

Weather and Climate Mega Bundle

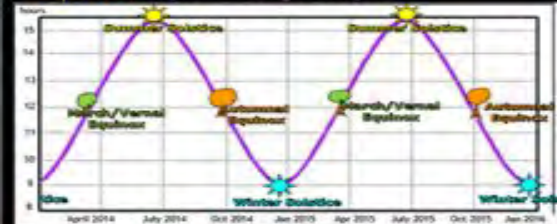
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compressed file



7 Units

Interactive Slideshows

- When is the March/Vernal and autumnal equinox. Purple line is length of day in NYC



- All other gases 1%

- *Argon
- *Carbon Dioxide
- Neon
- Helium
- Methane
- Krypton
- Hydrogen
- Xenon



- Air pressure applies a force equal in...

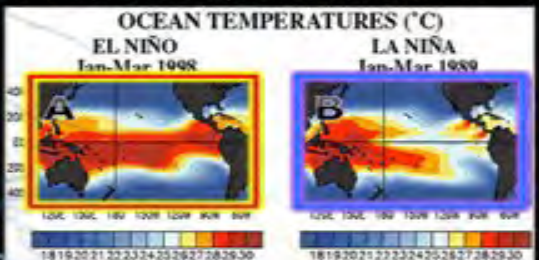
- A) all layers of the atmosphere
- B) all directions
- C) atmospheric pressure
- D) magnitude of the gas
- E) 565 Pascal Units



Which half of the earth gets more light during this season?



- Which is El Niño, and which is La Niña?



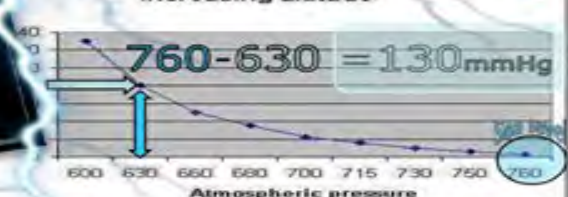
- Which is high pressure and which is low pressure?



What's the difference (mm of Hg) in air pressure between sea level and 80 meters in altitude?

- A) 1,000 B) 760 C) 499 D) 130 E) .001 F) 3 KPa

Atmospheric pressure decreases with increasing altitude



Hands-on Activities, Assessments, Games

- Which is weather, and which is climate?

A.) Climate is the atmospheric conditions over a long period of time (years).

B.) Weather is what is occurring right now.

2



Which colored arrow is the path for many hurricanes that hit the United States?



- These are the remains of plants and animals from hundreds of millions of years ago.

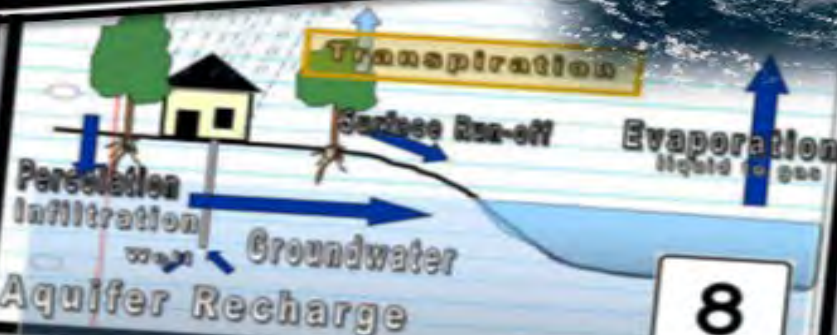
– We found a way to use ancient sunlight from millions of years ago, thus borrowed light.

7



• List three main types of clouds?

13



8

and warm air currents
Gulf Stream
Atlantic Ocean

3

SlideSpark Science



MIDDLE-LEVEL EDUCATIONAL RESOURCES

Interactive slideshows provide the roadmap for an amazing learning experience for students in grades 5-9. A Detailed set of work bundles chronologically follow the digital learning, providing a clear and intuitive roadmap to understanding. As the teacher or student advances through a slideshow, exciting hands-on activities, fantastic visuals, fill-in notes, review opportunities, video links, assessments, and much more are strategically placed throughout. Interactive learning unfolds step by step and supported by the work bundle to reach all types of learners. Everything you need to run to an amazing learning experience is provided in this one-of-a-kind science curriculum.

Each unit in the curriculum is designed to help teachers deliver the best possible learning experience for their students. Our interactive science slideshows are filled with questions and answers, important fill-in notes, hands-on activities, projects, games, built-in quizzes, and end of the unit assessment pieces. Students follow along with a work bundle that documents the entire learning experience for a fantastic review and assessment piece.

- Climate: The average weather of a particular part of the world at different times of the year.



- 78% Nitrogen (N_2 Gas)

Diatomic Nitrogen



Inert
Non-reactive

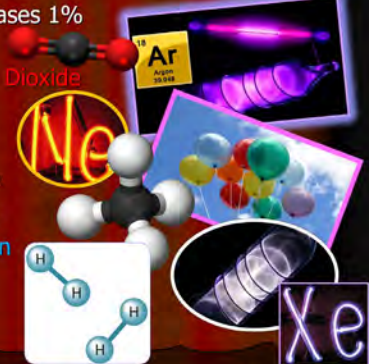


- Thermosphere: The ISS orbits here, Aurora borealis



- All other gases 1%

- *Argon
- *Carbon Dioxide
- Neon
- Helium
- Methane
- Krypton
- Hydrogen
- Xenon



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- Air Density
- The mass of air per unit volume



Coors Field, Denver CO

Petco Park, San Diego CA

Air Density Index
41.98

Air Density Index
64.07

Where is it easier to hit a homerun?

PART 1 THE ATMOSPHERE

Earth's Atmosphere: Weather and Climate

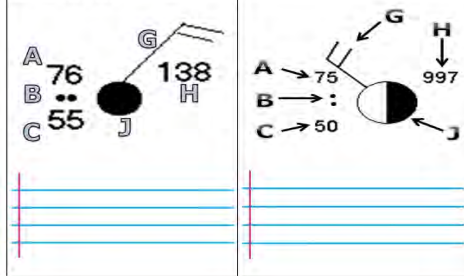
Name: _____

Date: _____

Weather: The state of the _____ at a given time and place, with respect to variables such as...

- Precipitation
- Humidity
- Wind Speed and D
- Air Density
- The mass of the air per unit volume
- Air _____ The force exerted onto the surface by the weight of the air
- % Cloud Cover

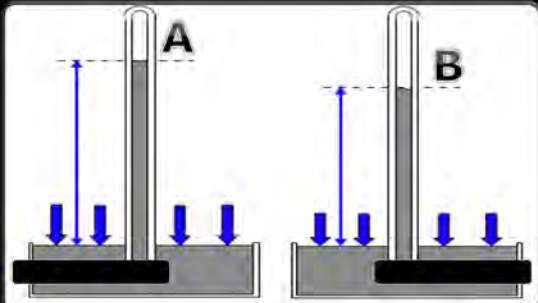
Please look at the weather station symbols and variables on the next page to accurately describe A, B, C, G, H, J from below.



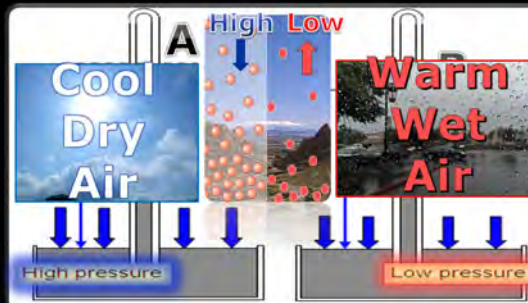
Red Slide Notes: Help students record important information in a fun and easy-to-understand way. Designed red-colored slides contain a few pieces of crucial information that students must record into their work bundle to complete the notes. Students will use these important notes throughout the work bundle.

The set-up of the slideshows are designed to make learning fun and interactive for students. With a mix of questions and answers, teachers can use these slides to get their students thinking and actively participating in their education. Plus, the answers are always revealed on the next slide, providing students with immediate feedback and helping teachers assess their understanding.

- Which one is low pressure? Which is high pressure?

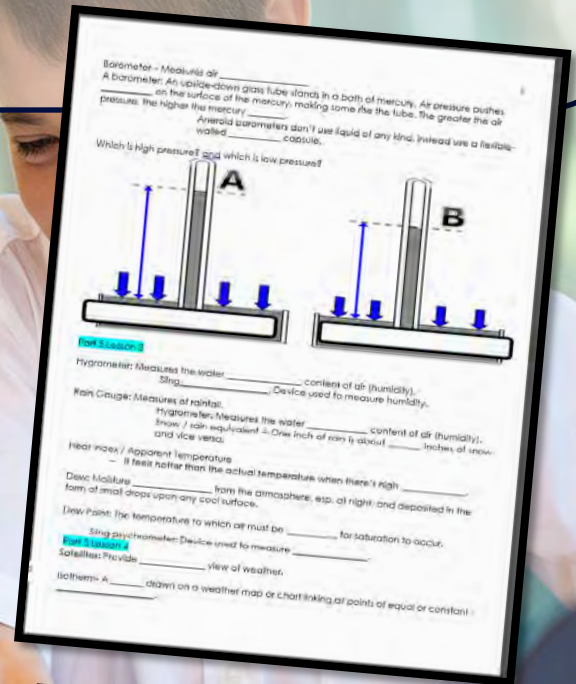


- Which one is low pressure? Which is high pressure?



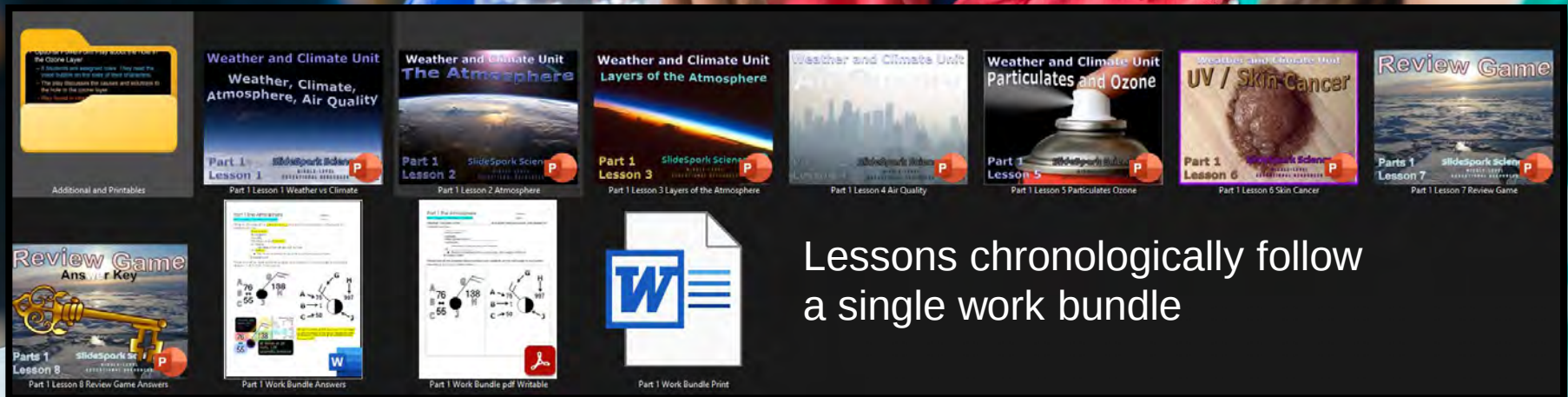
Next Slide

slideshow supports
Work Bundle



Lesson Planning

Daily lessons space exciting hands-on activities, red slide notes, video and academic links, projects, simulations, readings, built-in quizzes, and review opportunities throughout the slideshows. A typical day may have many different learning styles being targeted. Daily lesson planning becomes advancing through the slideshow roadmap the night before. Each lesson is roughly 50 minutes, but sometimes things can speed up or slow down. The best strategy is just to go at your classes own pace. The work bundle chronologically follows the interactive slideshow and you can always spend extra time assessing the quality of the writing within. If you don't quite finish a lesson, you can always pick it up the next day where you left off. The only real trick in timing is not starting a larger activity if you don't have the available time to complete. The slideshows have been designed to be a low stress, go at your classes own pace experience. Most activities are designed to be cost effective, using general materials that can be gathered from your local stores.



Lessons chronologically follow a single work bundle

Follow Along Work Bundle

Each science unit includes a single printable work bundle that stays with students from start to finish. Just print and distribute on day one—no daily handouts needed. The bundle follows the unit chronologically and includes everything: fill-in notes, diagrams, quizzes, lab activities, with follow up questions and much more. It's used daily, supports the end-of-unit quiz game, and is handed in for an additional assessment. Answer keys, some writable .pdf versions, and digital versions are also included for flexible classroom use..

PART 1 THE ATMOSPHERE

Name: _____ Due: _____

Weather: The state of the atmosphere at a given time and place, with respect to its various elements.

- Temperature
- Humidity
- Wind Speed and Direction
- Clouds
- Pressure
- Visibility

Please label the weather diagram particles and variables on the right side to accurately describe the atmosphere.

Weather

Climate

Atmosphere

Layers of the Atmosphere

Layer	Altitude	Characteristics
Troposphere	0 to 10 km	Contains most of the atmosphere's mass and water vapor. Temperature decreases with altitude.
Stratosphere	10 to 50 km	Temperature increases with altitude due to the ozone layer.
Mesosphere	50 to 85 km	Temperature decreases with altitude.
Thermosphere	85 to 600 km	Temperature increases with altitude due to the absorption of high-energy solar radiation.
Exosphere	600 to 10,000 km	The outermost layer, composed of atoms and molecules that escape the Earth's gravity.

The Atmosphere is made of

- 78% Nitrogen
- 21% Oxygen
- 1% Argon, 0.9% Carbon Dioxide, 0.04% Neon, Helium, Methane, Krypton, Hydrogen, Xenon

Layers of the Atmosphere

Labels: Troposphere, Stratosphere, Mesosphere, Thermosphere, Exosphere.

Characteristics: Temperature, Humidity, Wind, Clouds, Pressure, Visibility.

Diagram: A cross-section of the Earth showing the atmosphere's layers and the sun's rays hitting the surface.

PART 1 THE ATMOSPHERE
Name: _____ Date: _____

Weather the area of the _____ at a given time and place. It is reported to weather at a _____.

- Precipitation
- Humidity
- Wind Speed and Direction
- Air Pressure
- Cloud Cover

The mass of the air per unit volume.

The lines connect the area of the height of the air.

Cloud Cover

Please take the weather station mass and velocity on the next page to answer questions A, B, C, D, E, F, G, H, I, J.

Weather

Climate

Precipitation
Temperature
Seasons
Humidity
Rainfall
Wind

Different Same Different

A 76 B 55 C 55 G 138 H 997 J 50

A 75 B 50 C 50 G 138 H 997 J 50

What is dangerous about carbon monoxide? Use the picture below to explain in some of the procedures you must take to avoid the type of poisoning.

Carbon monoxide (CO) is a colorless, odorless gas that is produced by the incomplete combustion of carbon-containing fuels. It is a major cause of poisoning and death. Symptoms include headache, dizziness, weakness, nausea, and confusion. To avoid poisoning, ensure proper ventilation, use carbon monoxide detectors, and never use gas appliances in enclosed spaces.

ACID RAIN

Acid rain is caused by sulfur dioxide (SO₂) and nitrogen oxides (NO_x) released into the atmosphere from factories and vehicles. These gases react with water vapor to form sulfuric acid and nitric acid, which fall as precipitation. Acid rain can harm plants, animals, and buildings.

What's dangerous About PM

Particulate matter (PM) is a mixture of solid and liquid particles suspended in the air. It can be inhaled and cause respiratory and cardiovascular problems. Sources include traffic, industry, and natural events like dust storms.

Describe the day with the least fog.

Use the information on the next page to create a weather map for the day.

23 160 19

Describe the weather of a particular part of the world at different times of the year. (Larger periods of time)

What is the difference between weather and climate?

Weather: Precipitation, Temperature, Seasons, Humidity, Rainfall, Wind

Climate: Different, Same, Different

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Clouds

Clouds are formed by the condensation of water vapor in the atmosphere. They are classified into four main types: cumulus, stratus, cirrus, and nimbus.

Wind

Wind is the movement of air from high pressure to low pressure. It is caused by the uneven heating of the Earth's surface.

Cloud Types

Weather Conditions

Temperature

Humidity

Precipitation

Wind Speed

Cloud Cover

Particulate Matter around the school

Control Tape

Pollen / Dandelion

Dusty Closet

Smoke / Blown out candle

Curtain Fibers

Sweet Walk / Dusty Outside

Car Exhaust

Other?

Part 1 Review Game

1. _____ (CFCs) made by humans in aerosol deodorant.

2. The ozone layer is found in this layer of the atmosphere.

3. The atmosphere is made of _____.

4. _____ is a poisonous gas that has no smell or taste. Breathing it can make you swell, and it can kill if you're exposed to high levels.

5. A condition in which your airways narrow and swell and produce extra mucus. This can make breathing difficult and trigger coughing, wheezing and shortness of breath.

6. Layer of the atmosphere that merges with space, some satellites orbit here.

7. Molecules burn up in this layer of the atmosphere.

8. _____ is a layer in the earth's atmosphere at an altitude of about 62 miles (10 km) containing a high concentration of O₃, which absorbs most of the ultraviolet radiation reaching the earth from the sun.

9. _____ is a condition in which your airways narrow and swell and produce extra mucus. This can make breathing difficult and trigger coughing, wheezing and shortness of breath.

10. The average weather of a particular part of the world at different times of the year (longer periods of time).

11. The atmosphere is made of _____.

12. The state of the atmosphere at a given time and place, with respect to variables.

Layers of the Atmosphere

The atmosphere is made of _____.

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2. Oxygen - 21%

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Part 3 Winds

Diagram of global wind patterns showing Polar Cells, Ferrel Cells, and Trade Winds. Includes labels for wind directions and pressure zones.

The Coriolis Force

Diagram illustrating the Coriolis effect on a rotating sphere. Shows how wind direction is deflected to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

Sea Breeze and Land Breeze

Diagrams showing the formation of sea breezes and land breezes. Sea breeze occurs during the day when land is warmer than the sea, and land breeze occurs at night when land is cooler than the sea.

Mountain Rain Shadow Effect

Diagram illustrating the Föhn effect. Air is forced upward on the windward side, cools, and rains out. On the leeward side, the air descends, warms, and creates a rain shadow.

Temperature and Wind

Tables showing temperature scales (Celsius, Fahrenheit) and wind speed scales (Mph, Kts, Mph, Kts). Includes a formula for wind chill.

Convection

Diagram showing convection currents in a fluid. Warmer fluid rises and cooler fluid sinks, creating a circular motion.

Wind and Weather

Diagram showing wind direction and speed. Includes a scale for wind speed and a diagram of a weather system.

Part 3 Review Game

Diagram showing the Earth's tilt and the resulting seasons. Includes a table of the four seasons and their characteristics.

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Part 5 Weather Tools

Part 5 Lesson 1

Metorology: the study of the atmosphere, but focuses on weather processes and forecasting

Forecast: best of the information available and released on the next page to accurately predict A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ

Weather Conditions

Wind Speed: 0-10 mph, 11-20 mph, 21-30 mph, 31-40 mph, 41-50 mph, 51-60 mph, 61-70 mph, 71-80 mph, 81-90 mph, 91-100 mph, 101-110 mph, 111-120 mph, 121-130 mph, 131-140 mph, 141-150 mph, 151-160 mph, 161-170 mph, 171-180 mph, 181-190 mph, 191-200 mph, 201-210 mph, 211-220 mph, 221-230 mph, 231-240 mph, 241-250 mph, 251-260 mph, 261-270 mph, 271-280 mph, 281-290 mph, 291-300 mph, 301-310 mph, 311-320 mph, 321-330 mph, 331-340 mph, 341-350 mph, 351-360 mph, 361-370 mph, 371-380 mph, 381-390 mph, 391-400 mph, 401-410 mph, 411-420 mph, 421-430 mph, 431-440 mph, 441-450 mph, 451-460 mph, 461-470 mph, 471-480 mph, 481-490 mph, 491-500 mph, 501-510 mph, 511-520 mph, 521-530 mph, 531-540 mph, 541-550 mph, 551-560 mph, 561-570 mph, 571-580 mph, 581-590 mph, 591-600 mph, 601-610 mph, 611-620 mph, 621-630 mph, 631-640 mph, 641-650 mph, 651-660 mph, 661-670 mph, 671-680 mph, 681-690 mph, 691-700 mph, 701-710 mph, 711-720 mph, 721-730 mph, 731-740 mph, 741-750 mph, 751-760 mph, 761-770 mph, 771-780 mph, 781-790 mph, 791-800 mph, 801-810 mph, 811-820 mph, 821-830 mph, 831-840 mph, 841-850 mph, 851-860 mph, 861-870 mph, 871-880 mph, 881-890 mph, 891-900 mph, 901-910 mph, 911-920 mph, 921-930 mph, 931-940 mph, 941-950 mph, 951-960 mph, 961-970 mph, 971-980 mph, 981-990 mph, 991-1000 mph, 1001-1010 mph, 1011-1020 mph, 1021-1030 mph, 1031-1040 mph, 1041-1050 mph, 1051-1060 mph, 1061-1070 mph, 1071-1080 mph, 1081-1090 mph, 1091-1100 mph, 1101-1110 mph, 1111-1120 mph, 1121-1130 mph, 1131-1140 mph, 1141-1150 mph, 1151-1160 mph, 1161-1170 mph, 1171-1180 mph, 1181-1190 mph, 1191-1200 mph, 1201-1210 mph, 1211-1220 mph, 1221-1230 mph, 1231-1240 mph, 1241-1250 mph, 1251-1260 mph, 1261-1270 mph, 1271-1280 mph, 1281-1290 mph, 1291-1300 mph, 1301-1310 mph, 1311-1320 mph, 1321-1330 mph, 1331-1340 mph, 1341-1350 mph, 1351-1360 mph, 1361-1370 mph, 1371-1380 mph, 1381-1390 mph, 1391-1400 mph, 1401-1410 mph, 1411-1420 mph, 1421-1430 mph, 1431-1440 mph, 1441-1450 mph, 1451-1460 mph, 1461-1470 mph, 1471-1480 mph, 1481-1490 mph, 1491-1500 mph, 1501-1510 mph, 1511-1520 mph, 1521-1530 mph, 1531-1540 mph, 1541-1550 mph, 1551-1560 mph, 1561-1570 mph, 1571-1580 mph, 1581-1590 mph, 1591-1600 mph, 1601-1610 mph, 1611-1620 mph, 1621-1630 mph, 1631-1640 mph, 1641-1650 mph, 1651-1660 mph, 1661-1670 mph, 1671-1680 mph, 1681-1690 mph, 1691-1700 mph, 1701-1710 mph, 1711-1720 mph, 1721-1730 mph, 1731-1740 mph, 1741-1750 mph, 1751-1760 mph, 1761-1770 mph, 1771-1780 mph, 1781-1790 mph, 1791-1800 mph, 1801-1810 mph, 1811-1820 mph, 1821-1830 mph, 1831-1840 mph, 1841-1850 mph, 1851-1860 mph, 1861-1870 mph, 1871-1880 mph, 1881-1890 mph, 1891-1900 mph, 1901-1910 mph, 1911-1920 mph, 1921-1930 mph, 1931-1940 mph, 1941-1950 mph, 1951-1960 mph, 1961-1970 mph, 1971-1980 mph, 1981-1990 mph, 1991-2000 mph, 2001-2010 mph, 2011-2020 mph, 2021-2030 mph, 2031-2040 mph, 2041-2050 mph, 2051-2060 mph, 2061-2070 mph, 2071-2080 mph, 2081-2090 mph, 2091-2100 mph, 2101-2110 mph, 2111-2120 mph, 2121-2130 mph, 2131-2140 mph, 2141-2150 mph, 2151-2160 mph, 2161-2170 mph, 2171-2180 mph, 2181-2190 mph, 2191-2200 mph, 2201-2210 mph, 2211-2220 mph, 2221-2230 mph, 2231-2240 mph, 2241-2250 mph, 2251-2260 mph, 2261-2270 mph, 2271-2280 mph, 2281-2290 mph, 2291-2300 mph, 2301-2310 mph, 2311-2320 mph, 2321-2330 mph, 2331-2340 mph, 2341-2350 mph, 2351-2360 mph, 2361-2370 mph, 2371-2380 mph, 2381-2390 mph, 2391-2400 mph, 2401-2410 mph, 2411-2420 mph, 2421-2430 mph, 2431-2440 mph, 2441-2450 mph, 2451-2460 mph, 2461-2470 mph, 2471-2480 mph, 2481-2490 mph, 2491-2500 mph, 2501-2510 mph, 2511-2520 mph, 2521-2530 mph, 2531-2540 mph, 2541-2550 mph, 2551-2560 mph, 2561-2570 mph, 2571-2580 mph, 2581-2590 mph, 2591-2600 mph, 2601-2610 mph, 2611-2620 mph, 2621-2630 mph, 2631-2640 mph, 2641-2650 mph, 2651-2660 mph, 2661-2670 mph, 2671-2680 mph, 2681-2690 mph, 2691-2700 mph, 2701-2710 mph, 2711-2720 mph, 2721-2730 mph, 2731-2740 mph, 2741-2750 mph, 2751-2760 mph, 2761-2770 mph, 2771-2780 mph, 2781-2790 mph, 2791-2800 mph, 2801-2810 mph, 2811-2820 mph, 2821-2830 mph, 2831-2840 mph, 2841-2850 mph, 2851-2860 mph, 2861-2870 mph, 2871-2880 mph, 2881-2890 mph, 2891-2900 mph, 2901-2910 mph, 2911-2920 mph, 2921-2930 mph, 2931-2940 mph, 2941-2950 mph, 2951-2960 mph, 2961-2970 mph, 2971-2980 mph, 2981-2990 mph, 2991-3000 mph, 3001-3010 mph, 3011-3020 mph, 3021-3030 mph, 3031-3040 mph, 3041-3050 mph, 3051-3060 mph, 3061-3070 mph, 3071-3080 mph, 3081-3090 mph, 3091-3100 mph, 3101-3110 mph, 3111-3120 mph, 3121-3130 mph, 3131-3140 mph, 3141-3150 mph, 3151-3160 mph, 3161-3170 mph, 3171-3180 mph, 3181-3190 mph, 3191-3200 mph, 3201-3210 mph, 3211-3220 mph, 3221-3230 mph, 3231-3240 mph, 3241-3250 mph, 3251-3260 mph, 3261-3270 mph, 3271-3280 mph, 3281-3290 mph, 3291-3300 mph, 3301-3310 mph, 3311-3320 mph, 3321-3330 mph, 3331-3340 mph, 3341-3350 mph, 3351-3360 mph, 3361-3370 mph, 3371-3380 mph, 3381-3390 mph, 3391-3400 mph, 3401-3410 mph, 3411-3420 mph, 3421-3430 mph, 3431-3440 mph, 3441-3450 mph, 3451-3460 mph, 3461-3470 mph, 3471-3480 mph, 3481-3490 mph, 3491-3500 mph, 3501-3510 mph, 3511-3520 mph, 3521-3530 mph, 3531-3540 mph, 3541-3550 mph, 3551-3560 mph, 3561-3570 mph, 3571-3580 mph, 3581-3590 mph, 3591-3600 mph, 3601-3610 mph, 3611-3620 mph, 3621-3630 mph, 3631-3640 mph, 3641-3650 mph, 3651-3660 mph, 3661-3670 mph, 3671-3680 mph, 3681-3690 mph, 3691-3700 mph, 3701-3710 mph, 3711-3720 mph, 3721-3730 mph, 3731-3740 mph, 3741-3750 mph, 3751-3760 mph, 3761-3770 mph, 3771-3780 mph, 3781-3790 mph, 3791-3800 mph, 3801-3810 mph, 3811-3820 mph, 3821-3830 mph, 3831-3840 mph, 3841-3850 mph, 3851-3860 mph, 3861-3870 mph, 3871-3880 mph, 3881-3890 mph, 3891-3900 mph, 3901-3910 mph, 3911-3920 mph, 3921-3930 mph, 3931-3940 mph, 3941-3950 mph, 3951-3960 mph, 3961-3970 mph, 3971-3980 mph, 3981-3990 mph, 3991-4000 mph, 4001-4010 mph, 4011-4020 mph, 4021-4030 mph, 4031-4040 mph, 4041-4050 mph, 4051-4060 mph, 4061-4070 mph, 4071-4080 mph, 4081-4090 mph, 4091-4100 mph, 4101-4110 mph, 4111-4120 mph, 4121-4130 mph, 4131-4140 mph, 4141-4150 mph, 4151-4160 mph, 4161-4170 mph, 4171-4180 mph, 4181-4190 mph, 4191-4200 mph, 4201-4210 mph, 4211-4220 mph, 4221-4230 mph, 4231-4240 mph, 4241-4250 mph, 4251-4260 mph, 4261-4270 mph, 4271-4280 mph, 4281-4290 mph, 4291-4300 mph, 4301-4310 mph, 4311-4320 mph, 4321-4330 mph, 4331-4340 mph, 4341-4350 mph, 4351-4360 mph, 4361-4370 mph, 4371-4380 mph, 4381-4390 mph, 4391-4400 mph, 4401-4410 mph, 4411-4420 mph, 4421-4430 mph, 4431-4440 mph, 4441-4450 mph, 4451-4460 mph, 4461-4470 mph, 4471-4480 mph, 4481-4490 mph, 4491-4500 mph, 4501-4510 mph, 4511-4520 mph, 4521-4530 mph, 4531-4540 mph, 4541-4550 mph, 4551-4560 mph, 4561-4570 mph, 4571-4580 mph, 4581-4590 mph, 4591-4600 mph, 4601-4610 mph, 4611-4620 mph, 4621-4630 mph, 4631-4640 mph, 4641-4650 mph, 4651-4660 mph, 4661-4670 mph, 4671-4680 mph, 4681-4690 mph, 4691-4700 mph, 4701-4710 mph, 4711-4720 mph, 4721-4730 mph, 4731-4740 mph, 4741-4750 mph, 4751-4760 mph, 4761-4770 mph, 4771-4780 mph, 4781-4790 mph, 4791-4800 mph, 4801-4810 mph, 4811-4820 mph, 4821-4830 mph, 4831-4840 mph, 4841-4850 mph, 4851-4860 mph, 4861-4870 mph, 4871-4880 mph, 4881-4890 mph, 4891-4900 mph, 4901-4910 mph, 4911-4920 mph, 4921-4930 mph, 4931-4940 mph, 4941-4950 mph, 4951-4960 mph, 4961-4970 mph, 4971-4980 mph, 4981-4990 mph, 4991-5000 mph, 5001-5010 mph, 5011-5020 mph, 5021-5030 mph, 5031-5040 mph, 5041-5050 mph, 5051-5060 mph, 5061-5070 mph, 5071-5080 mph, 5081-5090 mph, 5091-5100 mph, 5101-5110 mph, 5111-5120 mph, 5121-5130 mph, 5131-5140 mph, 5141-5150 mph, 5151-5160 mph, 5161-5170 mph, 5171-5180 mph, 5181-5190 mph, 5191-5200 mph, 5201-5210 mph, 5211-5220 mph, 5221-5230 mph, 5231-5240 mph, 5241-5250 mph, 5251-5260 mph, 5261-5270 mph, 5271-5280 mph, 5281-5290 mph, 5291-5300 mph, 5301-5310 mph, 5311-5320 mph, 5321-5330 mph, 5331-5340 mph, 5341-5350 mph, 5351-5360 mph, 5361-5370 mph, 5371-5380 mph, 5381-5390 mph, 5391-5400 mph, 5401-5410 mph, 5411-5420 mph, 5421-5430 mph, 5431-5440 mph, 5441-5450 mph, 5451-5460 mph, 5461-5470 mph, 5471-5480 mph, 5481-5490 mph, 5491-5500 mph, 5501-5510 mph, 5511-5520 mph, 5521-5530 mph, 5531-5540 mph, 5541-5550 mph, 5551-5560 mph, 5561-5570 mph, 5571-5580 mph, 5581-5590 mph, 5591-5600 mph, 5601-5610 mph, 5611-5620 mph, 5621-5630 mph, 5631-5640 mph, 5641-5650 mph, 5651-5660 mph, 5661-5670 mph, 5671-5680 mph, 5681-5690 mph, 5691-5700 mph, 5701-5710 mph, 5711-5720 mph, 5721-5730 mph, 5731-5740 mph, 5741-5750 mph, 5751-5760 mph, 5761-5770 mph, 5771-5780 mph, 5781-5790 mph, 5791-5800 mph, 5801-5810 mph, 5811-5820 mph, 5821-5830 mph, 5831-5840 mph, 5841-5850 mph, 5851-5860 mph, 5861-5870 mph, 5871-5880 mph, 5881-5890 mph, 5891-5900 mph, 5901-5910 mph, 5911-5920 mph, 5921-5930 mph, 5931-5940 mph, 5941-5950 mph, 5951-5960 mph, 5961-5970 mph, 5971-5980 mph, 5981-5990 mph, 5991-6000 mph, 6001-6010 mph, 6011-6020 mph, 6021-6030 mph, 6031-6040 mph, 6041-6050 mph, 6051-6060 mph, 6061-6070 mph, 6071-6080 mph, 6081-6090 mph, 6091-6100 mph, 6101-6110 mph, 6111-6120 mph, 6121-6130 mph, 6131-6140 mph, 6141-6150 mph, 6151-6160 mph, 6161-6170 mph, 6171-6180 mph, 6181-6190 mph, 6191-6200 mph, 6201-6210 mph, 6211-6220 mph, 6221-6230 mph, 6231-6240 mph, 6241-6250 mph, 6251-6260 mph, 6261-6270 mph, 6271-6280 mph, 6281-6290 mph, 6291-6300 mph, 6301-6310 mph, 6311-6320 mph, 6321-6330 mph, 6331-6340 mph, 6341-6350 mph, 6351-6360 mph, 6361-6370 mph, 6371-6380 mph, 6381-6390 mph, 6391-6400 mph, 6401-6410 mph, 6411-6420 mph, 6421-6430 mph, 6431-6440 mph, 6441-6450 mph, 6451-6460 mph, 6461-6470 mph, 6471-6480 mph, 6481-6490 mph, 6491-6500 mph, 6501-6510 mph, 6511-6520 mph, 6521-6530 mph, 6531-6540 mph, 6541-6550 mph, 6551-6560 mph, 6561-6570 mph, 6571-6580 mph, 6581-6590 mph, 6591-6600 mph, 6601-6610 mph, 6611-6620 mph, 6621-6630 mph, 6631-6640 mph, 6641-6650 mph, 6651-6660 mph, 6661-6670 mph, 6671-6680 mph, 6681-6690 mph, 6691-6700 mph, 6701-6710 mph, 6711-6720 mph, 6721-6730 mph, 6731-6740 mph, 6741-6750 mph, 6751-6760 mph, 6761-6770 mph, 6771-6780 mph, 6781-6790 mph, 6791-6800 mph, 6801-6810 mph, 6811-6820 mph, 6821-6830 mph, 6831-6840 mph, 6841-6850 mph, 6851-6860 mph, 6861-6870 mph, 6871-6880 mph, 6881-6890 mph, 6891-6900 mph, 6901-6910 mph, 6911-6920 mph, 6921-6930 mph, 6931-6940 mph, 6941-6950 mph, 6951-6960 mph, 6961-6970 mph, 6971-6980 mph, 6981-6990 mph, 6991-7000 mph, 7001-7010 mph, 7011-7020 mph, 7021-7030 mph, 7031-7040 mph, 7041-7050 mph, 7051-7060 mph, 7061-7070 mph, 7071-7080 mph, 7081-7090 mph, 7091-7100 mph, 7101-7110 mph, 7111-7120 mph, 7121-7130 mph, 7131-7140 mph, 7141-7150 mph, 7151-7160 mph, 7161-7170 mph, 7171-7180 mph, 7181-7190 mph, 7191-7200 mph, 7201-7210 mph, 7211-7220 mph, 7221-7230 mph, 7231-7240 mph, 7241-7250 mph, 7251-7260 mph, 7261-7270 mph, 7271-7280 mph, 7281-7290 mph, 7291-7300 mph, 7301-7310 mph, 7311-7320 mph, 7321-7330 mph, 7331-7340 mph, 7341-7350 mph, 7351-7360 mph, 7361-7370 mph, 7371-7380 mph, 7381-7390 mph, 7391-7400 mph, 7401-7410 mph, 7411-7420 mph, 7421-7430 mph, 7431-7440 mph, 7441-7450 mph, 7451-7460 mph, 7461-7470 mph, 7471-7480 mph, 7481-7490 mph, 7491-7500 mph, 7501-7510 mph, 7511-7520 mph, 7521-7530 mph, 7531-7540 mph, 7541-7550 mph, 7551-7560 mph, 7561-7570 mph, 7571-7580 mph, 7581-7590 mph, 7591-7600 mph, 7601-7610 mph, 7611-7620 mph, 7621-7630 mph, 7631-7640 mph, 7641-7650 mph, 7651-7660 mph, 7661-7670 mph, 7671-7680 mph, 7681-7690 mph, 7691-7700 mph, 7701-7710 mph, 7711-7720 mph, 7721-7730 mph, 7731-7740 mph, 7741-7750 mph, 7751-7760 mph, 7761-7770 mph, 7771-7780 mph, 7781-7790 mph, 7791-7800 mph, 7801-7810 mph, 7811-7820 mph, 7821-7830 mph, 7831-7840 mph, 7841-7850 mph, 7851-7860 mph, 7861-7870 mph, 7871-7880 mph, 7881-7890 mph, 7891-7900 mph, 7901-7910 mph, 7911-7920 mph, 7921-7930 mph, 7931-7940 mph, 7941-7950 mph, 7951-7960 mph, 7961-7970 mph, 7971-7980 mph, 7981-7990 mph, 7991-8000 mph, 8001-8010 mph, 8011-8020 mph, 8021-8030 mph, 8031-8040 mph, 8041-8050 mph, 8051-8060 mph, 8061-8070 mph, 8071-8080 mph, 8081-8090 mph, 8091-8100 mph, 8101-8110 mph, 8111-8120 mph, 8121-8130 mph, 8131-8140 mph, 8141-8150 mph, 8151-8160 mph, 8161-8170 mph, 8171-8180 mph, 8181-8190 mph, 8191-8200 mph, 8201-8210 mph, 8211-8220 mph, 8221-8230 mph, 8231-8240 mph, 8241-8250 mph, 8251-8260 mph, 8261-8270 mph, 8271-8280 mph, 8281-8290 mph, 8291-8300 mph, 8301-8310 mph, 8311-8320 mph, 8321-8330 mph, 8331-8340 mph, 8341-8350 mph, 8351-8360 mph, 8361-8370 mph, 8371-8380 mph, 8381-8390 mph, 8391-8400 mph, 8401-8410 mph, 8411-8420 mph, 8421-8430 mph, 8431-8440 mph, 8441-8450 mph, 8451-8460 mph, 8461-8470 mph, 8471-8480 mph, 8481-8490 mph, 8491-8500 mph, 8501-8510 mph, 8511-8520 mph, 8521-8530 mph, 8531-8540 mph, 8541-8550 mph, 8551-8560 mph, 8561-8570 mph, 8571-8580 mph, 8581-8590 mph, 8591-8600 mph, 8601-8610 mph, 8611-8620 mph, 8621-8630 mph, 8631-8640 mph, 8641-8650 mph, 8651-8660 mph, 8661-8670 mph, 8671-8680 mph, 8681-8690 mph, 8691-8700 mph, 8701-8710 mph, 8711-8720 mph, 8721-8730 mph, 8731-8740 mph, 8741-8750 mph, 8751-8760 mph, 8761-8770 mph, 8771-8780 mph, 8781-8790 mph, 8791-8800 mph, 8801-8810 mph, 8811-8820 mph, 8821-8830 mph, 8831-8840 mph, 8841-8850 mph, 8851-8860 mph, 8861-8870 mph, 8871-8880 mph, 8881-8890 mph, 8891-8900 mph, 8901-8910 mph, 8911-8920 mph, 8921-8930 mph, 8931-8940 mph, 8941-8950 mph, 8951-8960 mph, 8961-8970 mph, 8971-8980 mph, 8981-8990 mph, 8991-9000 mph, 9001-9010 mph, 9011-9020 mph, 9021-9030 mph, 9031-9040 mph, 9041-9050 mph, 9051-9060 mph, 9061-9070 mph, 9071-9080 mph, 9081-9090 mph, 9091-9100 mph,

Part 7 Biomes

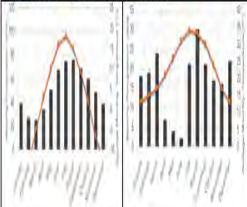
Name: _____

Date: _____

A biome is a large, distinctive complex of _____ communities adapted and maintained by _____.

Rainfall and _____ determine the type of biome.

Complete the precipitation and temperature data below! Then a variety of plants animals in the _____ and _____ from rainfall begin understand the graph.

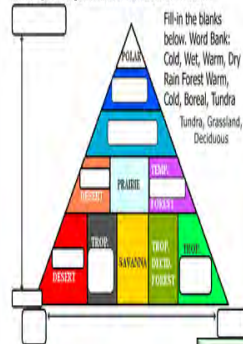


Biome characteristics
_____ area of both
_____ area of both
_____ area of both
_____ area of both

Which of the following is not a characteristic of a biome?
A. Large area of both
B. Similar precipitation climate
C. Similar plant species
D. Similar soil
E. Similar amount of sunlight
F. None of the above

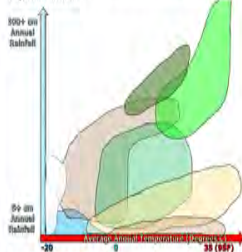
General rule: The higher the _____ and average _____ in a biome, the more and larger plants that the biome can support.
Animals will change below.

Please complete the diagram below about biomes as described in the text.

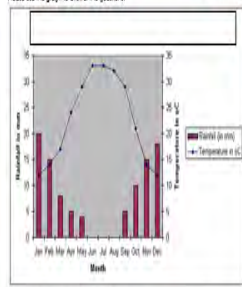


Fill-in the blanks below. Word Bank: Cold, Wet, Warm, Dry, Rain Forest, Warm, Cold, Boreal, Tundra, Tundra, Grassland, Deciduous.

Please use the biome data as described in the diagram. Word Bank: Tropical Rainforest, Temperate Rainforest, Tundra, Desert Forest, Warm Desert, Grassland, Polar, Temperate Deciduous Forest.



Please use the graph to answer the questions.



What biome do you believe this is? _____
How does the graph in the box at the top of the page?

What months receive the most rainfall?

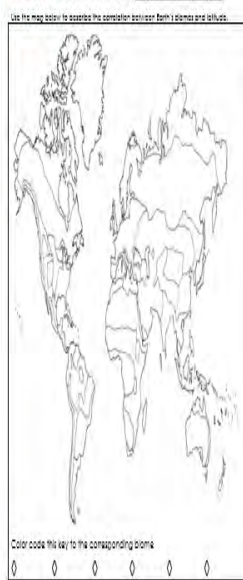
What months receive the least rainfall?

What type of plants and animals might you find in this biome?

Which months are summer in this biome? And which months are winter based on the temperature graph?

Part 7 Lesson 2

Use the map below to describe the distribution of biomes from 1. Biomes and 2. Biomes.



Color code this key to the corresponding biome.

Biome	Temp (Avg)	Rainfall (Avg)	Plants	Animals	Where on Earth
Tropical Rainforest					
Temperate Rainforest					
Tundra					
Hot Desert					
Temperate Deciduous Forest					
Savanna					
Tropical Desert					

Classify about a particular biome. **Part 7 Lesson 3**

Describe biome _____

You will find the following:

Biome: _____
Temperature: _____
Soil: _____
Plant species: _____
Animal species: _____
Limiting factors: _____
Biome location on earth: _____

In the following spaces, please include a list of people in your group that study (your self, too).

Person #1: _____

Person #2: _____

Person #3: _____

When will you be there and why?

Please describe the role of each person in the space below.

Please use the page to write a story that you can use for your presentation tomorrow.

Part 7 Biomes

Continued Story:

Complete the story! For a biome and the story of the biomes: temperature, precipitation, and animals.

Part 7 Lesson 4

Use the 1-10 names that biomes based on region. (10 points each) 2 point bonus.

1)	2)	3)
4)	5)	6)
7)	8)	9)
10)	11)	

Score: _____

Use the 1-10 names that biomes based on region. (10 points each) 2 point bonus.

1)	2)	3)	4)
5)	6)	7)	8)
9)	10)	11)	12)
13)	14)	15)	16)
17)	18)	19)	20)

Score #1: _____ Score #2: _____

Across

1. Tundra, also called _____, is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
2. Taiga, also called _____, is a cold, forested region. It is found in the northern part of the Northern Hemisphere. It is characterized by coniferous trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
3. Coniferous forest is a type of forest. It is found in the northern part of the Northern Hemisphere. It is characterized by coniferous trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
4. Deciduous forest is a type of forest. It is found in the southern part of the Northern Hemisphere. It is characterized by deciduous trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
5. The tropical rainforest is a type of forest. It is found in the southern part of the Northern Hemisphere. It is characterized by tropical rainforest trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
6. The tropical rainforest is a type of forest. It is found in the southern part of the Northern Hemisphere. It is characterized by tropical rainforest trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
7. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
8. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
9. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
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12. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
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14. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
15. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.

Down

1. Rainfall and _____ determine the type of biome.
2. Coldness of all the biomes.
3. Coniferous forest is a type of forest. It is found in the northern part of the Northern Hemisphere. It is characterized by coniferous trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
4. Deciduous forest is a type of forest. It is found in the southern part of the Northern Hemisphere. It is characterized by deciduous trees, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.
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15. A _____ is a cold, treeless region. It is found in the northernmost part of the Northern Hemisphere. It is characterized by low-lying vegetation, permafrost, and a long, cold winter. It is found in the Arctic region of North America, Europe, and Asia.

Never Cry Wolf Optional Movie

Name: _____

What obstacles did Tyler face? How did he overcome those obstacles and complete his research?

Describe some methods that Tyler used to observe wolves and collect data throughout the movie.

Describe the Arctic Tundra and Boreal Forest that Tyler lived in. (Think temperature and precipitation). What was the vegetation like? What were some animals that he observed?

How did Tyler's attitude change throughout the movie? What advantages help create this change?



Part 7 Biomes

Part 7 Lesson 1

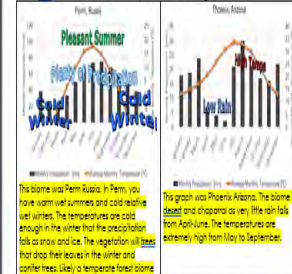
Name: _____

Date: _____

A biome is a large, distinctive complex of **plant** communities created and maintained by **climate**.

Rainfall and **temperature** determine the type of biome.

Compare the precipitation and temperature data below? Which is chart # Phoenix Arizona in the **USA**, and which is Fern Kusoff Bayan underneath the graph



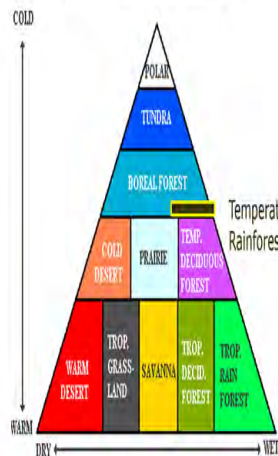
Some characteristics
 Large area of Earth
 Similar predictable **climate**
 Similar **plants**
 Similar **soil**
 Similar amount of **sunlight**

Which of the following is not a characteristic of a biome?
 A) Large area of Earth
 B) Similar predictable climate
 C) Varied plant species
 D) Similar soil
 E) Similar amount of sunlight
 F) None of the above

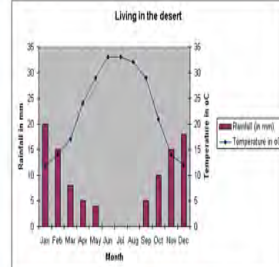
General rule: The higher the **latitude** and average **temperature** in a biome, the more and larger plants that the biome can support.

Animals will always follow.

Please complete the diagram below about biomes as described in the lesson.



Please use the graph to answer the questions.



What biome do you believe this is? **Desert Biome**
 Title this graph in the box at the top of the graph

What months receive the most rainfall?
 January to February and November to December receive the most rainfall in this biome.

What months receive the least rainfall?
 The months of April to September receive the least rainfall with June and July sometimes receiving no rain at all.

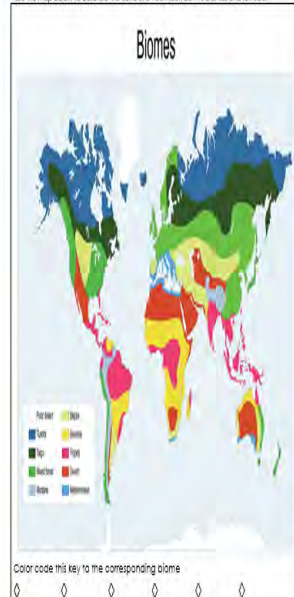
What type of plants and animals might you find this biome?
 You would desert vegetation.

The desert biome is characterized by sandy or stony soil, high temperatures and little moisture. Plants that grow well in desert environments need to store moisture in their fleshy leaves or have an extensive root system. Cacti are the most common desert plants. However, succulents, desert trees, grasses, and types of small shrubs and flowering bushes all grow well in deserts.

Which months are summer in this biome? And which months are winter based on the temperature graph?
 November, December, January, and February are the coldest months. The temperature ranges from 11 degrees Celsius to 15 degrees Celsius.

Part 7 Lesson 2
 Which biome covers 70% of the earth's surface?

Use the map below to describe the correlation between Earth's biomes and latitude.



Biome	Temp (Avg)	Rainfall (Avg)	Plants	Animals	Where on Earth
Tundra	Below 32°F (-1°C)	Below 10 cm (4 in)	Lichens, mosses, and small shrubs	Arctic and alpine regions	Arctic Circle, Alaska, Canada, Siberia
Coniferous Forest	32°F to 64°F (0°C to 18°C)	30 to 60 cm (12 to 24 in)	Coniferous trees (Pine, Spruce, Fir)	Elk, moose, caribou, and bears	North America, Europe, Asia
Deciduous Forest	64°F to 96°F (18°C to 36°C)	30 to 60 cm (12 to 24 in)	Deciduous trees (Oak, Maple, Birch)	Deer, squirrels, and birds	North America, Europe, Asia
Grassland	64°F to 96°F (18°C to 36°C)	30 to 60 cm (12 to 24 in)	Grasses	Antelope, bison, and birds	North America, Europe, Asia
Savanna	64°F to 96°F (18°C to 36°C)	30 to 60 cm (12 to 24 in)	Grasses and acacia trees	Antelope, zebra, and birds	Africa, South America, Australia
Tropical Rainforest	96°F to 128°F (36°C to 52°C)	More than 60 cm (24 in)	Tropical trees (Jungle)	Monkeys, parrots, and toucans	South America, Africa, Asia

Class talk about a particular biome. **Part 7 Lesson 3**

Selected biome: _____

Your skit must include the following:

Rainfall: _____
 Temperature: _____
 Soil: _____
 Some Plants: _____
 Some Animals: _____
 Limiting factors: _____
 Biome location on earth: _____

In the following space, please include input that people in your group had about your skit idea.

Person #1: _____
 Person #2: _____
 Person #3: _____
 Which skit have you chosen and why? _____

Please describe the roles of each person in the space below:

Please use this page to write a script that you can use for your presentation tomorrow.

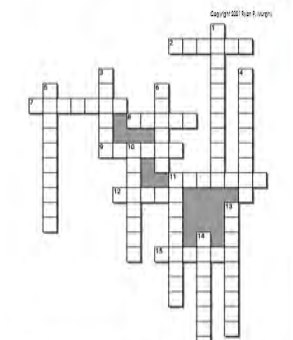
Continued Script

Complete using 36° - Pick a biome and tell me about it!
 16. Name of biome: _____
 17. Location: _____
 18. Climate: _____
 19. Plants: _____
 20. Animals: _____

1. Arctic / Polar Biome	2. Tundra Biome	3. Desert Forest / Tundra
4. Deciduous Forest Biome	5. Prairie Biome	6. Marine Biome
7. Savanna Biome	8. Tropical Rainforest Biome	9. Temperate Forest Biome
10. Marine / Coastal Biome	11. Marine / Open Gulf	

Score: _____
 Quiz #1: Name that Biome 1-20 and the movie / show / book / other just for fun

1. Grassland (Savanna) Jan King	2. Tropical Rainforest The Jungle Book	3. ARCTIC POLAR HAPPY FEET	4. POLAR, TUNDRA SHERLOCK
5. HOT DESERT THE ROAD RUNNERS	6. DESERT / COLD DESERT JOHN	7. PRAIRIE THE LITTLE HOUSE ON THE PRAIRIE	8. BOREAL FOREST BLOOD IN THE REEDS
9. DECIDUOUS FOREST KIDZIES BLUEZ	10. DECIDUOUS FOREST THE PRINCESS BRIDE	11. HOT DESERT STAR WARS A NEW HOPE	12. TEMPERATE FOREST THOUGHT
13. TROPICAL RAIN FOREST RAI RAPEE	14. TROPICAL RAIN FOREST JULIAN	15. TROPICAL RAIN FOREST BLOOD IN THE REEDS	16. DECIDUOUS FOREST BLOOD
17. GRASSLAND / PRAIRIE DANCES WITH A WOLF	18. PRAIRIE GEORGE	19. PRAIRIE CHARTER	20. Savanna Savanna



Across
 2. Tundra, also called _____ forest, biome (major life zone) of vegetation composed primarily of low-growing, needle-leaved or scale-leaved evergreen trees. Found in northern circumpolar forested regions. Characterized by long winters and moderate to high annual precipitation.
 7. A _____ is a rolling grassland scattered with shrubs and isolated trees, which can be found between a tropical rainforest and desert biome. Not enough can fall to support forests.
 10. A _____ area of earth is a hot and dry _____ temperatures are warm and dry year-round.
 12. A _____ is a large, distinctive complex of plant communities created and maintained by climate.
 15. All biomes on earth are being altered by _____

Down
 1. Rainfall and _____ determine the type of biome.
 4. _____ rainforests are coniferous or broad-leaved forests that occur in the temperate zone and receive heavy rainfall. The moist conditions of temperate rain forests generally support an understory of mosses, ferns and some shrubs and berries.
 6. _____ is a hot, moist biome where it rains all year long. It is known for its dense canopy of vegetation that forms three different layers.
 8. _____ forests in the mountains of all around the world. They are usually at an altitude of about 10,000 feet or more.
 11. A hot and dry _____ temperatures are warm and dry year-round.
 13. A _____ is a large, distinctive complex of plant communities created and maintained by climate.
 15. All biomes on earth are being altered by _____

What obstacles did Tyler face? How did he overcome those obstacles and complete his research?

Tyler faces isolation, harsh weather, and fear of wolves. He adapts to the environment, learns survival skills, and observes the wolves closely. Over time, he realizes they aren't the threat people believe, helping him complete his research.

Describe the Arctic Tundra and Boreal Forest that Tyler lived in (think temperature and precipitation). What was the vegetation like? What were some animals that he observed?

Tyler lives in the cold, dry Arctic tundra and the wetter, forested boreal zone. The tundra has moss, lichens, and low shrubs, while the forest has pine and spruce trees. He sees wolves, caribou, birds, and mice during his study.

Describe some methods that Tyler used to observe wolves and collect data throughout the movie.

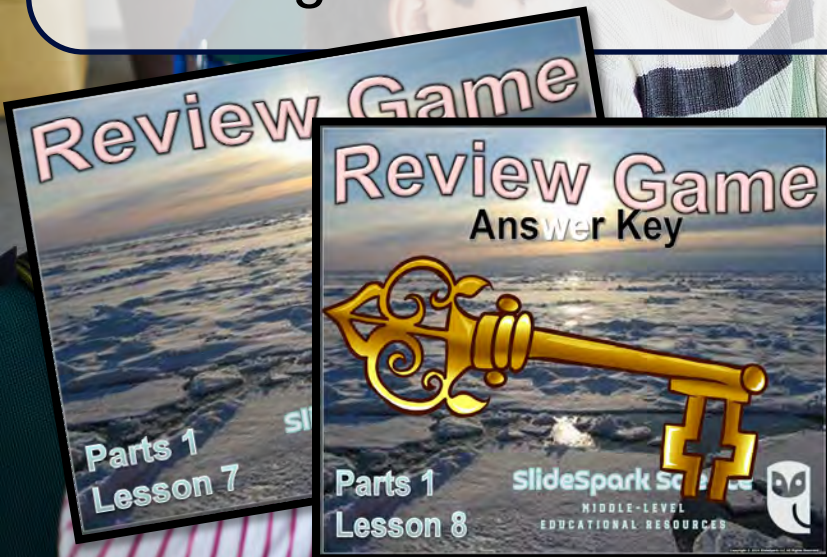
Tyler uses quiet observation, keeps detailed notes, and blends into the environment to study the wolves. He watches from a distance, tracks their movements, and even imitates their howls. He also studies their diet by examining leftovers and conducts an experiment by eating only mice, like the wolves, to understand their survival.

How did Tyler's attitude change throughout the movie? What influences help create this change?

Tyler changes from being nervous and unsure to confident and respectful of nature. His time alone, close contact with wolves, and learning from the Inuit people help him see the animals and the land in a new way.

Review Games / Assessments

Each Part of the 7 Units wraps up with an interactive Review Quiz Game, complete with slideshow answer version for easy self-assessment. A blank answer sheet is included in the work bundle, allowing students to work individually or in small groups with quiet collaboration. You can choose whether to permit the use of work bundles during the game—either way, it's an excellent review activity and assessment that encourages students to revisit and reference their notes.



Part 1 Review Game

1:20 = 5 pts.
*20-25 = Bonus = 1 pt.
(Secretly write owl in correct space +1 pt)
Final Question = 3 pt wager

Name: _____ Due: Today
Score: ____ / 100

AT MOST	LOTS/LAYERS	SMOOGY SMOG	MY WEATHER: TODAY	WEATHER MOVES (secretly - owl)
1) _____	6) _____	11) _____	16) _____	*21) _____
2) _____	7) _____	12) _____	17) _____	*22) _____
3) _____	8) _____	13) _____	18) _____	*23) _____
4) _____	9) _____	14) _____	19) _____	*24) _____
5) _____	10) _____	15) _____	20) _____	*25) _____

Final Question Wager: ____ pt. Answer: _____

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Part 1 Review Game

1:20 = 5 pts.
*20-25 = Bonus = 1 pt.
(Secretly write owl in correct space +1 pt)
Final Question = 3 pt wager

Name: _____ Due: Today
Score: ____ / 100

AT MOST	LOTS/LAYERS	SMOOGY SMOG	MY WEATHER: TODAY	WEATHER MOVES (secretly - owl)
1) FACE	6) MICROPHONE	11) ACID RAIN	16) SUN, SUSTAIN LIFE, CYCLES, CHANGES, BUREAU	*21) WATER
2) SOLID, LIQUID, GAS	7) STRATOSPHERE	12) CARBON MONOXIDE	17) SEE ROCKY NEXT PAGE	*22) TWISTER
3) COMBUSTION	8) BIOSPHERE	13) OTHER: Microorganisms	18) SHARKNADO	*23) SHARKNADO
4) HYDROGEN GAS	9) THERMOSPHERE	14) SPIN, CANCELS	19) WATER, B-CLOUDS	*24) THE DAY AFTER TOMORROW
5) OXYGEN GAS	10) EXOSPHERE	15) Volcanic Organic Compounds (POC's)	20) WATER PARTICULATE MATTER	*25) THE DAY AFTER TOMORROW

Final Question Wager: ____ pt. Answer: **ARABIAN MONSOON, B-C METHANE, COMING ON, DRAGON**

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ATMOSPHERE

Part 1 Example

QUIZ GAME

The Space shuttle orbits in this layer of the atmosphere?

Thermosphere 9

Meteors burn up in this layer of the atmosphere?

Mesosphere 6

Most of the other 21% of our atmosphere consists of this gas? **Oxygen**



5

• Final Question.

— Name A, B, C, and D.



The protective ozone layer is found here?

Stratosphere 7



78% of our atmosphere is composed of this gas?

4
Nitrogen Gas

:N::N:

:N≡N:



1 Point Each

16

The Atmosphere...

Driven by the Sun

Sustains Life

Circulates Matter and Energy

over time

And understanding it
holds the key to the past,
present, and

True or False? Weather is the state of the atmosphere at a given time and place?

False

1

Climate refers to the weather conditions prevailing in an area in general or over a long period of time.

This is a rapid chemical combination of a substance with oxygen, involving the production of heat and light.

3

Combustion



Water exists in what three states of matter on the earth? Solid, Liquid, Gas.

Gas

2

Liquid

Solid

20 Questions

This layer of atmosphere merges with space?

Exosphere

10



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What regional weather problem is evident here?

11



Copyright © 2024 Skatpark LLC

This can occur from too much sun exposure?

Skin Cancer - Melanoma

Skin Cancer

14



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- Name some weather variables?
– 1 point each up to 5 points.

18

Temperature

Air Density

Precipitation

Air Pressure

Wind Speed / Direction

Humidity

**Cloud
Cover**

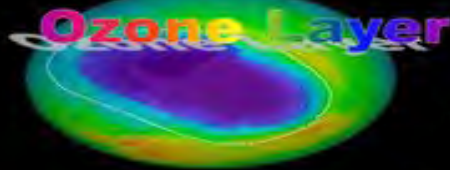


- Please describe the current weather below based on this weather station model.

– (1 point each up to 5 points)



These molecules called **Chlorofluorocarbons** abbreviated (CFCs) escape into the atmosphere from refrigeration and propellant devices and processes. In the lower atmosphere, they are so stable that they persist for years, even decades destroying the Ozone Layer



13

- Which one is weather? And which one is climate?

WEATHER VS. CLIMATE

A

WEATHER
SHORT-TERM STATE OF THE ATMOSPHERE
CAN VARY FROM TIME TO TIME OR LOCATION TO LOCATION
ALWAYS INCLUDES TIME AND LOCATION

B

CLIMATE
LONG-TERM PATTERN OF WEATHER
LONG-TERM = 30 YEARS OR MORE
AVERAGE WEATHER OVER MANY YEARS IN ONE SPECIFIC PLACE

19

- All of the following are ways to avoid this type of poisoning?

- Never run a car in a closed garage.
- Never burn charcoal indoors or in a tent.
- Always run a generator outdoors.
- Never burn anything without ventilation.
- Get a detector and follow the instructions.

12

Signs of Carbon Monoxide Poisoning



- Volatile Organic C O (VOC's), such as hydrocarbon fuel vapors and solvents are a form of air pollution and contribute to ground level ozone.



15

- These are the sum of all solid and liquid particles suspended in air many of which are hazardous (smaller than 10 micrometers)

- This complex mixture includes both organic and inorganic particles, such as pollen, soot, smoke, and liquid droplets.



Particulate Matter (PM)



20

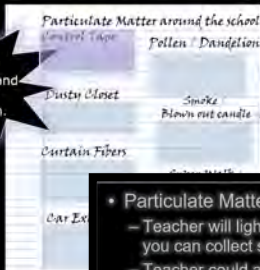
Activities / Labs

Our science activities are designed to help students explore and understand complex scientific concepts in an engaging and interactive way. Each science unit includes several hands-on activities that encourage students to collect data and think critically about the world around them. Our easy-to-follow slideshow provides detailed visuals, simple materials, and clear directions, making it easy for both students and teachers to navigate the activities.

• Particulate Matter around the school

- The first piece of clear packing tape should be labeled control. Place it on your paper without touching it much / contaminating the sample.

The rest we will collect on tape and place in journal sticky side down.



Why do we need control tape?

• Particulate Matter Dusty Closet

- Agree on a dusty spot in the school. Place tape down and collect some particulates that would certainly become airborne if stirred. Place in journal.



• Particulate Matter Smoke

- Teacher will light candle and then blow out so you can collect smoke.
- Teacher could also light a cigarette and hold outside so you can collect a gross sample.



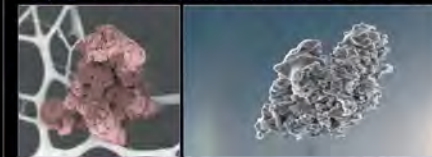
• Particulate Matter Pollen

- Place tape against a dandelion or other flower allowed by your teacher.



• Questions

- 1) How do the samples compare to the control?
- 2) Which sample had the largest particles and which had the smallest particles?
- 3) Which ones do you suspect would be the most dangerous to breathe in? Why?
- 4) Are there other places we should collect from?



Built-in Assessment

Each unit contains several built-in assessment questions that students answer in their work bundle. With the question revealed before the answer, the teacher can easily call on individual students or table groups to respond. These provide an effective and efficient way for teachers to assess student learning.

- Quiz 1-5 Name the layer of the atmosphere.
- Word Bank: **Stratosphere**, **Troposphere**, **Mesosphere**, **Thermosphere**, **Exosphere**

**QUIZ
WIZ**

3



3

Upper
Troposphere



Questions in Work Bundle

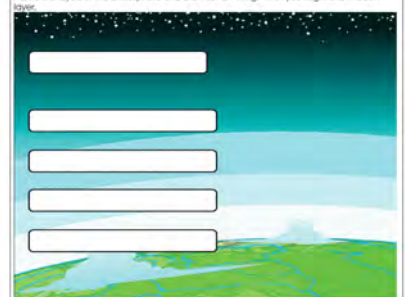
Part 1 Lesson 3 Layers of the Atmosphere

- Layers of the Atmosphere
- Exosphere - Merges with _____ some satellites here.
 - _____ Kármán line (100km)
 - Thermosphere - The ISS orbits here, Aurora
 - Mesosphere - _____, burnt up here
 - Troposphere - _____, occurs here, life, air travel.
 - Earth's Surface - _____

Quiz in the SlideShow: Name the layer in the atmosphere!

1)	2)	3)
		Bonus

Name the layers of the atmosphere and draw some "things" that you might find in each.

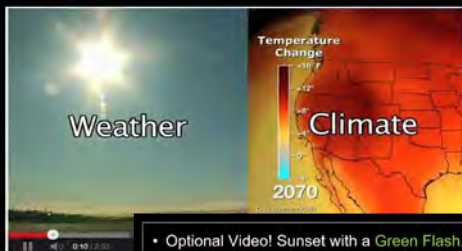


Built-in Video Links

Our science education program is designed with the modern, multimedia learner in mind, and our video links are a perfect complement to our educational materials. These short clips are embedded into the slideshow at just the right places for a fantastic review. Whether you're studying biology, chemistry or physics, our video links are an excellent way to reinforce your learning.

- Video Link! Difference between weather and climate.

– <https://www.youtube.com/watch?v=1s8eGd7THoo>



- Optional Video! Sunset with a Green Flash.

– <https://www.youtube.com/watch?v=Iwus2nqU0SY>



- Video Link! (Optional) Reality. 9 minutes for a single maneuver of Space Shuttle Atlantis preparing for docking with ISS.

We can watch a minute or two.

<http://www.youtube.com/watch?v=4RSnOiMVFHk>



- Video Link. (Optional) Carbon Monoxide Poisoning.

– <https://www.youtube.com/watch?v=KmqIqVwytwA>



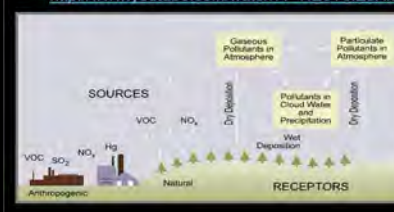
- Air Pollution Wrap Up

– <https://www.youtube.com/watch?v=e6rglSLy1Ys>



– Pay attention to where you might place your card during the video.

– <http://www.youtube.com/watch?v=HE6Y0iEuXMQ>



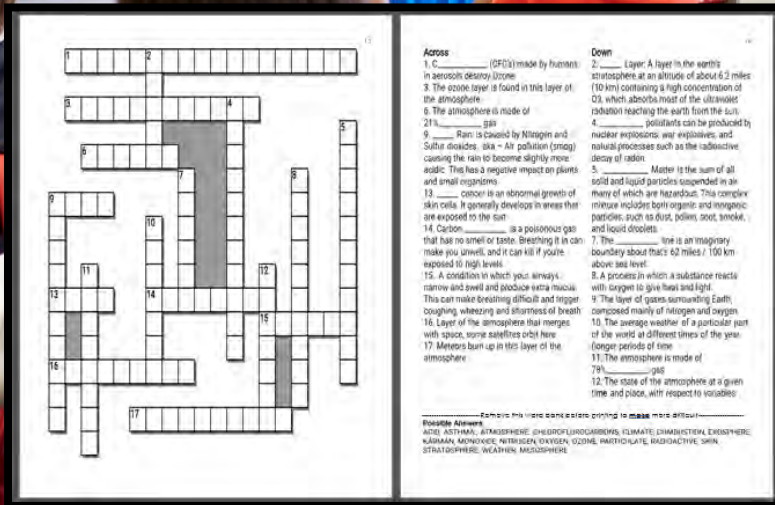
- Video Link! (Optional) Felix Baumgartner's supersonic freefall from 128k' - Mission Highlights / Red Bull Ad.

– <https://www.youtube.com/watch?v=2RR-tzGOvi0>



Games and Review

Games are a fantastic way for students to learn scientific concepts while having fun. We incorporate a variety of games into our curriculum, including interactive quizzes and puzzles that challenge students to think critically about the material. Our Hidden Box Games are a particularly popular feature, which conclude each unit by revealing a picture related to the topic. Students try to guess what the picture might be, making learning an engaging experience.



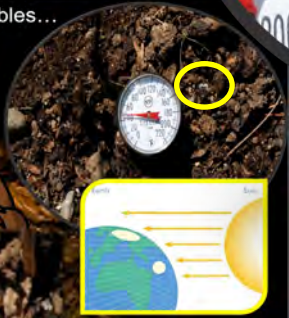
- Some other variables...

- Soil moisture
- Soil temperature
- Leaf wetness
- Solar radiation



- Some other variables...

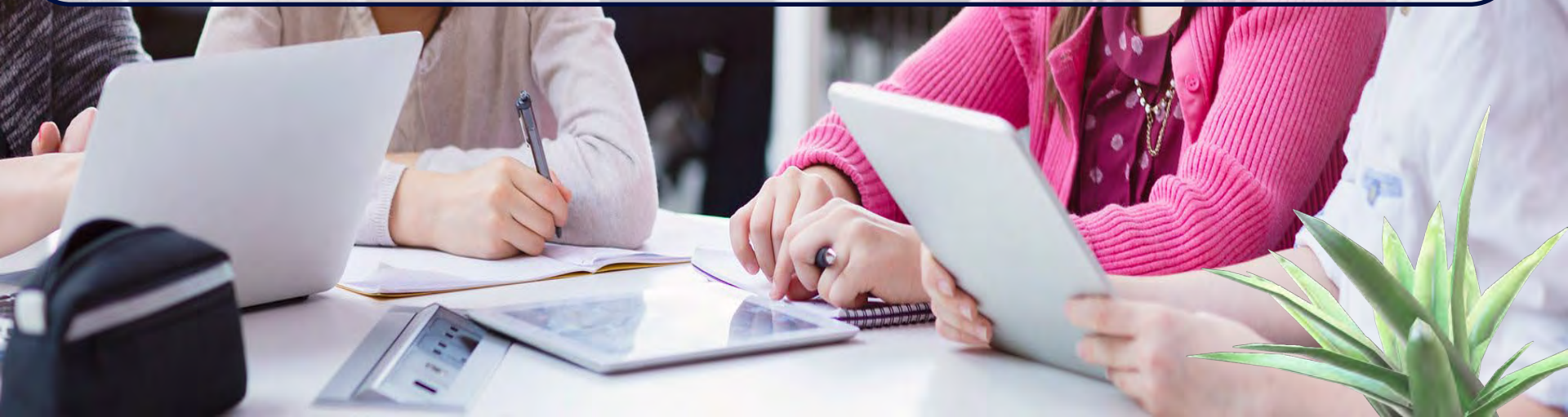
- Soil moisture
- Soil temperature
- Leaf wetness
- Solar radiation



The Owl - Each Part of the slideshow has a small clipart Owl hiding somewhere in a slide. The owl is incredibly small and blended into just the right slide. If a student spots the “Owl” they can raise their hand high into the air. When you call upon the student they can say “Owl” and be the student who spotted the Owl. Each PowerPoint Review game also has an owl hiding in it worth one point. Remind the students that they secretly write the word "owl" rather than yell it out during the review games. The Owl search is not included in every lesson. A slide at the beginning of the lesson will alert the students that today is an “Owl’ day. Everything arrives editable so delete if you wish. You will find that some students will become the expert owl hunters in the group.

Google Classroom Compatible

Our digital learning programs are designed for students to learn science in a flexible and engaging environment. Our Google Classroom-compatible units provide a seamless learning experience whether your students are in the classroom or learning from home. Our step-by-step slideshows and student work bundles ensure that students can complete their work independently. The PowerPoint Slideshows and step-by-step work bundles can easily be loaded to your Google Drive and posted in your Google Classroom. These are great for daily lessons, students who need additional time, and for a student who was absent and looking to catch up in their work bundle.





[Part 1 Lesson 2 Atmosphere](#)

Google Slides



[Part 1 Lesson 6 Skin Cancer](#)

Google Slides



[Part 1 Lesson 3 Layers of th...](#)

Google Slides



[Part 1 Lesson 8 Review Gam...](#)

Google Slides



[Part 1 Work Bundle Answers](#)

Google Docs



[Part 1 Lesson 5 Particulates ...](#)

Google Slides



[Part 1 Work Bundle Print](#)

Google Docs



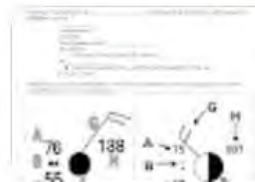
[Part 1 Lesson 7 Review Game](#)

Google Slides



[Part 1 Lesson 1 Weather vs ...](#)

Google Slides



[Part 1 Work Bundle pdf Writ...](#)

PDF



[Part 1 Lesson 4 Air Quality](#)

Google Slides



Part 2 Lesson 5 Review Game

Google Slides



Part 2 Lesson 6 Review Gam...

Google Slides



Part 2 Lesson 2 Air Pressure...

Google Slides



Part 2 Lesson 4 Weather Fro...

Google Slides



Part 2 Work Bundle Print

Google Docs



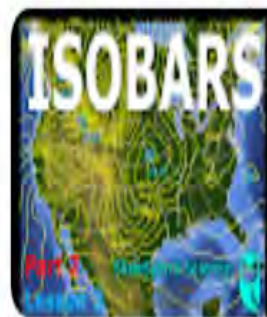
Part 2 Lesson 1 Air

Google Slides



Part 2 Work Bundle pdf Writ...

PDF



Part 2 Lesson 3 Isobars

Google Slides



Part 3 Lesson 2 Coriolis Force

Google Slides



Part 3 Lesson 9 Review Game

Google Slides



Part 3 Lesson 10 Review Ga...

Google Slides



Part 3 Lesson 1 Global Winds

Google Slides



Part 3 Lesson 6 Light and Te...

Google Slides



Part 3 Lesson 4 Airplane Se...

Google Slides



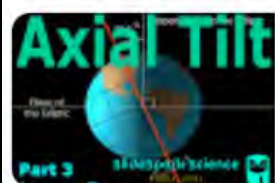
Part 3 Lesson 3 Wind Chill a...

Google Slides



Part 3 Lesson 5 Severe Wea...

Google Slides



Part 3 Lesson 7 Axial Tilt Se...

Google Slides



Part 3 Lesson 8 Solstice Equ...

Google Slides



Part 3 Work Bundle Answers

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Part 3 Work Bundle Print

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Part 3 Work Bundle Answers

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[Part 4 Lesson 4 Clouds](#)

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[Part 4 Lesson 6 Review Gam...](#)

Google Slides



[Part 4 Lesson 3 Water Cycle...](#)

Google Slides



[Part 4 Lesson 2 El Nino Wat...](#)

Google Slides



[Part 4 Lesson 1 Water Planet](#)

Google Slides



[Part 4 Work Bundle Answers](#)

Google Docs



Part 5 Work Bundle pdf Writ...
PDF



Part 5 Lesson 3 Measuring...
Google Slides



Part 5 Work Bundle Print
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Part 5 Lesson 1 Weather Var...
Google Slides



Part 5 Lesson 4 Isotherm an...
Google Slides



Part 5 Lesson 2 Anemomete...
Google Slides



Part 5 Work Bundle Answers
Google Docs



[Part 6 Lesson 4 Future](#)

Google Slides



[Part 6 Lesson 1 AGW](#)

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[Part 6 Lesson 3 Impacts](#)

Google Slides



[Part 6 Lesson 2 Greenhouse](#)

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[Part 6 Lesson 6 Review Game](#)

Google Slides



[Part 6 Lesson 5 Wrap Up](#)

Google Slides



[Part 7 Lesson 1 Biomes](#)

Google Slides



[Part 7 Lesson 2 Biome Research](#)

Google Slides



[Part 7 Lesson 3 Skit](#)

Google Slides



[Part 7 Lesson 4 Quiz Wrap Up](#)

Google Slides



[Part 7 Work Bundle pdf Writing](#)

PDF

Weather and Climate Unit

Weather and Climate Unit

40 Lessons (6th-8th Grade Medium Difficulty). Part 1 is 7 Lessons and 17 Page Work Bundle, Part 2 is 5 Lessons and 14 Page Work Bundle, Part 3 is 8 Lessons and 18 Page Work Bundle, Part 4 is 5 Lessons and 13 Page Work Bundle, Part 5 is 4 Lessons and 12 Page Work Bundle , Part 6 is 6 Lessons and 17 Page Work Bundle, Part 7 is 4 Lessons and 9 Page Work Bundle

[Part 1: Weather and Climate Unit](#): Weather Symbols, What is weather?, Difference between Weather and Climate, Climate, Importance of the Atmosphere, Components of the Atmosphere, Layers of the Atmosphere, Air Quality and Pollution, Carbon Monoxide, Acid Rain, Particulate Matter, Ground Level Ozone, Ozone Layer, Ways to Avoid Skin Cancer, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 2: Weather and Climate Unit](#): Weather and Climate Unit Part 2: Air Pressure, Air Pressure and Elevation, Barometers, Isobars, Cyclonic and Anticyclonic Systems, Air Pressure and Wind, Fronts, Type of Fronts, Pressure Systems on Global Winds, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 3: Weather and Climate Unit](#): Wind, Global Wind, Coriolis Force, Jet Stream, Sea Breeze / Land Breeze, Mountain Winds, Mountain Rain Shadow, Wind Chill, Flight, Dangerous Weather Systems, Light, Albedo, Temperature, Thermometers, Seasons, Solstice, Equinox, Axial tilt, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 4: Weather and Climate](#): Water % on Earth, High Specific Heat of Water, States of Water, Importance of the Oceans on Earth's Weather, The Gulf Stream, Ocean Currents, El Nino, La Nina, Water Cycle, Terms of the Water Cycle, Condensation, Precipitation, Evaporation, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 5: Weather and Climate Unit](#): Weather Forecasting, Weather Symbols, Reading and Weather Model, Weather Tools, Thermometer, Weathervane, Anemometer, Beaufort Scale, Barometer, Hygrometer, Sling Psychrometer, Rain Gauge, Dew, Dew Point, Heat Index, Satellites, Radar, Isobars, Isotherms, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 6: Weather and Climate Unit](#) : Climate Change: Climate Change, AGW Anthropogenic Global Warming, Difference between Weather and Climate, Understanding the Carbon Atom, Natural Emitters of Carbon, Greenhouse Effect, Interpreting Graphs associated with Climate Change, Impacts of Climate Change, Solutions to Climate Change, Movie Ice on Fire Sheet, Box Game Review, Crossword Puzzle, End Unit Assessment with Answer Version so students can Self-Assess

[Part 7: Biomes](#): Biomes: Biomes, Biome Characteristics, Comparing two different Biomes, Biomes on Earth, Case Study on a Biome, Biome Skit Activity Crossword Puzzle, End Unit Quiz that Names the Biome based on a Picture

7 Parts, 40 Lessons

7 Parts, 40 Lessons

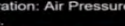
Hundreds of Amazing and Interactive Slides

- Climate Change

- Video Link! Difference between weather and climate.
 - <https://www.youtube.com/watch?v=1s>
- Some other greenhouse gases are **Nitrogen Oxides** and **Fluorinated Gases**
- The wind is caused by the differences in temperatures (and their differences) around a place
 - This is caused by the Sun
- New Area of Focus: **Anthropogenic Global / Human Induced Climate Change**
- **AGW**
- Student experiment to build

• **Demonstration: Air Pressure from directions.**

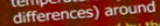
- Fill a small clear plastic cup halfway w
- Place a plastic plate or large notecard
- Flip upside down supporting from the b
- then let go from the bottom holding fro



Student Question to ask:

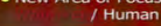
• The wind is caused by the differences in temperatures (and their differences) around a

• This is caused by the S



• New Area of Focus: **Anthropogenic Global / Human Induced Climate Change**

AGW



Hands-on Activities, Assessments, Games

Which colored arrow is the path for many hurricanes that hit the United States?

Evaporation
liquid to gas

Condensation
gas to liquid

Precipitation
infiltration

Groundwater
Aquifer Recharge

Evaporation
liquid to gas

Surface Run-off

8

These are the three main types of clouds

Cumulus

Cirrus

Stratus

North Atlantic Ocean

United States

and warm air currents

Gulf Stream

3

Atlantic Ocean

Follow Along Work Bundles

Weather and Climate Unit Part 1: Weather Symbols, What is weather?, Difference between Weather and Climate, Climate, Importance of the Atmosphere, Components of the Atmosphere, Layers of the Atmosphere, Air Quality and Pollution, Carbon Monoxide, Acid Rain, Particulate Matter, Ground Level Ozone Ozone Layer, UV, Ways to Avoid Skin Cancer

Part 1: Weather and Climate Unit



Additional and Printables



Part 1 Lesson 1 Weather vs Climate



Part 1 Lesson 2 Atmosphere



Part 1 Lesson 3 Layers of the Atmosphere



Part 1 Lesson 4 Air Quality



Part 1 Lesson 5 Particulates Ozone



Part 1 Lesson 6 Skin Cancer



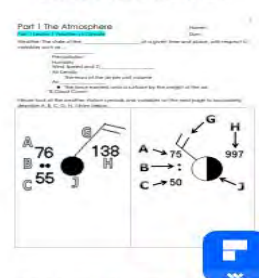
Part 1 Lesson 7 Review Game



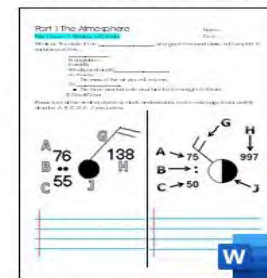
Part 1 Lesson 8 Review Game Answers



Part 1 Work Bundle Answers



Part 1 Work Bundle pdf Writable



Part 1 Work Bundle Print

Weather and Climate Unit Part 2: Air Pressure, Air Pressure and Elevation, Barometers, Isobars, Cyclonic and Anticyclonic Systems, Air Pressure and Wind, Fronts, Type of Fronts, Pressure Systems on Global Wind

Part 2: Weather and Climate Unit



Additional and Printables



Part 2 Lesson 1 Air



Part 2 Lesson 2 Air Pressure Projects



Part 2 Lesson 3 Isobars



Part 2 Lesson 4 Weather Fronts



Part 2 Lesson 5 Review Game



Part 2 Lesson 6 Review Game Answers



Part 2 Work Bundle Answers



Part 2 Work Bundle pdf Writable



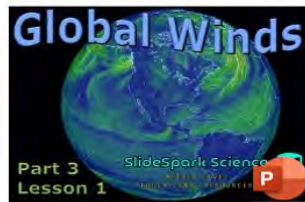
Part 2 Work Bundle Print

Part 3 Wind: Wind, Global Wind, Coriolis Force, Jet Stream, Sea Breeze / Land Breeze, Mountain Winds, Mountain Rain Shadow, Wind Chill, Flight, Dangerous Weather Systems, Light, Albedo, Temperature, Thermometers, Seasons, Solstice, Equinox, Axial tilt,

Part 3: Weather and Climate Unit



Additional and Printables



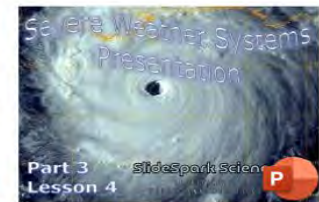
Part 3 Lesson 1 Global Winds



Part 3 Lesson 2 Coriolis Force



Part 3 Lesson 3 Wind Chill and More



Part 3 Lesson 4 Airplane Severe Weather Project



Part 3 Lesson 5 Severe Weather Systems



Part 3 Lesson 6 Light and Temp



Part 3 Lesson 7 Axial Tilt Seasons



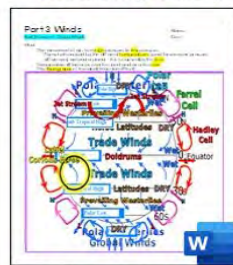
Part 3 Lesson 8 Solstice Equinox



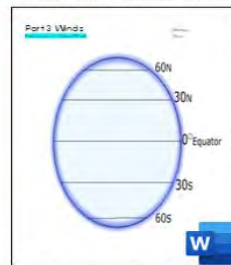
Part 3 Lesson 9 Review Game



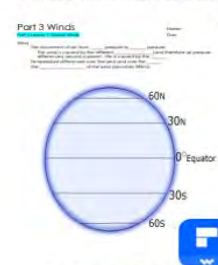
Part 3 Lesson 10 Review Game Answers



Part 3 Work Bundle Answers



Part 3 Work Bundle Print



Part 3 Work pdf Writable

Weather and Climate Unit Part 4, Earth the Water Planet: Water % on Earth, High Specific Heat of Water, States of Water, Importance of the Oceans on Earth's Weather, The Gulf Stream, Ocean Currents, El Nino, La Nina, Water Cycle, Terms of the Water Cycle, Condensation, Precipitation, Evaporation

Part 4: Weather and Climate

Additional and Printables

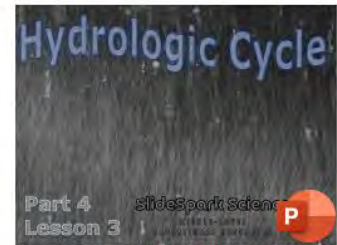
Just the Water Cycle



Part 4 Lesson 1 Water Planet



Part 4 Lesson 2 El Niño Water Molecule



Part 4 Lesson 3 Water Cycle two days



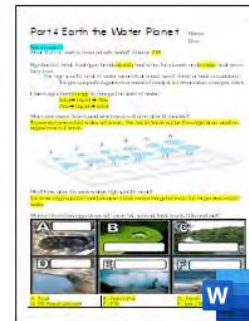
Part 4 Lesson 4 Clouds



Part 4 Lesson 5 Review Game



Part 4 Lesson 6 Review Game Answers



Part 4 Work Bundle Answers



Part 4 Work Bundle pdf Writable

Weather Forecasting, Weather Symbols, Reading and Weather Model, Weather Tools, Thermometer, Weathervane, Anemometer, Beaufort Scale, Barometer, Hygrometer, Sling Psychrometer, Rain Guage, Dew, Dew Point, Heat Index, Satellites, Radar, Isobars, Isotherms,

Part 5: Weather and Climate Unit



Additional and Printables



Part 5 Lesson 1 Weather Variables Wind Vane



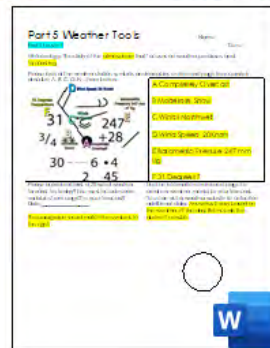
Part 5 Lesson 2 Anemometer Barometer



Part 5 Lesson 3 Measuring Water



Part 5 Lesson 4 Isotherm and Wrap Up Quiz



Part 5 Work Bundle Answers



Part 5 Work Bundle pdf Writable



Part 5 Work Bundle Print

Weather and Climate Unit Part 6: Climate Change: Climate Change, AGW Anthropogenic Global Warming, Difference between Weather and Climate, Understanding the Carbon Atom, Natural Emitters of Carbon, Greenhouse Effect, Interpreting Graphs associated with Climate Change, Impacts of Climate Change, Solutions to Climate Change, Move Ice on Fire Sheet

Part 6: Weather and Climate Unit



Additional and Printables



Part 6 Lesson 1 AGW



Part 6 Lesson 2 Greenhouse



Part 6 Lesson 3 Impacts



Part 6 Lesson 4 Future



Part 6 Lesson 5 Wrap Up



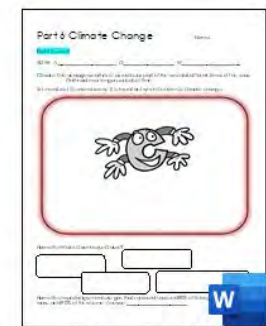
Part 6 Lesson 6 Review Game



Part 6 Lesson 7 Review Game Answers



Part 6 Work Bundle Answers



Part 6 Work Bundle Print

Curriculum Guide

Number of Lessons in each unit (50 min, daily lessons) and difficult rating scale / intended grade level.

 =Easier,

 = More difficult,

 =Most difficult

Earth Science Units	Daily Lessons	Intended Grade	
Geology Topics Unit	60 Lessons	6-8 medium difficulty	
Weather and Climate Unit	40 Lessons	6-8 medium difficulty	
Astronomy Unit	60 Lessons	6-8 medium difficulty	
Weathering, Soil Sciences	28 Lessons	5-7 easier	
Rivers and Water Quality	25 Lessons	5-7 easier	
Water Molecule Unit	20 Lessons	5-7 easier	
Biogeochemical Cycles Unit	16 Lessons	5-7 easier	

Life Science Units

Life Science Units	Daily Lessons	Intended Grade	
Ecology Feeding Levels Unit	13 Lessons	5-6 easier	
Ecology Interactions Unit	30 Lessons	5-6 easier	
Ecology Abiotic Factors Unit	13 Lessons	5-6 easier	
Botany Unit	50 Lessons	5-7 easier	
Evolution and Natural Selection	40 Lessons	5-7 easier	
Taxonomy and Classification	50 Lessons	6-8 medium difficulty	
Infectious Diseases Unit	30 Lessons	7-9 more difficult	
DNA and Genetics Unit	42 Lessons	8-10 most difficult	
Human Body Systems Unit	85 Lessons	6-8 medium difficulty	
Cell Biology Unit	30 Lessons	8-10 most difficult	

Physical Science

	Daily Lessons	Intended Grade	
Laws of Motion and Machines Unit	33 Lessons	8-10 most difficult	
Matter Energy and the Environment	58 Lessons	7-10 medium difficulty	
Atoms and Periodic Table Unit	44 Lessons	8-10 most difficult	
Science Skills Unit	30 Lessons	5-7 medium difficulty	

Physical Science Curriculum

Dear Valued Educator,

Our fully editable .pptx and .doc resources are perfect for educators looking to bring enthusiasm and creativity to their lessons. We encourage you to make changes to fit your needs and style. As science educators, we're committed to providing students with the tools they need to succeed in the classroom and beyond. Each unit in the curriculum includes a range of resources that have been developed through extensive research and use in a busy classroom. Our teaching approach is designed to make science education engaging and exciting for learners of all ages. We offer a one-of-a-kind science curriculum that will challenge, inspire, and educate students to become tomorrow's scientists and leaders. Join us today and learn more about how our program can help you achieve your classroom goals.

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Thank you for your time and interest in our Science curriculum. We strive to provide students with engaging and informative lessons that will spark their curiosity and encourage scientific exploration. Should you have any questions or concerns, please do not hesitate to contact us. Thank you again for considering our curriculum, and we wish you all the best in your educational journey.

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