Sources of examples

Special interest for any teacher is to have access to a high variety of sources for examples and problems to supply the mini-PBL projects. In fact, it is enough to give a basic applied problem to generate a bigger list of activities based on that.

Every course, in all universities around the world, graduate students present thousands of degree, master and PhD thesis where you can find for sure a list of examples/applications where a graphic or dataset can be the start point for constructing a mini-PBL project.

We encourage you to find your own sources, ask colleagues from your university for precise use of mathematics in any scientific area. Then connect such applications with SDG and construct your mini-PBL.

For help in such searching, in the following table we group basic scientific areas with the SDG to provide a list of suggestions for search math applications with SDG's interest label. Obviously, this is not a closed list, the items are interchangeable, and anyone can find an application of interest in the thousands of research papers and reports published every year all round the world.

SUSTAINABLE DEVELOPMENT GOALS	**Scientific areas or studies**
	❖ Population studies and databases ❖ Incomes & Costs reduction ❖ Logistic & Transportation ❖ Equality studies
	❖ Agriculture ❖ Nutrition ❖ Plagues ❖ Pollution
	❖ Medical databases ❖ Epidemiology ❖ Pharmacokinetic ❖ Microbiology ❖ Genetic ❖ Sports ❖ Aging

	❖ Education databases ❖ Psychology ❖ Neuroscience ❖ Human & childhood behavior ❖ Economy of Education ❖
	❖ Incomes inequalities ❖ Population proportion on labor sectors ❖
	❖ Water supply databases ❖ Pollution ❖ Microbiology ❖ Engineering ❖
	❖ Energy production and consume databases ❖ Engineering ❖ Consume ❖ Optimization of resources ❖ Penetration of renewable energies
	❖ Labor databases ❖ Social studies ❖ Share market ❖ Bank products ❖ Economy and enterprise ❖ Tourism ❖ Digital business
	❖ Industry and production databases ❖ Engineering ❖ Mobility ❖ Artificial Intelligence ❖ New Materials ❖ Nanotechnology ❖ Connectivity ❖ Logistic & Transportation ❖ 4th Industrial Revolution: Industry 4.0

	❖ Social lacks and gaps databases ❖ Social studies ❖ Population studies ❖ Incomes/costs reduction ❖ Digital access
	❖ Quality living databases ❖ Population studies ❖ Optimization ❖ Logistic & Transportation ❖ Civil Engineering ❖ Architecture ❖ Baggage management ❖ Energy ❖ New materials for urban furniture: maintenance, cleaning, preventing damage,... ❖ Electric and autonomous mobility ❖ Air pollution ❖ Noise reduction ❖ Mobility ❖
	❖ Consume and human behavior databases ❖ Marketing ❖ Social networks ❖ Raw and new materials ❖ Energy ❖ Engineering
	❖ Climate change databases ❖ Deforestation ❖ Desertification ❖ Atmospheric physics ❖ Overheating ❖ CO2 reduction ❖ Carbon footprint
	❖ Climate change and oceans ❖ Acidification of oceans ❖ Sustainable fishing ❖ Microbiology on oceans ❖ Microplastic and oceans ❖ Waste and biodegradable materials
	❖ Climate change and land sustainability ❖ Sustainable farming ❖ Residues and waste processing ❖ Waste and biodegradable materials

	❖ Social studies databases ❖ Economy ❖ Cooperation for development ❖
	❖ Social studies ❖ Social networks ❖ Civil movements ❖