Engineering

Gr K - 3 | “Every Child is an Engineer”

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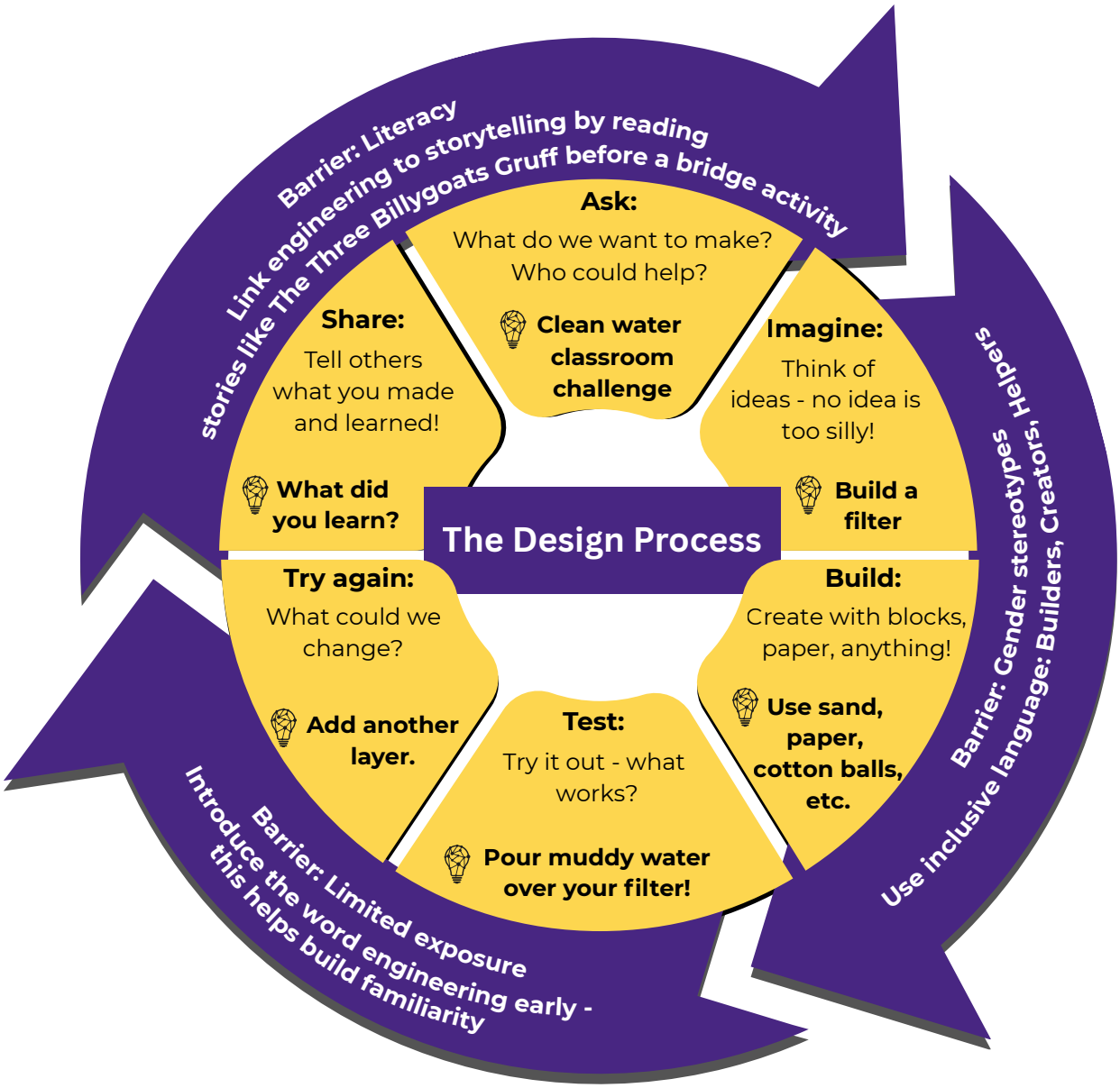

Classroom Discussion Points:

What did you notice? How could we make it even cleaner next time? Who might need clean water and why?

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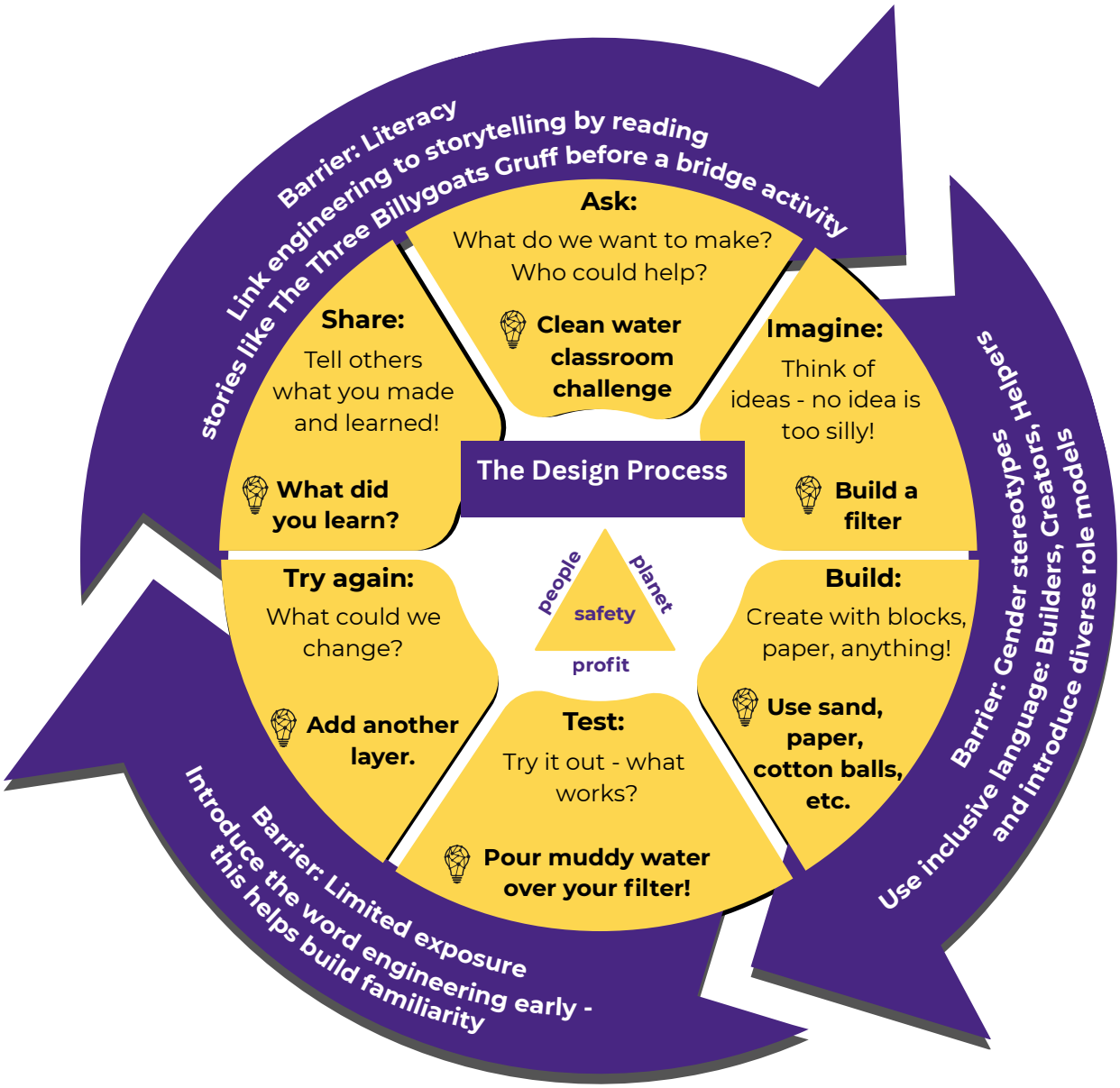

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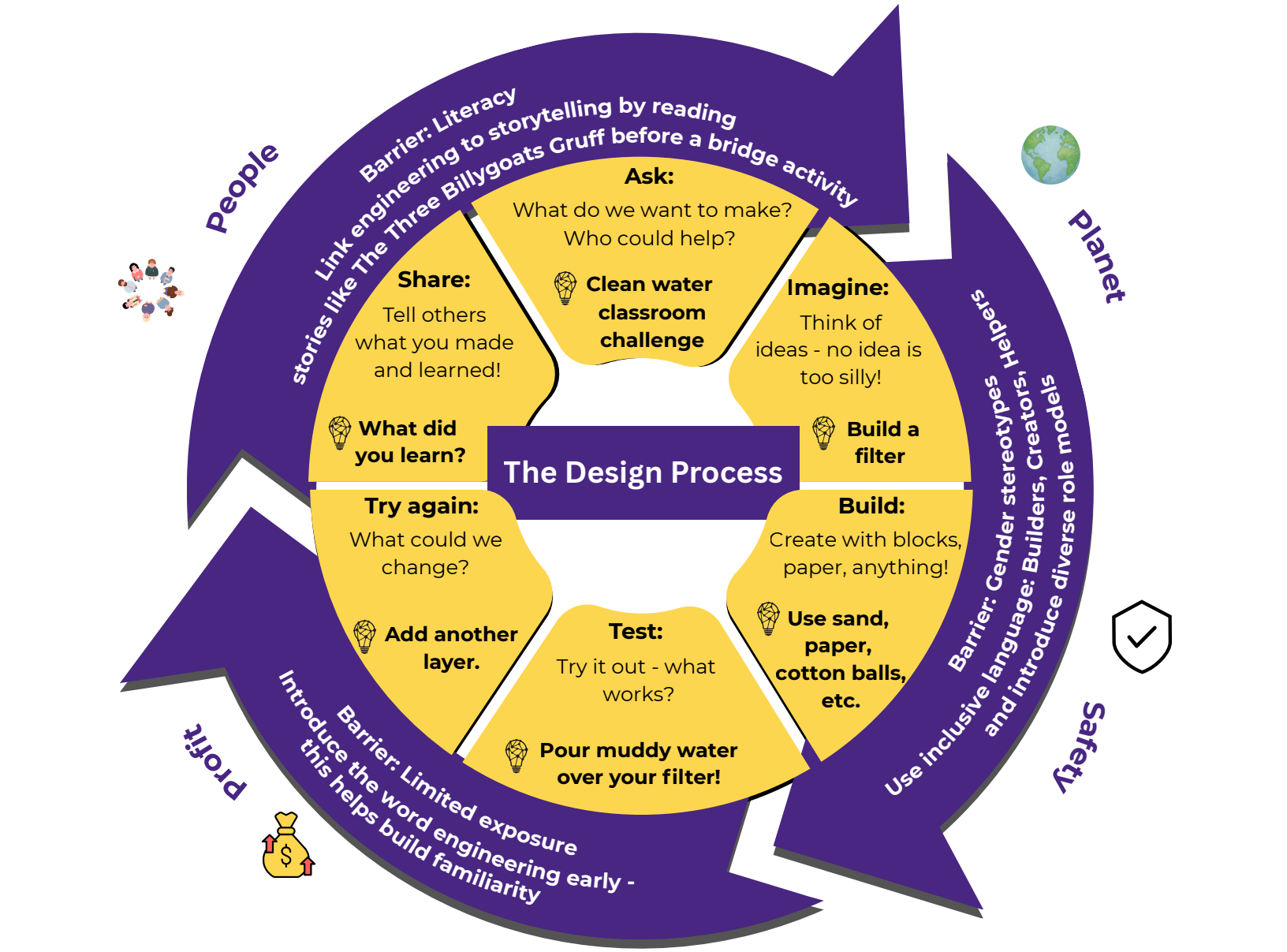

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Engineering

Gr 4-6 | “Design, Test, Try Again!”

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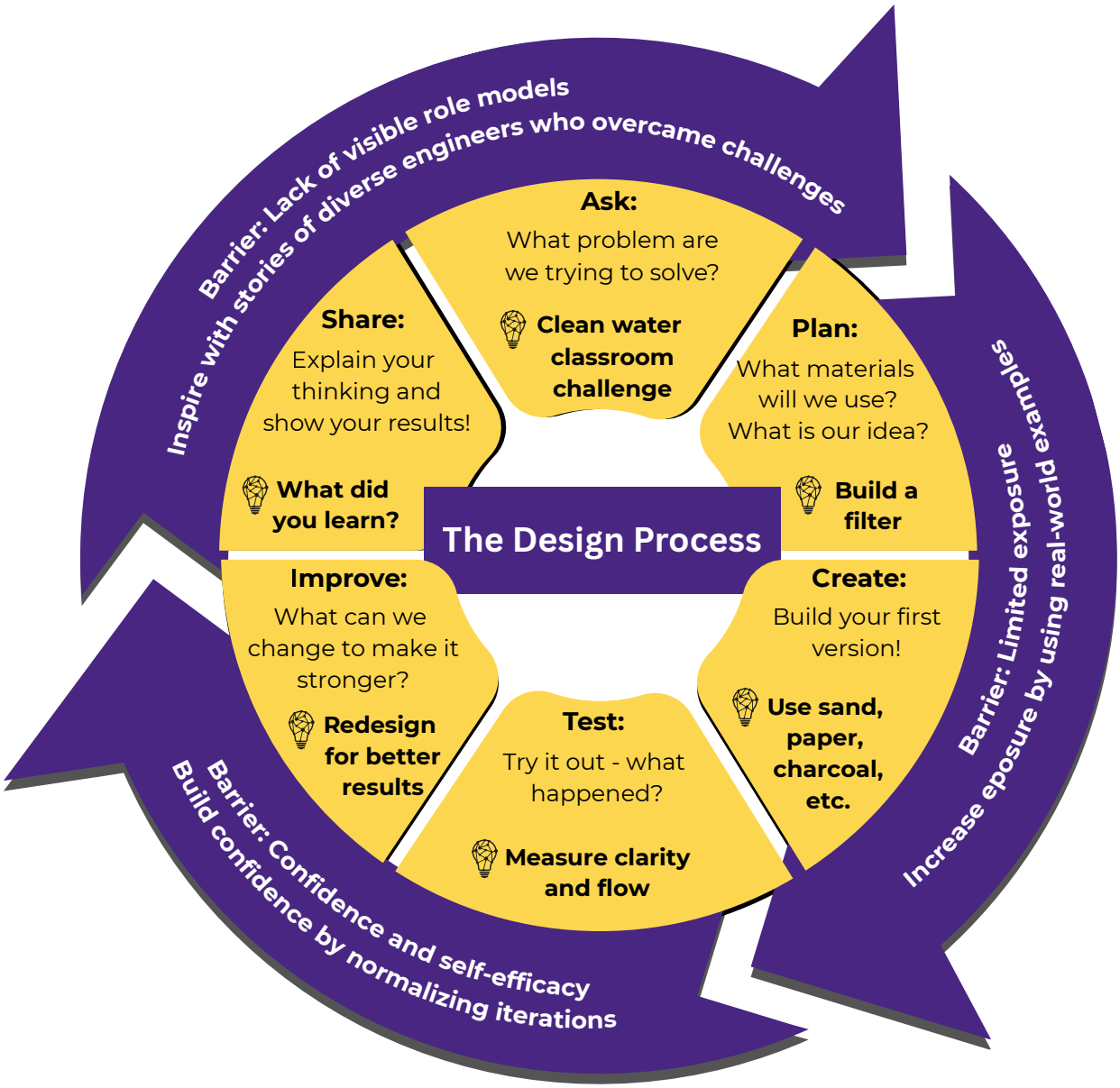

Classroom Discussion Points:

How could your design be implemented in the real world? What trade-offs do engineers have to make between cost, environment and access? How could technology or policy improve clean water systems?

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Engineering

Gr 7 - 9 | “Engineering the Real World”

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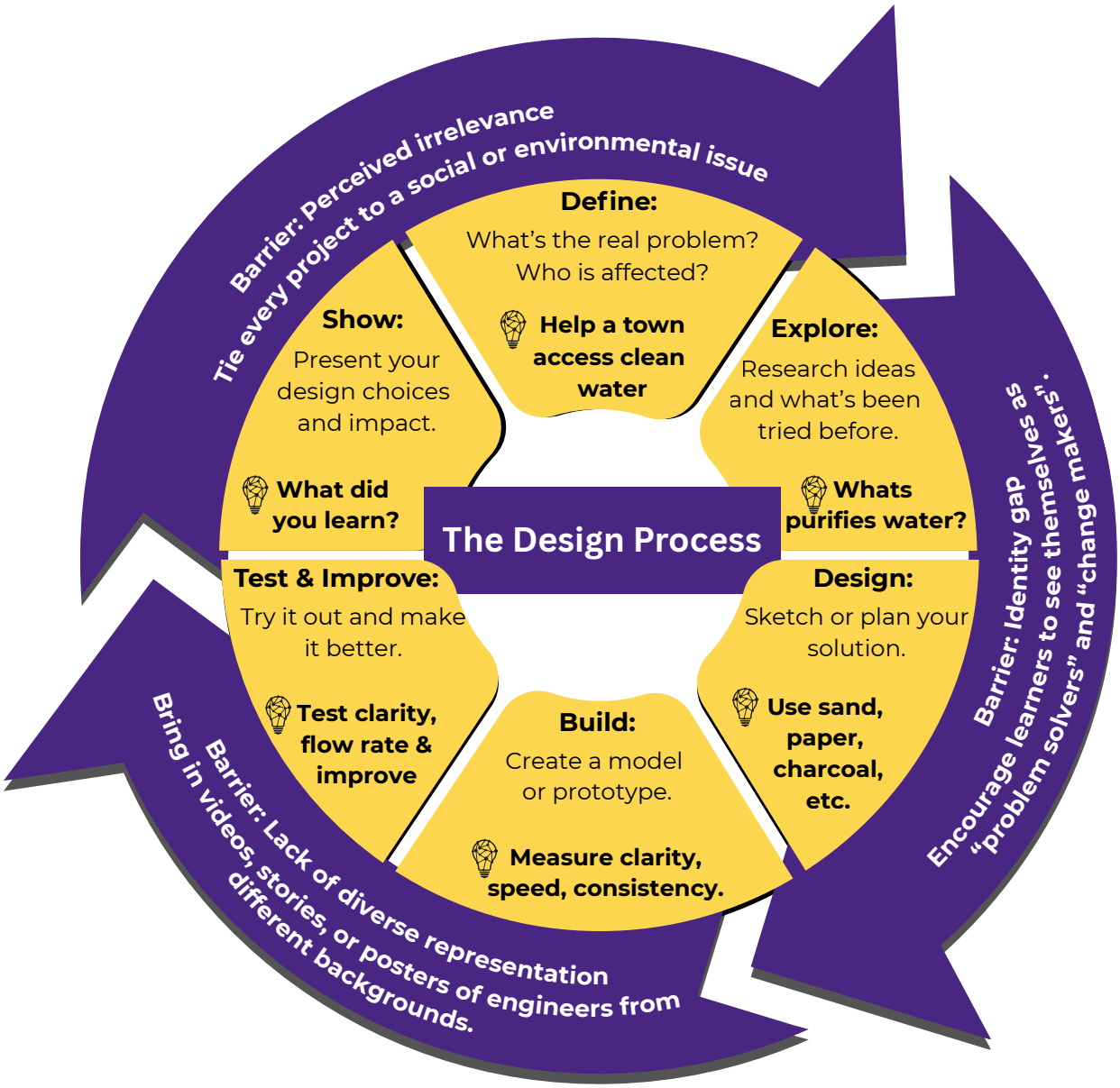
Engineering is about using science, creativity, and teamwork to solve real problems that matter — from clean water to safer cities. Engineers think about people, the planet, and how everything connects.



Classroom Discussion Points:

What made your design better? What is the trade-off between speed and clarity? How do engineers test and improve ideas?

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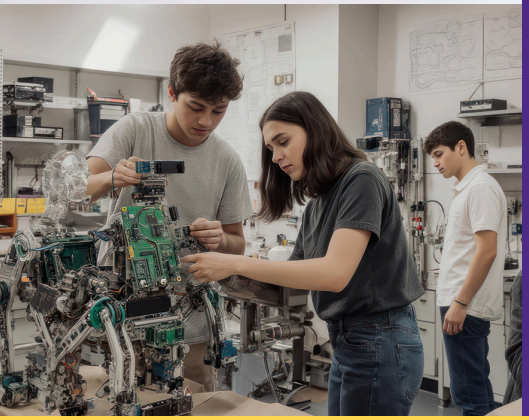

Engineering

Gr 10 - 12 | “Engineering My Future”

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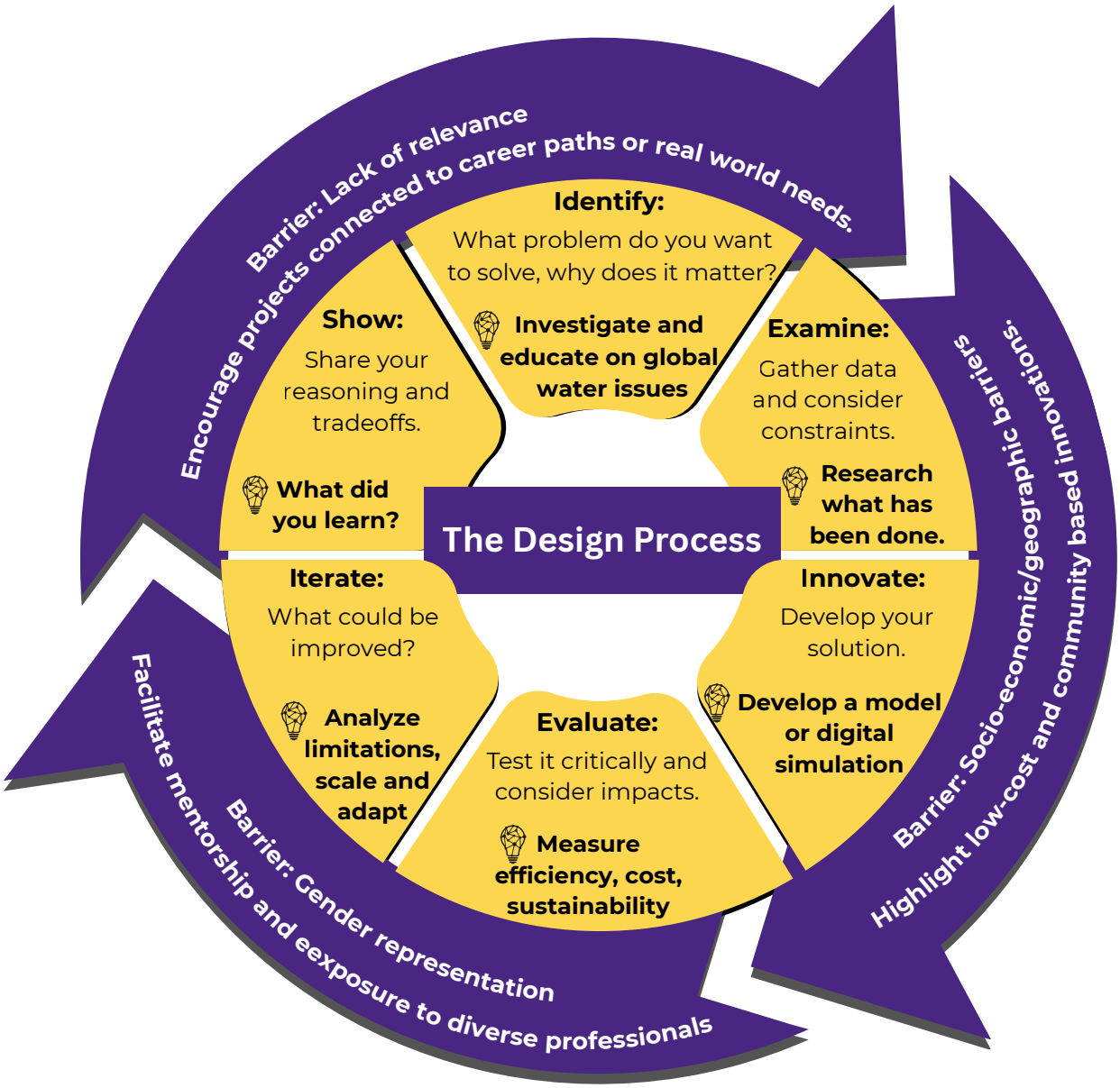
Engineering uses science, creativity, and critical thinking to design solutions that improve life for people and protect the planet. Engineers balance technical skill with empathy, ethics, and sustainability.



Classroom Discussion Points:

Why isn’t clean water available everywhere? What constraints (cost, materials, environment) do engineers face? How could your design help real people?

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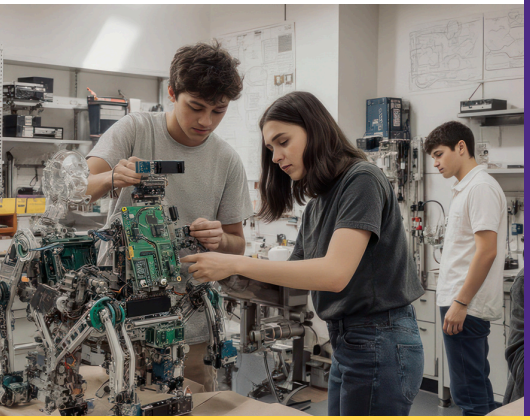

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Engineering Opens Doors

For Parents, Guardians, and Guidance Counsellors

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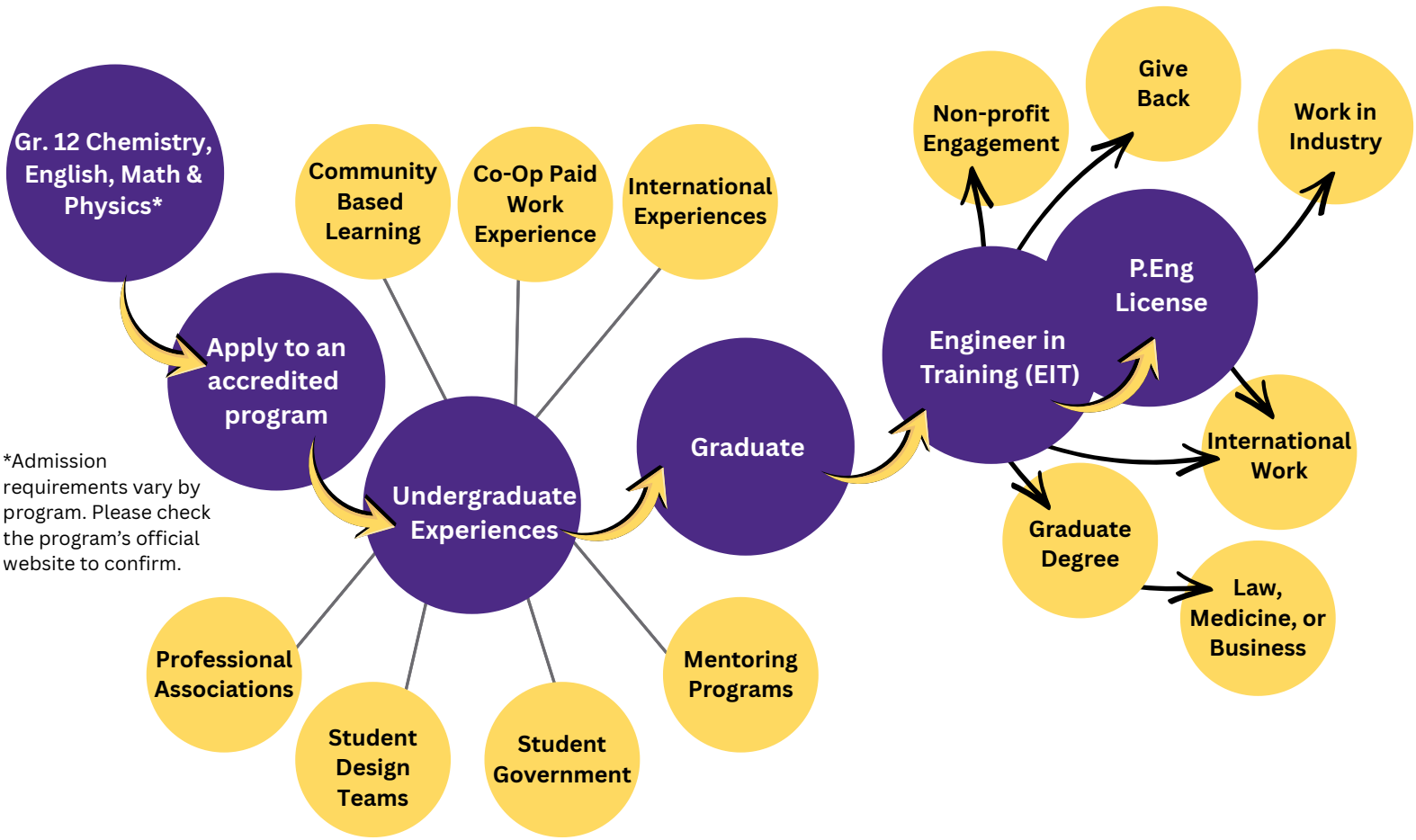
Engineering is about using creativity and problem-solving to make life better for people and the planet. Engineers design, build, and improve things — from clean energy to medical devices to safer roads — applying science and math as tools for positive change, not as barriers to entry.

Next Steps to Becoming an Engineer...



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Adapted from Ontario Network of Women in Engineering

Engineering builds transferable skills: critical thinking, collaboration, creativity, systems thinking which prepares learners for a lifetime of evolving careers.

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Reframing the Message

Previous Perception	Evolving the Narrative
You need to be a math genius to be an engineer.	Engineering uses math and science, but it's really about solving problems, being creative, and helping people.
Engineering is for people who like building or fixing things.	Engineering is for *thinkers and doers* - anyone curious about how to make the world better.
Engineers work alone.	Engineering is a team sport. Collaboration, empathy and communication are essential.
Engineering is a narrow career path.	Engineering opens doors into medicine, sustainability, design, business and technology.

Removing Roadblocks

- **Stereotypes about math/science:** Emphasize growth mindset — these are learned tools, not fixed talents.
- Gender bias and representation: Share diverse examples of engineers (e.g., biomedical, environmental, social innovation).
- **Lack of confidence/self-efficacy:** Reframe "I'm not good at math" as "I'm still learning how to use math as a tool."
- **Perceived lack of relevance:** Connect engineering to helping others, protecting the environment, and designing a better future.
- **Information overload:** Provide simple "next steps" and pathways (e.g., local outreach programs, ONWiE or EIR mentors).

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Pathways to becoming an engineer in Canada

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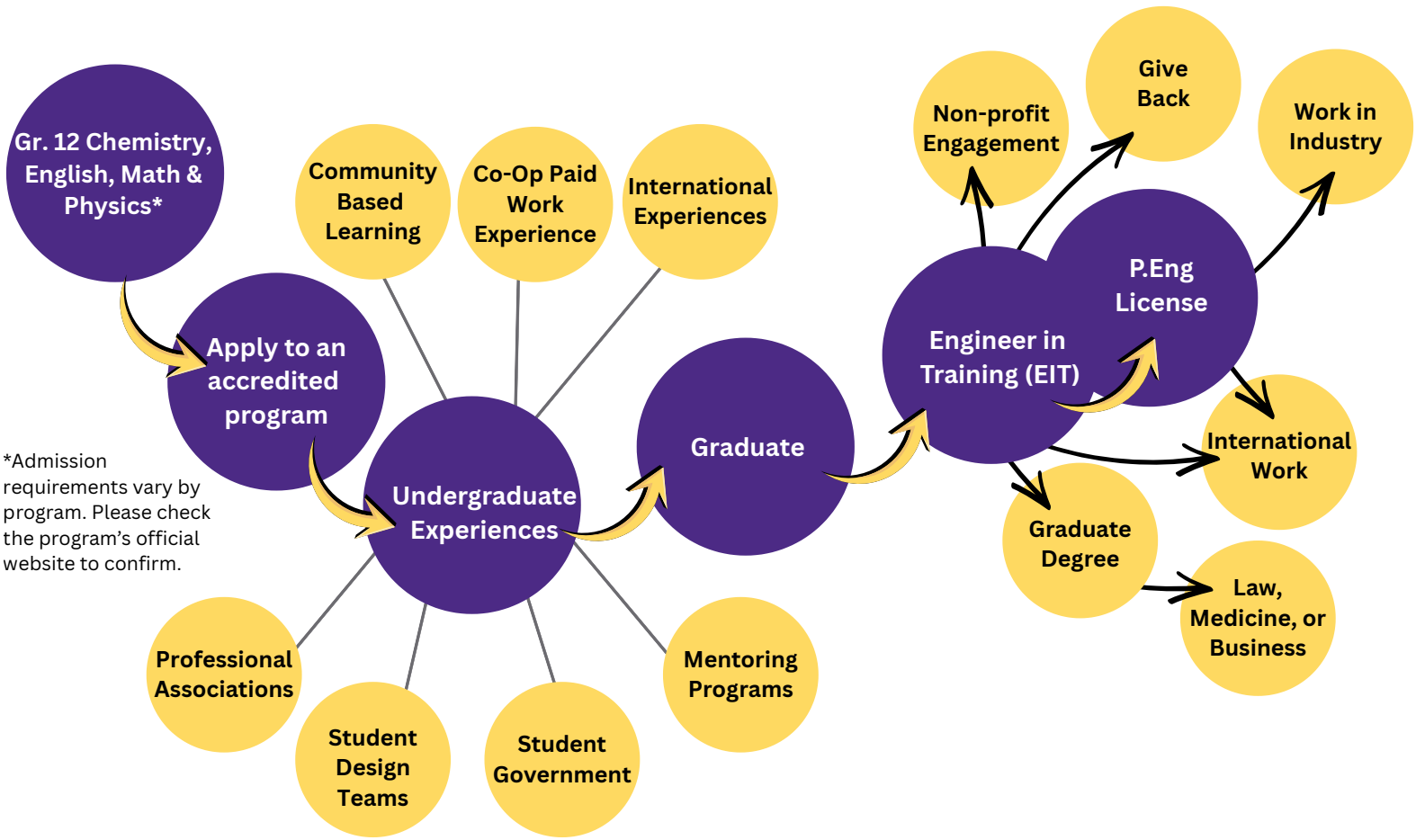

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