheets carbon paper, 2 sheets typing paper, 1 golf ball

Vocabulary: asteroid belt, asteroids

Memory work: types of meteors (meteor, exploding meteor, meteor shower, meteorite)

Left Side- list each type and describe it

Right Side- divide a piece of paper into 4 sections and illustrate each meteor type (using pg. 43 in Visual Factfinders)

Scientist: Begin reading about Edwin Hubble in *Edwin Hubble: American Astronomer*. Read pg.7-34 . Begin the scientist notebooking pages. Use the following website to help you if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/edwinhubble.html>.

Week 10: Comets

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 44-45	pg.412		#83 Light Meter, #93 Darkness	*Comets and Meteors (Kerrod)-A *Comets (Vogt)-O *Comets and Meteor Showers (Sipiera)-Y

Supplies for experiments: yardstick, shoe box, foil, wax paper, scissors, cellophane tape, flashlight; flashlight

Vocabulary: Halley's Comet, Giotto spaceprobe

Memory work: the periods of a comet (short-period, long-period)

Left Side- list and describe the length of the comet periods

Right Side- divide a piece of paper in 2 columns and list characteristics of each period using this website <http://spaceguard.iasf-roma.inaf.it/NScience/neo/neo-what/com-prop.htm>.

Scientist: Continue reading about Edwin Hubble in *Edwin Hubble: American Astronomer*. Read pg.35-54. Continue the scientist notebooking pages. Use the following website to help you if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/edwinhubble.html>.

Week 11: The Milky Way

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 46-49	pg.390-391	pg. 52-53, 57	#67 Hazy, #71 Spirals	*The Milky Way and Other Galaxies (Rau)-A *Galaxies (Welsbacher)-O *The Milky Way (Rustad)-Y

Supplies for experiments: paper hole punch, black construction paper, white paper, glue, masking tape; 1 sheet paper, paper hole punch, 1 qt. Jar, pencil, water

Vocabulary: Milky Way, quasars

Memory work: types of galaxies (irregular, elliptical, ordinary spiral, barred spiral)

Left Side- list and describe each galaxy type

Right Side- divide a black piece of paper into 4 parts and use chalk, a white crayon, or a white colored pencil to draw the types of galaxies from pg. 48 in Visual Factfinders

Scientist: Continue reading about Edwin Hubble in *Edwin Hubble: American Astronomer*.

Read pg.55-79. Continue the scientist notebooking pages. Use the following website to help you if necessary

<http://www.sciencekids.co.nz/sciencefacts/scientists/edwinhubble.html>.

Week 12: Stars

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Book
pg. 52-59	pg.392-393	pg. 48-51	#60 Shrinking, #62/63 Spreader/ Brighter	*How Far is a Star?-A *Stars (Vogt)-O *Stargazers-Y

Supplies for experiments: 2 small balloons, 2 large-mouthed glass jars, refrigerator, marking pen; 2 flashlights, foil, pencil, 2 sheets of blank paper

Vocabulary: black hole, star cluster

Memory work: the sizes of stars (supergiants, giants, red giants, dwarf, white dwarf)

Left Side- list the stars from biggest to smallest and describe each type

Right Side- print and complete pages 10 & 11 (info to complete it is on page 1) on the following link http://www.homeschoolshare.com/space_lapbook.php (the download marked "Sun, Moon, and Stars")

Scientist: Finish reading about Edwin Hubble in *Edwin Hubble: American Astronomer*. Read pg.80-102. Finish the scientist notebooking pages. Use the following website to help you if necessary <http://www.sciencekids.co.nz/sciencefacts/scientists/edwinhubble.html>.

Week 13: Constellations

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 60-62	pg.396-397	pg.57	#59 Star Clock, #66 Box Planetarium	*The Glow in the Dark Night Sky Book-A *Seeing Stars (Muirden)-O *The Big Dipper (Branley)-Y

Supplies for experiments: solid colored & dark umbrella, white chalk; shoe box, black construction paper, cellophane tape, flashlight, straight pin, scissors

Vocabulary: celestial sphere, constellation

Memory work: 12 Zodiac signs

Left Side- list the signs in order and what symbol the star pattern creates

Right Side- divide a black piece of paper into 12 sections and use chalk, colored pencil, or crayon to draw each constellation using the following link for help if necessary

<http://mcsmearthscience.blogspot.com/2012/12/3rd-marking-period-homework.html>

Scientist: Begin reading about Carl Sagan in *Carl Sagan:Astronomer*. Read pg.9-35. Begin the scientist notebooking pages. Use the following link to help you if necessary

http://en.wikipedia.org/wiki/Carl_Sagan.

Week 14: Birth of Astronomy

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 64-65	pg. 414-415, 426-427		#61 Distant Stars, #72 Star Chart	*DK Astronomy-A *Kingfisher Facts & Records Book of Space-O *Solving the Mysteries of Stonehenge-Y

Supplies for experiments: your thumb, modeling clay, pencil; white poster paper, string, large nail, marker, a helper

Vocabulary: Stonehenge, ziggurat

Memory work: Kepler's laws of planetary motion

Left Side- write the three laws in your own words using the following link for help

<http://www.sciencekids.co.nz/sciencefacts/scientists/johanneskepler.html>

Right Side- copy and paste these images onto the paper

[http://4.bp.blogspot.com/_GqGEPRWofVA/TDs-](http://4.bp.blogspot.com/_GqGEPRWofVA/TDs-PJSaRQI/AAAAAAAAACow/6mh3ODsTjoo/s1600/Keplers_Laws3.jpg)

[PJSaRQI/AAAAAAAAACow/6mh3ODsTjoo/s1600/Keplers_Laws3.jpg](http://4.bp.blogspot.com/_GqGEPRWofVA/TDs-PJSaRQI/AAAAAAAAACow/6mh3ODsTjoo/s1600/Keplers_Laws3.jpg) (*shrink to print!*)

Scientist: Continue reading about Carl Sagan in *Carl Sagan:Astronomer*. Read pg.36-61 .

Continue the scientist notebooking pages. Use the following link to help you if necessary

http://en.wikipedia.org/wiki/Carl_Sagan.

Week 15: Telescopes

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 66-71	pg. 416-417	pg. 8-11, 58-59	#86 Focus, #87 Bouncer	*Telescopes (Richardson)-A *Adventures in Space-Flight to Fix the Hubble-O *How to Catch an Elephant-Y

Supplies for experiments: 1 qt. Jar, foil, flashlight, sheet of black construction paper, index card, modeling clay, scissors; flashlight, flat mirror, helper, modeling clay

Vocabulary: radio telescope, Hubble Space Telescope

Memory work: types of telescopes (reflecting, refracting)

Left Side- list and describe the types of telescopes

Right Side- print the picture on the following link and label which type of telescope each one is (cut off the answers on the bottom)

<http://images.yourdictionary.com/telescope>

Scientist: Continue reading about Carl Sagan in *Carl Sagan:Astronomer*. Read pg.62-90. Continue the scientist notebooking pages. Use the following link to help you if necessary

http://en.wikipedia.org/wiki/Carl_Sagan.

Week 16: Rockets/Satellites

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 72-77	pg.418-421	pg. 22-23	#31 Satellite Crash, #97 Free Fall	*Neil, Buzz, & Mike Go to the Moon-A *Satellites (Deady)-O *Rockets (Vogt)-Y

Supplies for experiments: empty 3lb. Coffee can, poster board, pencil, scissors, glass marble, masking tape; plastic cup, string, ruler, scissors, masking tape, modeling clay, helper

Vocabulary: rockets, slingshot launch

Memory work: types of orbit (polar, geostationary, eccentric, circular)

Left Side- list and describe the orbit types

Right Side- print the image on the following page and label the orbit types

http://www.clipart.dk.co.uk/1363/subject/Physics/Types_of_orbit

Scientist: Finish reading about Carl Sagan in *Carl Sagan:Astronomer*. Read pg.91-108. Finish the scientist notebooking pages. Use the following link to help you if necessary

http://en.wikipedia.org/wiki/Carl_Sagan.

Week 17: Life in Space

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 78-81	pg.420-421	pg. 12-19	#48 Moving Target, #55 Heavy	*Footprints on the Moon-A *Living in Space-O *Floating in Space-Y

Supplies for experiments: string, ruler, washer, scissors, 1 paper towel, book, masking tape; marker, masking tape, 2 rubber bands, string, large rock, large pot or bucket, scissors

Vocabulary: spacesuit, space walking

Memory work: Neil Armstrong's quote ("That's one small step for (a) man, one giant leap for mankind")

Left Side- copy the quote in your best handwriting

Right Side- draw a picture of what you think the first moon landing may have looked like

Week 18: Future in Space

Stars/Planets (all)	Kingfisher Science (older)	1 st Enc. of Space (younger)	Experiments (Astronomy)	Extra Reading Books
pg. 82-83	pg.424-425	pg. 24-25	#99 Space Suit, #100 Sweaty	*The International Space Station (Branley)-A *The Amazing International Space Station-O *Women in Space-Y

Supplies for experiments: sealed bottle of pop, clear drinking glass; jar with a lid

Vocabulary: orbiting power stations, space cities

Memory work: distances from other planets to Earth

Left Side- use the following link to write the distances from other planets to Earth

http://wiki.answers.com/Q/How_far_are_the_planets_from_earth

Right Side- draw a rocket you would use to get to another planet