PBL Driving Question Examples

Students can choose an example question to research and complete their project about, or create their own question. Any grade level student could choose any of the question ideas. Projects will look very different based on grade level. Please follow the project rubrics to adapt.

Categories:

Nature/Hiking Art Chess Foreign Language Martial Arts Music Cooking/Home-ec Sewing Physical Education Archery Dance Robotics General Examples/Fill in the Blank (could apply to many classes) Questions combining two classes

Nature/Hiking

- 1. Why shouldn't you take firewood from one area to another?
- 2. Why shouldn't we feed bears and other wild animals?
- 3. How has building expansion affected ecosystems?
- 4. Why is Great Smoky Mountains National Park the salamander capital of the world?
- 5. Compare and contrast section hiking to long distance hiking.
- 6. What ways should a person prepare for animal and element safety while hiking?

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Art

- 1. What is color?
- 2. What are some ways that making art helps people?
- 3. What are three ways in which art has changed over time?
- 4. How has pottery developed through the centuries?
- 5. Compare and contrast what parts of the brain are utilized by creating visual artwork.
- 6. Who is a famous artist and how have they influenced society?

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Chess

- 1. Why is chess considered a brain game?
- 2. What qualifies someone as a chess master?
- 3. How can playing chess improve math skills?
- 4. How can learning chess be helpful in school and daily life? (Problem solving, etc.)
- 5. How do strategic games improve cognitive abilities?
- 6. How does someone create a virtual chess or any other online game?

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Foreign Language

- 1. How are English and Spanish similar and different?
- 2. Design a menu in English and Spanish.
- 3. How are books translated into different languages?
- 4. Compare and contrast music in two different cultures.
- 5. What makes musical instruments similar and different between cultures?
- 6. How does learning a second language help in learning English?
- 7. How is music similar and different in other countries? (languages)
- 8. Write a short children's book and translate it into a second language
- 9. How does learning a different language affect the brain?
- 10. How can learning a second language lead to a career?

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Martial Arts

- 1. How do healthy eating habits help people in martial arts (or any other sport)?
- 2. Which muscles are used in martial arts (or any other sport)?
- 3. How do martial arts use both the mind and body?
- 4. How can martial arts help people be safe?
- 5. How has martial arts changed over time in different cultures?
- 6. Compare and contrast the different types of martial arts.

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Music

Grades K-2

- 1. How is singing made by the human voice?
- 2. How does the (instrument) make sound?
- 3. Why are warm-ups important before singing or playing an instrument?

- 4. Why does a song get stuck in your head? Research and explain an earworm.
- 5. How does music influence a society or community of people?
- 6. How can a (new) instrument be created?
- 7. How does music affect mood (actual neurological research)?
- 8. How can music be used to help people with Alzheimers or other cognitive issues?
- 9. What kind of coordination is required to play _____ (instrument)?
- 10. How does music relate to ____?
- 11. What is the relationship between math and music?
- 12. What are some ways music can be a career?

13. How did (<u>Beethoven, Chopin, etc.</u>) affect their time period in history or their genre? (<u>return to Categories</u>)

Cooking

- 1. What are the similarities and differences between crocheting and knitting?
- 2. Compare and contrast foods between _____ and _____ cultures.
- 3. Choose 2 famous chefs and tell why they are famous.
- 4. How has crocheting evolved through the centuries/over time?
- 5. How is math used in sewing and cooking/baking?
- 6. Compare and contrast foods between _____ and _____ cultures.

(return to Categories)

Sewing

Grades K-2

- 1. What are 3 plants /animal products used to make cloth and how are they used?
- 2. How is cloth used in art?
- 3. How was history affected by the invention of the sewing machine?
- 4. What are 3-5 some ways that sewing skills might lead to career opportunities?
- 5. Who are two or three fashion designers who had a profound influence on fashion?
- 6. How can sewing be used both as an art form and to meet practical needs?
- 7. How have sewing advancements changed fashion?
- 8. What resources are used to make cloth and how is cloth made?
- 9. How was clothing made a long time ago and how is it made now?
- 10. Who made the first sewing machine and how did it change history?

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Archery

Grades K-2

1. How would you design a new bow?

- 2. Design an archery obstacle course.
- 3. What is the relationship between archery and physics?
- 4. How has archery changed over time?

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Physical Education

Grades K-2

- 1. Why is exercise important for children?
- 2. Why is warming up important to PE?
- 3. What will it take to create a fitness routine for my family?
- 4. How does physical activity change your brain chemistry?
- 5. How can someone who is/ was not a professional sports player be a great coach?
- 6. How can nutrition be applied to exercise?

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Dance

- 1. How is dance different between cultures?
- 2. What are the best stretches for dancers and why?
- 3. Which genres of music match each type of dance?
- 4. How many people have to work backstage in a Broadway musical and what do they do?
- 5. Who are some famous dancers in (genre/genres) and what makes them famous?
- 6. What are ways to avoid injury in dance?
- 7. Evolution/History of (genre) of dance.
- 8. Evolution/History of (costume) of (genre) of dance and why do they wear this?
- Who has choreographed the greatest number of musicals? Bio of person and summary of musicals.
- 10. Life skills: original design or make a costume. Explain each step.
- 11. Fine arts: Which are the best or most famous dance schools?
- 12. How does dance integrate the whole brain?
- 13. How do pointe shoes affect the structure of the foot over time?
- 14. Who is a famous choreographer and why are they famous? (Bio)
- 15. How does dance/exercise change brain chemistry?
- 16. Which muscles are used in (genre) or dance in general?

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Robotics

- 1. What is a pneumatic system and what does it replace?
- 2. What are some commonly used RPA tools? (robotic process automation)
- 3. How will robotics affect the future of some current jobs?
- 4. What kind of jobs are available for robotic engineers?
- 5. What is the origin of robotics?

- 6. Will robots replace humans in every kind of job?
- 7. Should robots be allowed to perform surgery?

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General Examples/Fill in the Blank (could apply to many classes)

What are the benefits of learning _____? (As a student, in the future, personal growth, health, to help society, etc)

- Can learning how to read music and playing piano or another instrument help me in other school subjects?
- How can learning dance (or swimming, etc.) help me stay healthy?
- How can the skills learned in ham radio be used to help others?

How does nutrition and health affect _____?

- How does health correlate with athletic performance?
- Why is nutrition important and how do nutritional needs vary among different sports?

What is the history of _____? (Development of a sport, invention of an instrument, equipment used, clothing styles worn, etc)

- When was basketball invented? How have the rules changed over time?
- How has gymnastics equipment changed over the centuries, and how does that impact the sport today?
- How has the cost of fabric versus the cost of labor impacted the fashion industry?

Research a famous athlete/artist/naturalist/movement, etc. and tell how they influenced the development of their field.

- Describe the history of recycling and how it impacts us today.
- Who was Arthur Ashe (or any other famous athlete) and how did he or she influence their sport?
- Who is Kenny G (or any other musician) and how has he or she impacted saxophone (______ instrument/genre) music?

What does someone need to know about ______ (swimming, hiking, skating, gymnastics, etc) before they start or as they progress through levels? (safety, prerequisites, long term, start up costs, etc)

- What are the safety rules for hockey? Why are they important?
- How can a competitive gymnast prevent injury over years of competition?
- What kind of equipment do you need to start wilderness hiking?

What are some of the ethical implications or considerations in this field? (fast fashion, robotics, AI, societal pressures on young athletes, hiking/Leave No Trace)

- Should there be upper or lower age limits on competitive athletes?
- What are some of the pros and cons of using robotics in medicine?
- Some National Parks are severely limiting public access to certain areas of the parks. Are there ways to safely explore those areas that will not harm the parks?

Questions Combining Two Classes:

- 1. How can learning _____ and _____ help someone as a student and an adult?
- 2. Compare and contrast the (history OR health benefits) of _____ and _____.
- 3. What careers can learning _____ and _____ lead to?
- 4. Compare and contrast the skills needed in _____ and ____?

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