Advanced Placement Environmental Science (APES) Summer Assignment 2026

Shane Alderman

Thanks for taking on the challenge of APES. Environmental Science is a complicated and immense field of study. This summer assignment is designed to help you get off to a good start in a demanding course. My goal for this assignment is to 1) get you ready for a college-level class and understand the workload and critical thinking that it entails, 2) (hopefully) get you excited and passionate about some of the topics we'll be covering- if you don't enjoy learning about environmental topics, this class may not be the best choice for you at this time and 3) get you accustomed to watching the required videos and taking your notes on your own outside of class.

This assignment will be due on the second day of class- NO LATE WORK will be accepted in this course!

Part A is worth a 100-point project grade (counts the same as a test). This is a great opportunity to get your quarter 1 test average up! **If you choose not to do Part A, it will be exempted**, but there is no alternate assignment.

Part B is worth a 30-point quiz grade. **Failure to complete Part B will result in a 0/30 quiz grade** and a recommendation to switch to another course of your choice. There will be a test on information contained in part B during the first week of school before the drop/add deadline.

Questions may be emailed to me before the start of school at shane.alderman@bvhs.org

Part A: "Ape's Summer" Don't Forget to take your Ape! APES 2026 – 2027 Summer Scavenger Hunt Guidelines

GOAL:

1. See APES all around you as you explore, enjoy, honor, consider and document your environment!

RULES:

1. **FIND** all of the 25 items on the list (see list below). All items can be found locally, at some level, but some better examples might be further away. Find **one example from each row**!

2. **PROOF** of finding each item is an image (digital or film, still or motion), clearly showing (a) the **item**, (b) **yourself**, and (c) the **paper ape** [or, in a pinch, a date-identifying item].

3. **DOCUMENTATION** required for each image must include (a) the item **identification** (**category** and **name** of specific item or place as applicable), (b) the item's specific **location** with map if needed **(NOTE: No one location may be used for more than one item. Duplicate places will earn half-credit),** (c) the **date** the item was found and captured, and (d) **"additional information"** (see list).

4. Your **PRODUCT** will be a PowerPoint slideshow (PDF) **OR** a video (MP4)

a. It is **due by the beginning of the class period on Monday, August 8th**, 2026, via a Canvas upload. This is a college level class and **no late work is accepted**. If you choose not to do it, it will be exempted, but there is no alternate assignment.

b. Everything in the finished product must be school appropriate.

HELPING your partner:

a. If product is a video: you may work with **one partner** (in pairs) to submit **one video product for both** of you. **Both partners must be represented with each and every item with a paper APE**. If you choose to work in pairs, and your partner bails on you, you are still responsible for finishing alone for credit.

b. If your product is a slideshow (PPT, Canva, Google Slides) you can help each other, but **your product is yours alone, and you must appear with a paper APE in each image**. **Each partner will submit a unique product.** (Not 2 versions of the same or similar presentation)

6. You are **NOT ALLOWED** to trespass, obstruct traffic, violate any laws, jeopardize your safety or the safety of others (please adhere to any rules or laws!) in any way in pursuit of any item.

PRODUCT: Video OR Slideshow including locations and dates, submitted with rubric checklist.

1. VIDEO: Each item would be a clip, including the item, the paper ape, you, and the requisite documentation (which could be audio, of course). Videos can be submitted with a partner.

2. POWERPOINT SLIDESHOW: Each item is a slide, including the item, the paper ape, you and the requisite documentation. Slideshows must be submitted individually. If you're doing it on Google, Keynote or some other program, download it and convert it to PowerPoint.

3. Locations and dates: every image must have a unique and specific location, city, state, and date photographed. You may not use the same location more than once to satisfy multiple categories. Any repeated locations lose all 4 points for that item. For instance: If it a building or a farm, be sure to give the name of that specific building or farm as well as the city, state, and date photographed.

4. Checklist: **Highlight the boxes you were able to find and document on the Scavenger Hunt List.** Highlighter or check marks are fine. **Turn in the checklist** with your project for ease in grading.

CREDIT:

1. This counts as a 100-point project grade! Each properly documented item earns a maximum of 4 points! You will want this to help increase your test average during Quarter 1 as projects count in the test category! Think of it as pre-course extra credit!

2. All 25 items must be in your finished project if you wish to earn the maximum score. Explore! All of these items are out there! I will allow you **two "free spaces"** like in Bingo, so technically you are finding 23 or more!

3. "Best" is generally worth more than "Better", which is generally worth more than "Good", but any will satisfy the item. **It is acceptable to have a mix of good, better, and best,** but always do your BEST whenever you can in APES!

4. Clarity and quality of imagery is important.

5. Accuracy and thoroughness of documentation are important.

6. Creativity and entertainment value are far better than no creativity or entertainment value; they can compensate for minor deficiencies, but not for major deficiencies. 😊

7. Evidence of trespassing, obstruction of traffic, violation of laws, jeopardizing safety or compromising integrity will cost credit. Do not film people or places that you are asked not to film. Do not pick plants nor endanger any animals. Do not use your phone or camera while driving.

8. Photoshopping or AI image generation or manipulation or using any other sources which are not your original work to gain advantage constitutes an academic integrity violation, and will earn a zero on this summer assignment.

SUGGESTIONS:

1. Try to have fun with this part; it's not supposed to be "work."

2. Build it gradually throughout the summer. Saving it all for the last days would make it "work".

3. Keep the ape with your phone/or in your car, so you're always ready. When you see something, whip out the ape, take a picture or clip, and collect the info.

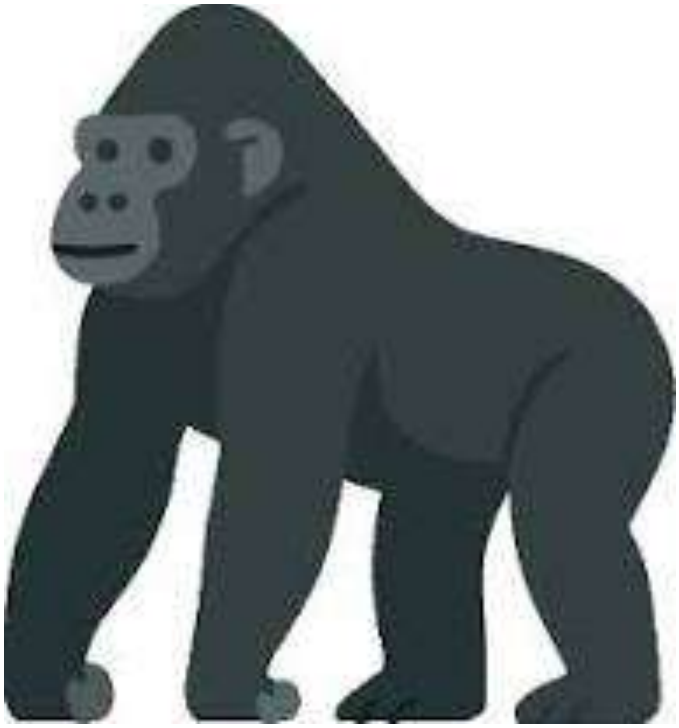
Part A has been adapted from the work of ***Manuel Appleman at San Mateo High School***

APES 2026–2027 Summer Scavenger Hunt Checklist

Name: _____I abide by the BVHS honor code.

#	Category	Best	Better	Good	Additional Info (must *also* include location, date, time)
1	**Lithosphere**	Igneous rock outcrop (exposed bedrock)	Sedimentary or metamorphic rock outcrop (exposed bedrock)	Non-native rock, bigger than you	**Name of rock type**
2	**Hydrosphere**	Ocean or Wild and Scenic River	Bay or Dam-controlled River	Flowing stream or standing water in a watershed	**Name of water body**
3	**Atmosphere**	Cumulus-type cloud	Stratus-type cloud	Cirrus-type cloud	**Name of cloud type**
4	**Biogeochemical Cycles**	Nitrogen Cycle	Carbon cycle	Water cycle	**Where the element or compound has come from and is going to**
5	**Energy Flow**	Carnivore consuming herbivore or carnivore	Herbivore consuming producer	Photosynthesis happening	**Names and roles of participating species**
6	**Endangered Species**	Native endangered animal, in its habitat	Native endangered plant, in its habitat	Non-native endangered species	**Common and/or species name**
7	**Biodiversity**	Invasive animal species	Invasive plant species	Invasive human species	**Common and/or species name, and where it came from**
8	**Population Growth**	Human less than 1 year old	Human less than 2 years old	Human less than 5 years old	**Name of human and quote from the human or the human's minder**
9	**Forest**	Native tree you can't reach more than one quarter around	Native tree you can't reach more than halfway around	Non-native tree you can't reach more than halfway around	**Common and/or species name**
10	**Biodiversity Preserve**	National park system unit	State park system unit	County or city park system unit	**Name of park**

11	**Food Crops**	Food crop being grown on a farm	Food crop being transported or sold at outdoor farmer's market	Food crop being processed or retailed at chain store	**Name of food crop**
12	**Meat**	Animals raised for food in a CAFO	Animals raised for food on rangeland	Meat being retailed	**Name of animal**
13	**Fishing**	Commercial fishing operation	Recreational fishing	Fish being retailed	**Name of fish**
14	**Water Resources**	Water transport system	Water storage system	Water delivery and use	**Where water came from and goes to**
15	**Water Pollution**	Point source of water pollution	Nonpoint source of water pollution	Polluted water or solid pollutant	**Specific type of water pollution**
16	**Air Pollution**	Stationary point source emitting pollution	Mobile source emitting pollution	Air pollution without identified source	**Specific type of air pollution**
17	**Renewable Energy**	Renewable power generating plant	Renewable residential or commercial generator	Renewably powered appliance	**Type of renewable energy**
18	**Fossil Fuels**	Fossil fuel production or processing	Non-gasoline fossil fuel use or retail	Gasoline retail	**Name of fossil fuel**
19	**Solid Waste**	Reducing waste generation	Reuse of potential waste	Recycling potential waste	**Specific type of waste being averted**
20	**Urbanization**	LEED platinum or gold building	LEED silver or certified building	Other green building	**Name/business and green features**
21	**Mass Transit**	Riding public mass transit	Public mass transit	Private mass transit	**Destination and ride quality**
22	**Fuel Economy**	Two cars differing by >30 mpg	Two cars differing by >20 mpg	Two cars differing by >10 mpg	**Makes, models, and mileage**
23	**Environmental Studies and/or Workplaces**	University or college building	Nature center building	Commercial or office building	**Name and quote from worker**
24	**People aiding the Environment**	Worker in environment-related profession	Volunteer in environment-related work	Environmentally aware person	**Name, role, and quote from worker.**
25	**Beauty**	Extraordinarily beautiful non-human thing	Moderately beautiful non-human thing	Non-human thing not beautiful at all	**What it is and why?**



Part B: Unit 1 The Living World: Ecosystems-Diving into course content!

GOAL:

1. Get started on APES content and modeling the "flipped classroom" aspects of the course.

DIRECTIONS:

1. **WATCH** the **Jordan Smedes Unit 1 AP Environmental Science-Ecosystems Playlist** (Topics 1.1-1.11) and **USE** the APES Unit 1 Note-frames (by Kathryn Coats) to document your watching/learning.

2. **ADD** the note frames to **Notability** on your device or **PRINT** them**.** They are mostly filled in and contain great content. Your job is to elaborate and add missing items. These must be done **completely and neatly** and **in your own handwriting**. No typed/copy-paste or AI generated responses will be accepted. If you don't already have stylus, now is the time to get one.

3. **Complete the Practice FRQ** at the end of the Smedes videos for **1.5 Nitrogen Cycle**, **1.8 Primary productivity and 1.9 & 1.10 Trophic Levels and the 10%** Rule. These must be **handwritten** neatly on paper or in a notability note. Please see below for help with what level of detail the **BOLD** APES task verbs in the FRQs require.

APES task verbs

Identify: Answer the question. No introduction. No extra words or phrases.

Describe: Provide the characteristic necessary. Answer question and one piece of elaboration.

Explain: Cause-Effect-Consequence. Provide the Why or How behind a process.

Calculate: Perform the mathematical steps. Show your work!

4. It is **due by the beginning of the class period on Tuesday, August 8th**, 2026, via a Canvas upload. This is a college level class and again, **no late work is accepted**.

CREDIT:

1. This counts as your first 30-point quiz grade! Start off the semester strong and do your best work!

2. This content will be used as you review for the Unit 1 Test that will be given before the drop/add date for this course.

SCORING

30-29 points: All items complete/accurate. Responses use supporting exampl**es** and detail**s** from the lesson videos. Neatly handwritten (it can easily be read).

28-27 points: Most items complete/accurate. Responses use supporting exampl**es** and detail**s** from the lesson videos. Neatly handwritten (it can easily be read).

26-25-24 points: Most items complete/accurate. A few responses may **lack** supporting exampl**es** and/or detail**s**. Neatly handwritten, but some parts may be hard to read.

23-22-21 points: Many items incomplete/inaccurate. Several responses lack supporting examples and details. Handwritten, but many parts may be hard to read.

20 points or less: Little effort was shown to fully complete the responses OR to neatly handwrite the responses.

Part B contains materials created for APES by **Jordan Smedes** and **Kathryn Coats** which they graciously share for the good of APES students across the country.

Lastly, two items. 1)Pick up a **composition notebook**- "College ruled" if possible. Target or Wal-Mart should have them for a dollar or so at back to school sales. 2) **Enjoy the summer** and I am excited to see you back on campus!

Shane Alderman