



Problem #1: "Bright Ideas, Big Solutions!"

How Might We Question:

How might we design a fun and helpful invention that makes life easier at school or at home?

Problem:

Invent something awesome to make life easier at school or home! Every day at school or home, you notice little problems—maybe your backpack is always messy, your pencils keep rolling off your desk, or your little brother can't reach the sink to wash his hands. What if YOU could invent something that makes life easier at school or at home?

Your mission is to become a Kid Inventor! You'll think like a scientist, design like an engineer, and build like a maker. You can use cardboard, tape, LEGO, recycled materials, or even simple circuits—whatever helps bring your idea to life.



Problem #2: "Planet Protectors Unite!"

How Might We Question:

How might we help protect the Earth by creating something that reduces waste, saves energy, or keeps nature clean?

Problem:

The Earth is an amazing place full of animals, plants, oceans, and forests—but it needs our help! Every day, people throw away too much trash, use too much electricity, or forget to recycle. That's where YOU come in.

You've just been recruited as a Planet Protector—a special kind of inventor who uses science, technology, and creativity to help the Earth. Your mission is to come up with an idea, invention, or solution that helps take care of our planet.



Problem #3: "Future Builders"

How Might We Question:

How might we design and build something like an architect that helps people in our school or neighborhood?

Problem:

Imagine you're a junior architect working for a special design team called Future Builders Inc. Your mission? To help design and build something that makes life better for people in your school or neighborhood.

You'll think like a real architect by:

- Identifying a need in your community (like a quiet reading space, a safer bus stop, or a fun outdoor area)
- Sketching your ideas like blueprints
- Choosing materials that are strong, safe, and maybe even eco-friendly
- Building a model of your design
- Explaining your choices to a panel of "city officials" (parents, teachers, and classmates!)

Your project will show how architecture isn't just about buildings—it's about helping people and shaping the world around us.



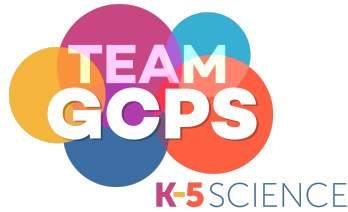
Problem #4: 🐾 "Save Our Wild Friends!"

How Might We Question:

How might we inspire kids to take action in protecting endangered species by helping them understand the causes and consequences of extinction?

Problem:

Many animal species around the world are at risk of extinction due to habitat loss, pollution, climate change, and human activities. Without awareness and action, these species may disappear forever, disrupting ecosystems and biodiversity. Kids need engaging ways to learn about these challenges and discover how they can help protect endangered animals. Create a plan and a prototype to help endangered species around the globe.



Problem #5: "Weather Wonders: Brave the Storm, Beat the Heat!"

How Might We Question:

How might we help communities prepare for extreme weather events—like hurricanes, floods, or heatwaves?

Problem:

Extreme weather events like hurricanes, floods, and heatwaves are becoming more frequent and intense due to climate change. Many communities struggle to stay safe and prepared. Kids need to understand the science behind these events and learn practical ways to help themselves and others during emergencies. Create and test a prototype to help protect communities from extreme weather.



Problem #6: "Storm Watchers: Protecting Our Communities!"

How Might We Question:

How might we help communities prepare and stay safe when a big storm causes flooding in their community?

Problem:

Twenty years ago, Hurricane Katrina struck New Orleans, becoming one of the most devastating hurricanes in U.S. history. When the levees (walls built to hold back water) failed, entire neighborhoods were quickly submerged, especially in areas where families had fewer financial resources and limited access to emergency support. Many residents were unable to evacuate in time due to overcrowded roads, caused by everyone trying to leave at once, and the storm's unexpectedly rapid arrival. Additionally, many people could not afford the costs of evacuation, making it even harder to escape.

Even today, storms and floods continue to impact communities around the world, including areas close to home. During these emergencies, families may lose power, run out of clean water and food, or face challenges reaching safety.

Now it's your turn to imagine solutions. What if YOU could invent something or create a plan that helps families stay safe during storms? Could it warn people sooner, give them a safe way to escape, or make sure they have food, water, and shelter? Could it be something small to help one family, or something big to protect a whole community?



Problem #7: "From Stars to Sidewalks!"

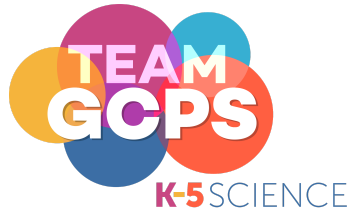
How Might We Question:

How might we help our communities understand the importance of space exploration by showing how space technology improves everyday life—like weather forecasting, GPS, and communication?

Problem:

Many people don't realize how space exploration and technology affect our daily lives—from GPS and weather forecasting to satellite communication. Without understanding these connections, communities may overlook the value of space science. Kids need engaging ways to explore how space impacts their world and inspires future innovation.

Design a creative solution, such as a model, interactive display, or demonstration, that helps people in your community see how space exploration benefits everyday life.



Problem #8: Computer Science Solution

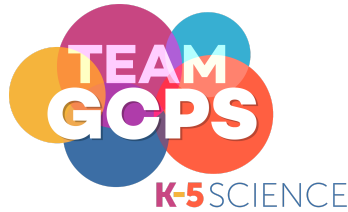
How Might We Question:

How can we design and build a solution using computer science to help solve a real-world problem?

Problem:

Computer science plays an important role in our society. To put it simply, computer science is the practice of using computers and/or computer systems to help solve real world problems. Real world problems exist everywhere and range from everyday dilemmas like remembering to wash our hands before lunch and struggling to carry a heavy book bag off the bus, to complex issues such as building earthquake resistant structures and cleaning up oil spills in the ocean. As computer science allows us to develop new and innovative technologies, we are able to solve more real world problems and help more people.

Identify one real-world problem that is currently taking place in your school, community, or home that interests you. Research the problem you identified and design a technology based solution to help solve the problem. This could include, but is not limited to, robotics, hardware and software design or artificial intelligence.



Problem #9: Student Choice

How Might We Question:

Student Developed

Problem:

Spend some time watching the world around you. Make observations of all the things you can see: the environment, the traffic, the weather, your school, and wildlife are all great places to start.

What do you notice? What do you wonder?

After you observe and ask questions, determine if there is a problem in your community that you are really interested in solving. Develop a driving question, and design a solution to help solve the real world problem.